

*Suicide Vulnerability and Risk:  
Fragmented Sense of Self and Psychache*

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Submitted in partial fulfilment of the requirement for the combined degree  
of Master of Psychology (Clinical)/Doctor of Philosophy



April 2018

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## Declaration

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I acknowledge the support I have received for my research through the provision of the Australian Postgraduate Award (APA) Scholarship.

Margaret Prysak

Signed:

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## **Dedication in Memory**

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*This thesis commemorates  
the work and humanity of Peter Chamberlain,  
  
and is dedicated to those  
who, under constraints of an unfavourable circumstance,  
renounced the connection to their own pure, benevolent, unconditioned self*

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## **Abstract**

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Suicidality research has largely focused on psycho-social or demographic suicide risk factors, with less emphasis generally being directed towards understanding individual vulnerability factors. Moreover, although previous research has indicated that suicidality is underscored by the inner workings of personhood, suitable phenomenological approaches appear to have been infrequently applied. Accordingly, this thesis aimed to explore suicidal tendencies as predicted by low sense of self-cohesion, low self-esteem, psychological pain, distress, and emotions that underlie those psychological states.

The selection of theoretically derived psychological factors was guided by the theories of Edwin S. Shneidman (*psychache*), and Heinz Kohut (*self* and *self-cohesion*). The cross-sectional nonexperimental design involved a survey of university students and staff, and volunteers from the South Australian community ( $N = 359$ , 72% females, 28% males, aged 18-67 years [ $M = 28.72$ ;  $SD = 12.29$ ]). Participants completed a battery of psychometric instruments, assessing self-cohesion, psychache, self-esteem, and psychological distress: 1) *The Psychological Pain Assessment Scale (PPAS)*; 2) *The Orbach and Mikulincer Mental Pain scale (OMMP)*; 3) *The Psychache Scale (PS)*; 4) *The Adelaide Self-Cohesion Scale (ASCS)*; 5) *The Depression Anxiety Stress Scales 21 (DASS 21)*; 6) *The Beck Self-Esteem scale (BSE)*; and 7) recent suicidality (from *The Psychiatric Symptom Frequency Scale*), lifetime attempts, and current suicidality indices.

The thesis involved five studies, with results from each informing subsequent studies.

Study 1 examined the psychometric properties of ASCS. Its three-factorial structure was replicated, confirming its validity for assessing a sense of self-cohesion.

Study 2 tested relationships between self-cohesion, self-esteem, psychache, depression, anxiety, and stress. Exploratory factor analysis, followed by a Schmid-Leiman solution, found near-equivalence between the psychache measures OMMP and PS. Self-cohesion, self-esteem, psychache, depression, anxiety, and stress emerged as distinct but inter-related constructs, all strongly loading on a general factor of psychological frailty.

Studies 3 and 4 explored relationships between these psychological factors and recent suicidal ideation/action, and history of suicide attempts. The utility of ASCS for assessing suicidality was also examined. The strongest contributor to recent suicidal ideation/action was depression, followed by self-esteem (part of self-cohesion) and psychache. The strongest contributor to lifelong suicide attempts was anxiety, followed by unmet childhood needs (part of self-cohesion).

Study 5 clarified the nature of psychache in relation to three suicidality indices (recent suicidal ideation/action, lifetime attempts, and current suicidality). Two negative emotions underscored intense psychache across the three suicidality measures: self-hate and worthlessness. Additionally, "lure of death" was associated with lifetime suicide attempts only. Sadness, betrayal, and anger had negative associations with suicidality indices; hopelessness was associated with recent/current ideation, but not suicidal actions.

It was concluded that suicide vulnerability is characterised by anxiety and a diminished sense of *self*, originating in early developmental frustrations resultant from unmet psychological needs. Further, tendencies for suicidal ideation/behaviours may partially be attributed to heightened levels of depression and psychache, and lowered self-esteem. As a clinical implication of the findings, it was proposed that a personal capacity for self-empathy may counter limitations of the *self*, help mollify deleterious effects of psychache and depression, reducing potential for suicide.

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A number of other associates have also assisted me at various stages of this project and I thank them all. I am especially grateful for tuition in statistical procedures, kindly provided by then my peer, and now, Dr Christopher Powell. Also, Thank you to Dr Dennis Liu and his research team at the Lyell Mc Ewin Hospital, who offered potential assistance in proceeding studies. Further, thank you to Dr Quentin Black for his insights in respect to the topics covered in this thesis.

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## *Preface*

### **Suicide Vulnerability and Risk: Fragmented Sense of Self and Psychache**

Motto:

*[...] man cannot fulfill his essential self in any better way than by giving emotionally nourishing support to man, i.e., to himself and to his like.*

— Kohut (1978, pp. 714-715)

Over the last 50 years, suicidology research has made considerable advances in the understanding of suicide risks and processes. Nonetheless, factors influencing suicide vulnerability still remain unclear and suicide rates world-wide continue to be high. Additionally, it has been agreed that, although many suicides share common features, suicide is a unique phenomenon, and best studied from a phenomenological perspective, i.e., as the directly lived experience of those affected by suicidal ideation, intent, and behaviour (Pompili, 2013). Thus, a phenomenological approach is likely to complement predominantly generalising approaches to suicide. Further, acknowledging that a large proportion of suicidology research has been data-driven and lacking theoretical foundations, suicidology experts have suggested that, to advance an understanding of suicidality, the study of suicide needs to be grounded in psychological theory (J. R. Rogers & Lester, 2010); and essentially theory that encapsulates the wholeness and individuality of the psychological make-up of suicide-inclined persons.

In order to address these gaps and concerns in suicidality research, the aim of this thesis was to examine the relationship between a sense of selfhood and individual experiences of negative mental states and affect in the light of suicidality; especially, as related to suicidal vulnerability (as opposed to suicide risk). This investigation has been guided by the theoretical proposals of suicidology expert, Edwin S. Shneidman and his construct *psychache* (psychological pain). The theory of psychache has been combined with the premises of the forefather of *self psychology*, Heinz Kohut, which implicate *self* and a sense of *self-cohesion* in suicidality. Support for the selected theoretical premises was provided from diverse empirical and qualitative research, as well as from reports of psychodynamic practices and observations. The following research questions directed the enquiry:

- i) What are the psychological factors that contribute to suicidal vulnerability?**
- ii) What are the implications for suicide prevention and clinical treatment?**

The principal focus of this thesis, as emerged from reviews of theory and prior research findings, comprised relationships between psychache, a sense of self, self-esteem, psychological distress (depression, anxiety, and stress), and suicidality. These potential determinants of suicidality have been examined in five empirical studies reported here, with each study guiding the direction of the subsequent study, and progressively addressing the research questions. Merging the studies' results with relevant theories has resulted in a novel proposal about the potential factors underscoring an emergence of suicide vulnerability.

To set the background of this enquiry, and to demonstrate the magnitude of the issue and the need for continued research into the area of suicide, the thesis begins with an overview of suicide facts, notions, and current statistical data (Chapter 1). This is followed by an abridged outline of different contemporary suicide-related psychological theories, to allow a reader a broader view on the diversity of current suicidology approaches (Chapter 1). From among these approaches, two have been selected and described in detail; the *psychache* theory, advocated by Shneidman and the premises of *self* and *self-cohesion*, formulated by Kohut (Chapter 2). This thesis proposes that merging these two theories could be a key to better understanding suicide vulnerability and propensity.

The empirical procedure to address the research problem pertaining to suicide vulnerability factors begins with the examination of the validity of the theoretical postulates of Shneidman's notion of psychache and Kohut's perspectives on the construct of self and suicidality. Methodology of the quantitative aspect of this research is described in detail (Chapter 3), followed by an examination of the method of assessing self-cohesion, validating the utility of the self-cohesion scale selected for this thesis (*The Adelaide Self-cohesion Scale; ASCS*; Chapter 4, Study 1). Exploratory factor analysis, supplemented with a Schmid-Leiman solution, is next employed to clarify the method of measuring the construct of psychache and to establish independence of the constructs of main interest to this study; self-cohesion, psychache, self-esteem, and psychological distress (Chapter 5, Study 2). The contribution of these constructs to suicidal tendencies, in relation to recent and lifetime suicide ideation and attempts, is then tested, and utility of the ASCS for assessment of suicidality is evaluated (Chapters 6 and 7, Studies 3 and 4).

In Chapter 8, the obtained empirical results are brought together to consider the findings in light of the first research question and their relevance to the theoretical frameworks underlying this investigation. In Study 5, the specifics of psychache are further examined with the investigation focusing on the nature of the most frequently occurring emotional states associated with psychache and suicidal intentions and actions, and in respect to both, suicide risk and vulnerability factors (Chapter 9).

A final chapter, Chapter 10, summarises the findings of this research and indicates areas for further consideration, as well as outlines research and clinical implications of the findings. The thesis concludes with a suggestion for a potential future investigation to delineate the methods of testing the theoretical inferences drawn from this study.

## SECTION A: BACKGROUND INFORMATION AND LITERATURE REVIEW

### Chapter 1

#### Introduction: Suicide and Suicidology Overview

Suicide—a self-annihilating act, conceivably denoting a loss of motivation to continue one’s own existence or a desire to escape an insufferable situation—is a deeply disturbing and unexplainable event to those who witness it and, reportedly, often equally perplexing to those who enact it (Leenaars, 2005; Maltzberger, Gill, & Orbach, 1996; Shneidman, 1979). Over the last century, science has energetically embarked on the mission to uncover the mystery of the wish to live, the wish to die, and the mental capacity to carry out the act of self-annihilation. While research has significantly enriched understanding of the processes behind suicide, important questions are still awaiting answers; what makes it possible for a human being to bypass innate self-preservation mechanisms and terminate life?

This thesis proposes that a state of selfhood is central to understanding vulnerability to suicide. Subsequent sections of Chapter 1 provide a general sketch of the notion of suicide, its occurrence, history, aetiology, statistical prevalence, and the development of the study area of *suicidology* (section 1.1), followed by an outline of suicide-process theories and associated suicide risk factors (sections 1.2 and 1.3).

This thesis avoids deliberations on suicide by children, because these are not homogenous populations in respect to cognitive maturity (within the same chronological ages), thus their capacity for an informed comprehension of life, death, and the potential

irreversibility of self-harming behaviour (Mishara, 1999). Other, likely qualitative, methods would be required to investigate suicide in young populations.

## 1.1 Suicide: Nomenclature, Definition, Historical Sketch, Aetiology, and Prevalence

### 1.1.1 Nomenclature and definition.

Formerly fashioned as *self-murder* or *self-killing*, suicide was discussed in 1637 by John Sym, Scottish Calvinist minister (Sym, 1988). Sym's conceptualisation of self-murder included a very broad range of unsafe behaviours, from self-neglect, risk-taking, and other irresponsible acts, to the intentional taking of one's own life. Barraclough and Shepherd (1994) noted that, prior to Sym's treatise, Sir Thomas Browne used the word suicide in his scientific-religious dissertation *Religio Medici* (Browne, 1952), purportedly first written in 1635, though published in 1643. *The Oxford English Dictionary* informs that the term "suicide" was first used in 1651 by English philosopher and writer, Walter Charleton.

Although Sym's self-murder label has been traditionally adopted in Germany, other expressions have also circulated: e.g., "self-destruction, self-killing, self-slaughter, *sibi mortem consciecere* (to procure one's own death), *vim sibi inferred* (to cause violence to oneself), and *sui manu cadere* (to fall by one's own hand)" (Shneidman, 1979, p. 146). Each of these expressions entails the self as an agent of this act of essentially self-perpetrated murder (Farberow, 2016).

Definitions of suicide and suicide-related mental and physical acts reflect continually changing cultural and generational norms and expectations. With no universally endorsed definition of suicide, different schools of thought have proposed their perspectives on what constitutes suicide (Leenaars, 2004).

In the Western world, clinical sense, suicide is considered a self-directed harmful act, essentially underscored by the intention to cease one's own existence (Farberow & Shneidman, 1961; Gvion & Apter, 2012; Leenaars, 2004). Even though, in prior research, it has been proposed that suicide is a necessarily self-effected act (Shneidman, 1979), the definition cannot incontestably specify the agent of the act—it is known that occasionally suicidal individuals may opt to engage another person to instigate a suicidal action, e.g., a voluntary physician-assisted euthanasia or deploying others, either by provocation or persuasion, to carry out the act (Mayo, 1983).

De Leo, Burgis, Bertolote, Kerkhof, and Bille-Brahe (2006) supplemented the definition with an additional clause, adapted from the WHO/EURO Multicentre Study on suicidal behaviour, specifying that suicide is “carried out with the purpose of bringing about wanted changes” (p.14). Further, a philosophical reflection by Wreen (1988) denoted that the suicidal intention leading to suicide needs to be voluntarily enacted and “informed with a relatively strong desire” to kill one's own self or allow it to die (p.17). Again, flexibility in the interpretation needs to be exercised, because this intention or desire is a psychometrically and clinically problematic construct—the degree of lethal intentionality is difficult to establish with certitude (Silverman, Berman, Sanddal, O'Carroll, & Joiner Jr, 2007a), because it is characterised by fluctuating motivations (Keith-Spiegel & Spiegel, 1967; McLaughlin, 2007), potentially stemming from either, or both, conscious and subconscious tenacities or enticements. Nevertheless, approximating a definition of suicidal intent and behaviour (also referred to as *suicidality*) is crucial for both preventive and remedial action, and is usually accomplished by assessing overt and covert behaviours encompassing deleterious thoughts, actions, and communications of a

lethal and self-targeted nature (Gvion & Apter, 2012; Silverman, Berman, Sanddal, O'Carroll, & Joiner Jr, 2007b).

Despite years of suicide research, the conceptualisation of suicide appears still incomplete, with the *Diagnostic and Statistical Manual of Mental Disorders, fifth edition* (DSM-5, 2013) separating lethal and non-lethal self-harm, and including both “Suicidal Behaviour Disorder” and “Nonsuicidal Self-Injury” within the manual’s final section, labelled *Conditions for Further Study*. As a guide, DSM-5 advises that suicide attempt encompasses some level of intent to die, with the action executed within the past 24 months. Notably, self-harm that is politically or dogmatically driven, or performed under the conditions of delirium, confusion or suicide pacts, does not qualify for the diagnosis, and further, suicidal ideation or preparation are also not considered part of the disorder conceptualisation.

Similar criteria for defining suicidal behaviour have previously been proposed by Rosenberg et al. (1988), and formulated as Operational Criteria for the Determination of Suicide (OCDS). These, however, were found clinically uninformative due to unidentified causality of suicide, with no potential for furthering development of therapeutic action (O'Carroll et al., 1996).

While the intentionality to die is a commonly presumed criterion for defining suicidal behaviour, often suicidal individuals report feeling torn between their wish to live and die; assessing intentionality thus appears confounded by unresolved ambiguity, the factor frequently reported by those who crave to escape pain associated with life, but simultaneously want to preserve life itself (Shneidman, 1986). Furthermore, self-annihilation is not always a singular goal or intention of a suicidal person. Thus, completion of the suicidal act is unpredictable to the very end, with suicidal intent varying

from moment to moment, and with some individuals abandoning the final act, either due to external persuasion or by their own accord (Simon, 2006).

Additionally, a more recent formulation of suicide and suicide attempts, often used in communication of information on self-inflicted deaths in Australia is “intentional self-harm” (e.g., Australian Bureau of Statistics, 2016). However, this term seems insufficient, because it is applicable to both lethal and non-lethal self-harming behaviours. Although it is logical to differentiate between active and intentionally lethal suicide attempts and non-suicidal self harm, the approach adopted by the ABS confirms that a debate about how to conceptualise suicide still continues. Burke et al. (2018), for example, found that individuals who engage in non-suicidal self-harming are at risk of suicidal ideation and suicide attempts (also see the review by Hamza, Stewart, & Willoughby, 2012), so that, indirectly, NSSI may be implicated in suicide. On the other hand, Klonsky and Muehlenkamp (2007) argued that “self-injury is most often performed to temporarily alleviate intense negative emotions, [...], end periods of dissociation or depersonalization, and help resist suicidal thoughts” (p. 1045). The question thus remains whether a non-suicidal self-injury contributes to, or alleviates, suicide risk, or what circumstances determine when self-harming behaviours become implicated in suicide.

### **1.1.2 Historical sketch.**

Suicide is not a modern day dilemma; the theme of self-destruction appears in the earliest chronicles of human history (Goldney, 2002) and suicide has probably occurred since the conception of human capacity for making cognitive and emotional appraisals. Early depictions of suicide have been disseminated through literary and visual work, for example, *The Bible's* descriptions of suicides of Abimelech, Samson, Saul, and his associate, as well as Simri and Ahitophel (Shneidman, 1979), or the *New Testament's*

suicide of Judas (Matthew 27:3-10); and paintings such as *Suicide of Ajax* by Eurytos Krater, dated as far back as 6 B.C. Later epochs brought poetic portrayals of suicide, such as that of *The Wood of the Suicides* in Dante's *Inferno* (c.1375); and images, such as *The Suicide of Saul* by Pieter Bruegel the Elder, 1562; and *The Death of Socrates* by Jacques-Louis David, 1787.

A comprehensive compilation of writings relating to suicides of prominent persons and perspectives on suicide throughout history, starting with the *Egyptian Didactic Tale*, *Dialogue of a Man With His Soul* (c. 1937-1759 B.C.; author unknown) and ending with contemporary views on suicide is presented at *The Ethics of Digital Suicide Archive* webpage endorsed by the University of Utah, J. Willard Marriott Library.

Historical views about the nature and morality of suicide have differed across times and civilisations. From accounts of suicide in antiquity, presented by Garrison (1991), van Hooff (1993), and Seidel (1995), it can be inferred that ancient Greco-Roman perspectives on suicide often suited social norms and political contexts of the times. That is, generally, and not without contradiction, while suicide was often seen as a “rational act of volition” of a mentally sound mind, it was also criticised for being unnatural and ‘un-Godly’ (van Hooff, 1993, p. 76). Although suicide was not exactly encouraged or overly idealised, it was not always condemned; suicide was censured when it was deemed a cowardly and violent act. On the other hand, suicidal acts tended to evoke commendation when underlined by altruistic motives, or erased shame or guilt, or fulfilled divine aims (Garrison, 1991). As Roman stoic Lucius Annaeus Seneca (circa 4 BC–65 AD) proclaimed, it was wise and apt to take one’s own life if one was trapped in the complications of old age, especially in respect to failing mental faculties (B. R. Sharma, 2004). Further, self-inflicted deaths were approved when they were politically enforced or driven, as in the

cases of the Roman statesman Marcus Portius Cato (95–46 B.C.) who committed suicide when facing defeat in war, and also in the alluded suicides by the Athenian philosopher Socrates (circa 470–399 BC) and the statesman and philosopher, Seneca. However, the deaths of the latter two dignitaries were driven by politically motivated accusations (Frey, 1978; Ker, 2010; Walton, 1980), so that classifying those as suicides is debatable, due to the lack of transparency as to the intentionality of the concerned agents.

Overall, six categories of motivations behind self-killing in antiquity have been distinguished: 1) suffering pain from sickness or old age; 2) military defeat or war-related grief; 3) politically or socially imposed sanctions; 4) mental indispositions (as in cognitive enfeeblement); 5) stress resulting in grief, depression and/or anxiety; and 6) unidentified reasons (Seidel, 1995). The most frequently encountered groups of suicides were those suffering pain, and those with chronic debility and frailty of old age (Seidel, 1995). Interestingly, this trend emphasising the impact of personal suffering on suicidal tendencies continues to prevail in modern times (Shneidman, 1993).

Over time, around the 4<sup>th</sup> century AD, with the strengthening of Christianity and its infrastructure, suicide became increasingly reproached, and often countered with legal sanctions and excommunications inflicted on suicide attempters and also on the deceased bodies of those who died via suicide (Leenaars, 2004).

In certain cultures, however, suicide has not only been accepted but unequivocally expected or applauded. For example, the Indian custom of *jauhar*, a mass suicide of women, often in response to threat of potential enslavement or harm following a defeat in war (A. Sharma, 1988), and *sati*, suicide by a widowed woman, often by immolation during the husband's funeral (Hawley, 1994), had both been customary throughout many centuries, and only outlawed in not so distant times (Farberow, 2016). Other examples of

glorified ways of dying were the Japanese traditional honour self-killings, *seppuku/harakiri*, mostly reserved for samurai warriors, and *jigai*, female suicides, both stemming from society-imposed moral norms, and not necessarily from indisputably self-volitional action (Fusé, 1980; Maiese, Gitto, Dell'Aquila, & Bolino, 2014). A very different type of self-killing was deployed within the combat tactics of World War II; in Japan, *kamikaze*, i.e., piloted aircrafts were flown into war targets in self-sacrificial acts in the servitude to the nation and emperor (Israeli, 1997). In recent times, the world has been challenged with mass assassinations or murders, a movement asserted by Muslim radical fundamentalists, *Islamikaze*, declaring their beliefs and faith via unsuspected bombings or other public executions, concluded with ultimate martyrdom-suicide gestures (Ferrero, 2006; Israeli, 1997). Still, judicious voices of humanitarians and suicidology experts question the contextual dynamics of these murderous acts, separating them from the death category of suicide, and urging the world community to recognise these violent deeds as *homicide* (Goldney, 2014).

As stated above, this thesis is concerned with suicide in the Western understanding of the act, excluding political, religious, or self-sacrificing/altruistic deaths, or those embraced as the envisaged gates to eternal afterlife recompenses, pseudo-altruistic deaths.

### **1.1.3 Suicidology history sketch.**

Prior to the engagement of psychological, medical, and sociological sciences, investigations of suicide were mostly domains of philosophy and theology. Over the last two centuries and in the international arena, philosophical dissertations on the notion of suicide thrived, initiated by great thinkers, such as Scottish philosopher David Hume (1711-76), Genevan philosopher Jean Jacques Rousseau (1712-78), German philosophers

Immanuel Kant (1724 –1804) and Arthur Schopenhauer (1788-1860), the French sociologist Émile Durkheim (1858-1917), and the Algerian-French philosopher Albert Camus (1913-1960). One of the early major in-depth expositions on the nature, causes and issues of suicide was presented in 1790 by Charles Moore, Rector of Cuxton, Vicar of Boughton-Blean, Kent, and titled *A full inquiry into the subject of suicide: To which are added (as being closely connected with the subject) two treatises on duelling and gaming*. Nearly 100 hundred years later, Henry Morselli and William Wynn Westcott followed with their explications on suicide (1881 and 1885 respectively).

In 1910, a small circle of psychoanalysts and medical professionals shone a psychological spotlight on suicide. This occurred by way of a series of meetings in Vienna of the newly-formed International Psychoanalytical Association (IPA), initiated by Sigmund Freud and presided over by Alfred Adler (Shneidman, 1969). Since that time, the matter of suicide progressively overcame the long-engrained self-murder taboo, with both academic and lay worlds gradually embracing the newly emerged frankness in the debate on self-inflicted death.

More recently, the American Association of Suicidology was established in 1968 by Edwin S. Shneidman (American Association of Suicidology, 2016). This initiated renewed interest in suicidology research and establishment of world-wide suicide-prevention organisations and forums, improving knowledge about suicide processes and associated factors. Nonetheless, even after many years of this research, experts have still not reached a consensus as to why some individuals are more likely to engage in suicidal behaviours than others.

#### 1.1.4 Suicide incidence.

It is commonly contended that the potential for suicide occurs exclusively in the human species, *homo sapiens* (Preti, 2007). Nonetheless, a range of suicide-resembling behaviours have been observed in the other species; for instance, beaching of whales and dolphins (Department of Environment and Energy, 2016) or self-starvations by domesticated animals (Preti, 2007), amongst many other examples. Because biological processes and intentionality behind those acts are largely obscured, the judgement about those atypical animal deaths is reserved. Essentially, it is commonly agreed that, for self-destructive action to be considered a suicide, it needs to entail a conscious, self-inspired volition to die (at least as understood as a death of physical entity), the feature unidentified in non-human species. Nevertheless, it is supposable that some neurological condition contributing to suicidality, such as malfunctioning in serotonergic pathways, could constitute a common characteristic across human and non-human species (Preti, 2011).

To some degree it is also questionable if the potential for suicidality is a universal phenomenon amongst humans. While it has been suggested that no human population would be indisputably immune to suicidality (World Health Organisation, 2016), a serendipitous finding by anthropological linguist, Dr Daniel Everett, opened a different perspective on the topic. According to Everett, there appears to be evidence contradicting a view of suicide as a homogeneous and universal behaviour. Everett has reported that the Amazonian tribal people Pirahã find it unconceivable to contemplate or to commit suicide (interview with Everett; Lechtenberg & Lam, 2011). The Pirahã, despite the harsh realities of their environment and high child mortality rates, appear to live in a state of “relentless happiness”, where death by suicide does not occur (Lechtenberg &

Lam, 2011; radio podcast). It is not clear what contributes to this remarkable psychological aptitude of the Pirahã, because Everett focused the study on the linguistics of the tribe, with mental health findings only being a secondary and unintended discovery. As to the psychosocial qualities of the Pirahã, Everett noted that the tribe provides dignifying care to each other, especially their elderly and disadvantaged, that their culture possesses no vocabulary to denote psychological maladies such as worry, depression, or schizophrenia, and their language makes no references to past events and unfamiliar others (Everett, 2009).

Characteristically, in the Pirahã's upbringing, the "autonomy and individual agency is highly esteemed, yet not in terms of the mental way of being, but in terms of independent functioning and action competence (e.g., early walking). Thus, the self-perception is mediated through others and social relationships" (Keller, 2016, p. 61). Moreover, it is common for Pirahã children to be fostered by siblings and not-immediate family (to be "raised by the village"), with the kinship system adhering "to the principle of immediacy of experience", though the mother, if alive, is always near-by present (Everett, 2005, p. 632). Everett (2014) described the attachment style in the Pirahã children as "concentric circles" with the central connection to the mother (and not necessarily the father), with the parental role extending to available family and community members, who provide quality caring and role-modelling; the practice known as allomothering. This type of upbringing will be further discussed and compared to general practices, as prevailing in western societies (Chapter 10, section 10.1.1).

According to Everett, these people "are proud of being Pirahãs, contented with their culture and lifestyle; and even if they see all I have, they feel no desire to become like me" or to possess materialistic goods (Everett, 2012). The Pirahã do not perceive

themselves as economically disadvantaged, even though in a Western sense, their life conditions could be deemed as impoverished. Everett's findings have not been confirmed or disconfirmed by psychological research but several other reports have been made, questioning or debasing the role of socio-economic status in suicide tendencies. Perhaps this unexpected trend could be attributed to the ability to accept, adapt, or habituate to a socio-economic situation, or the ability to sustain self-preserving motivation, despite financial and lifestyle limitations.

Further, investigations of socio-cultural correlates in relation to suicide could be influenced by their operationalisations of the construct of wealth or well-being. For example, A. Y. S. Lee and Pridmore (2014), having analysed population well-being data from 102 countries, found a positive and statistically significant positive Spearman's correlation ( $\rho = 0.39, p < 0.001$ ) between population well-being and suicide rates, suggesting that suicide is associated with higher, rather than lower, living standards. The data in Lee and Pridmore's study comprised measures of health, income, and education, combined into a composite score of the Human Development Index (HDI). The authors suggested that limitations of the HDI scale may have contributed to the intriguing findings. Further, a recently conducted systematic review of findings in respect to the economic wealth relative to deaths by suicide globally, uncovered that the associations of poverty and death by suicide varied across countries, with 56% of comparisons being positive, 25% null, 6% negative and 13% inconsistent (Iemmi et al., 2016).

In the earlier reports, De Rosis (1961) summarised his perspective on suicide occurrence, suggesting that cultural impositions are most prominent factors in suicidal tendencies. He asserted that "suicide has been significant in those cultures where importance was placed on the pursuit of power over others, possessiveness, or prestige"

(De Rosis, 1961, p. 244). It has also been noted that suicide appears to occur more often in countries where an economic gap or contrast between different societal strata is wide, evoking a sense of social and/or material inequalities or competitiveness within societies (P. Delfabbro, personal communication, November 17, 2017). Moreover, a historical review of suicide data across European countries found increased rates of suicide in instances of rapid fluctuations in the economy of particular countries and thus financial and social status stability of the affected individuals, as well as restricted access to financial and social supports, especially for the most disadvantaged members of the afflicted societies (Solano, Pizzorno, Pompili, Serafini, & Amore, 2017). These notions of economic disadvantage will be re-visited in section 1.3 and the final chapter of this study (Chapter 10, section 10.1.1).

#### **1.1.5 Suicide prevalence statistics.**

Global epidemiological and demographic suicide information is considered as estimates only, due to inconsistencies in reporting suicide incidence data (Goldney, 2010; Saint-Laurent, 2016). Biases in suicide data can be introduced at various levels of information gathering and dissemination, from the accounts of families, health practitioners, community members associated with the deceased, interpretations of police investigators, medical examiners and coroners, or shortcomings in the consistency of collating, coding, recording and archiving forensic information. At each point of the transfer of information there is a potential for misconstructions due to cultural, religious or societal taboos, the need for protection from social stigma and scrutiny, economic consequences, political motives, legal implications, misattribution due to ambiguity of the death-surrounding context, as in motor vehicle accidents, drowning, falling off heights,

drug overdose, and missing persons cases (Claassen et al., 2010; De Leo, 2010; Goldney, 2010; Shneidman, 1979).

Nonetheless, suicide is a serious international social and economic problem, and according to one widely accepted estimate, one person dies as a result of suicide every 40 seconds worldwide, totalling over 800 000 persons annually (World Health Organisation, 2014, 2016). Suicide attempts are currently not being closely and consistently monitored, but the latest, 2012, global estimate of the ratio of suicides to suicide attempts has suggested that one suicide succeeds from 20 attempts within adult populations. Reported suicide-mortality numbers vary widely across nations; from 0.3/100 000 population in Saudi Arabia to 36.8/100 000 population in the Republic of Korea—these trends have been measured among those countries with populations larger than 250 000 (World Health Organisation, 2016).

In Australia, between 2011 and 2013, suicide was the first leading cause of death within the population aged 15 to 44 years (Australian Institute of Health and Welfare; AIHW; 2016). According to the Australian Bureau of Statistics (ABS; 2016), in the years 2001 - 2011, approximately 1.7 percent of all deaths annually were due to suicide, exceeding fatal casualties from motor vehicle accidents (AIHW, 2016).

Earlier, between 1989 and 2001, the number of deaths resulting from intentional self-harm was relatively high though stable in Australia, but with unexplained escalation during the period between 1997 and 1998, especially in male suicide, exceeding 20 deaths/100 000 population. This was followed by a slight decline in deaths between 2001 and 2006, and since then, inexplicably, suicide-deaths have been on the rise again, for both males and females, and across age groups (Figure 1; Australian Bureau of Statistics, 2016). Overall, in 2015, an average of approximately 12.6 persons committed suicide per

100 000 within the Australian population. These statistics, however, varied between diverse societal or ethnic groups (e.g., Aboriginal and Torres Strait Islander peoples; residents of rural and remote communities; those affected by mental illness; those who identify as lesbian, gay, bisexual, transgender or intersex), and between states and territories. Currently, the highest suicide-death rates are recorded for Northern Territory; 21 suicides per 100 000 residents (Australian Bureau of Statistics, 2016). One notes that, while the Aboriginal and Torres Strait Islander people constitute just 2.5% of the total Australian population, this indigenous group comprises 27.8% of the Northern Territory population. However, although this higher representation may contribute to Northern Territory statistics, it remains the case that Indigenous Australians are over-represented in national suicide statistics. Thus, in addition to the situation in the Northern Territory, according to the most recent data, young Indigenous people have the highest suicide rates across New South Wales, Queensland, South Australia, and Western Australia; almost 91/100 000 population for 25-29 years old males and almost 22/100 000 for 20-24 years old females (data gathered in 2010; Australian Bureau of Statistics, 2016). With age and gender standardised, suicide rates among Indigenous Australians still exceed those of other ethnic and cultural groups, by over a 100% (Australian Bureau of Statistics, 2016). In respect to diverse ethnic backgrounds, three-quarters of those who died by suicide between 2001 and 2010 were born in Australia, 7.4% in Europe (apart from the United Kingdom), 7.1% in the United Kingdom, and 3.8% in Asian countries (Australian Bureau of Statistics, 2016).

**Figure 1. Intentional Self-Harm Death Rates, Australia, 2006-2015**

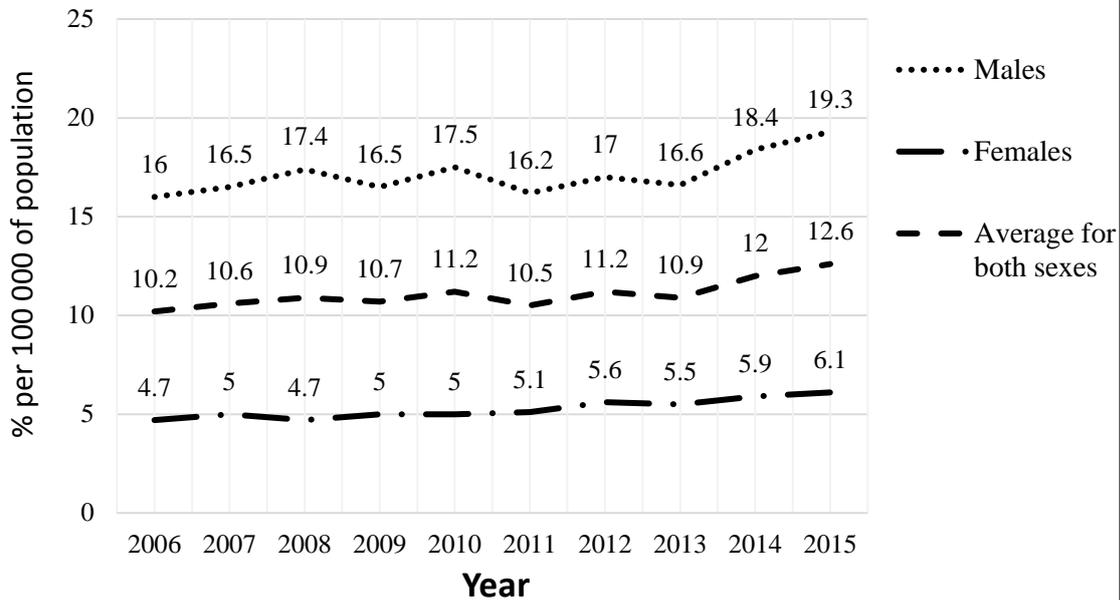


Figure 1. Adapted from the Australian Bureau of Statistics (2016); The intentional self-harm death rates have been standardised. The suicide rates are considered estimates.

Regarding gender, in Australia, the female rate of mortality from suicide is lower than that for males (Figure 1). Although females attempt suicide more frequently than males, they are less likely to realise lethal outcomes, this fact mostly attributed to less violent and potentially rescuable methods of self-destruction (van Heeringen, 2001). According to the 2010 estimation, males were 3-4 times more likely to die via suicide than females, although, there were no apparent disparities in the age of the two sexes; about 50% of males who died by suicide were between 33 and 57 years old, and similarly about 50% of females were between 31 and 56 years old (Australian Bureau of Statistics, 2016). Across the nation, the impact of suicide on young lives is most pronounced, with almost

28% of young men's deaths in the age bracket 15-24 being attributed to suicide in 2011 (Australian Institute of Health and Welfare, 2016).

Evidently, based on the reported demographic statistics world-wide, suicide presents a high-ranking societal problem, not only affecting the individuals who engage in the act, but adding socio-economic burden to communities and nations, as well as affecting mental well-being of those bereaved by suicide. There is an urgent need for improved understanding of why so many people choose to end their lives prematurely and what psychological prerequisites determine or allow this drastic course of self-destructive action.

#### **1.1.6 Aetiology of suicide.**

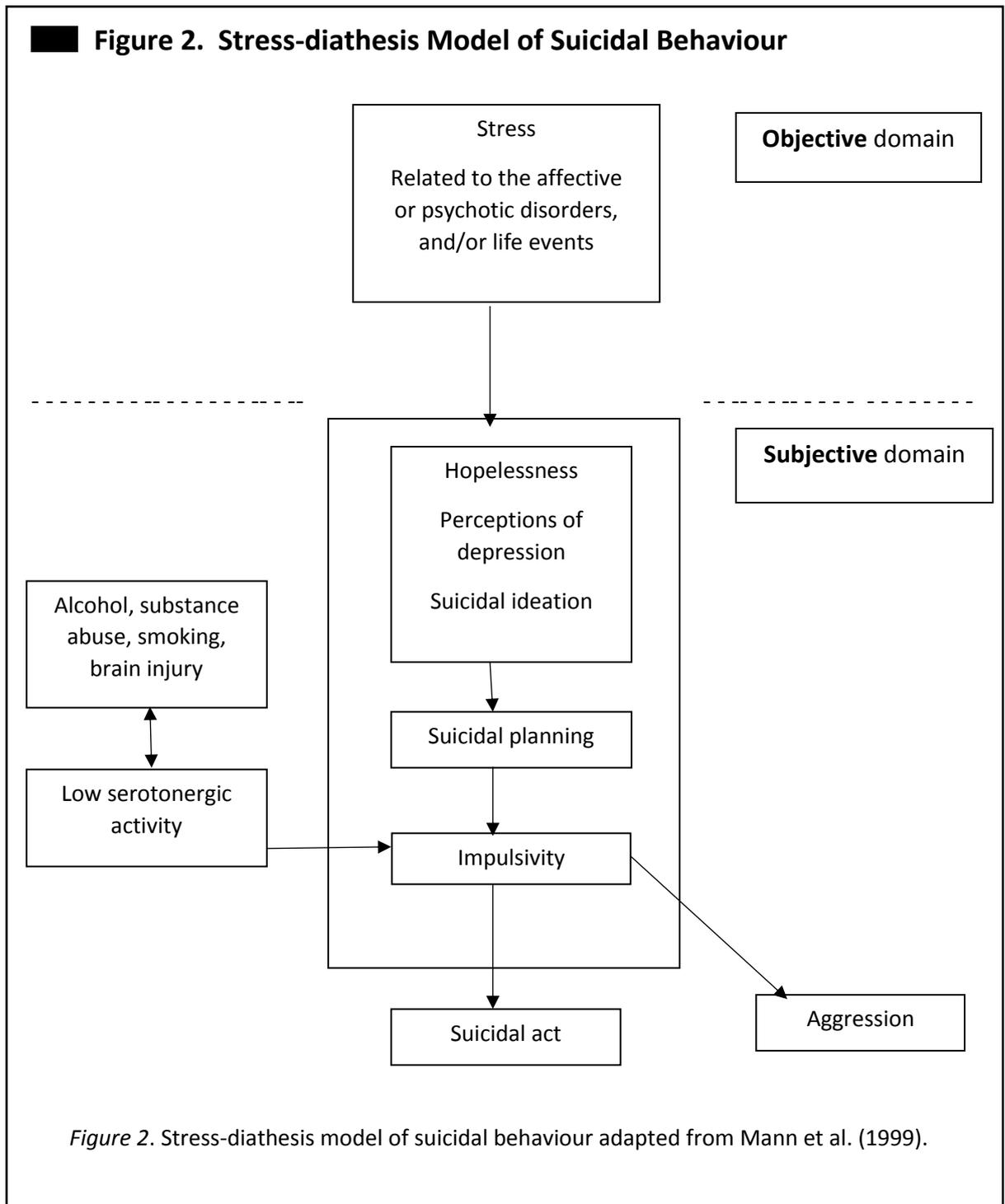
It is understood that aetiology of suicide is complex, fundamentally idiosyncratic (Lester, 2014), extending beyond a medical model of psychiatric disorder, and driven by the dynamics of numerous external and internal factors (De Gioannis & De Leo, 2012). Following Edwin S. Shneidman's formulation, suicide is described as "a multidimensional malaise" (Leenaars, 1996, p. 221), emphasising its complexity, which involves a gamut of contributing factors, from unconscious to conscious motivations, and from biological, psycho-socio-economic circumstances to ethical and philosophical principles.

Suicide is often accompanied by distressing circumstances, and thus may be commonly attributed to external pressures. However, the accuracy of such an interpretation of a suicidal act is questionable. It has been suggested that a decision to commit suicide is not simply the consequence of external circumstances alone; instead, psychological experiences of intense suffering are central in the suicide process (Leenaars, 1996; Shneidman, 1987b). Stress, thus, can precede suicide or appear to play a decisive role, being the proverbial 'straw that broke the camel's back' (Orbach, 1997), which tilts

the wish to live towards the wish to exit the intolerable situation. Most importantly, each act of suicide needs to be viewed individually, rather than by comparisons to a set of assumed universal or statistics-based demographic and socio-economic standards. For example, Mann, Waternaux, Haas, and Malone (1999) found no statistically significant differences between suicide-attempting and non-attempting populations in respect to age, sex, marital status, Caucasian ethnicity, height, and number of offspring. Although a negative association of education levels with attempted suicide reached statistical significance, this result was deemed by the authors as not clinically sound, because of a marginal difference between the levels of educational engagement, i.e., 1.3 years on average (Mann et al., 1999). Further, no statistically reliable differences were found between suicide attempters and non-attempters in respect to the objective severity of psychopathologies, although differences were evident in respect to their subjective/self-reported perceptions of the levels of depression, hopelessness and suicidal ideation. The suicide model proposed by Mann et al. (1999) therefore implicates two domains; objective and subjective strata of personal experience, highlighting how subjective evaluations feed into the suicidal tendency (Figure 2).

The stress-diathesis model proposed by Mann et al. (1999) places stress and additional psychosocial tribulations at the centre of suicidal vulnerability. The support for the suicide model placing subjective inner experiences on par with external and objective stressors is seen in a number of published studies by, for example, Fedyszyn, Robinson, Harris, Paxton, and Francey (2012); Lopez-Castroman et al. (2012); Roy (2011); Bruffaerts et al. (2010); Osvath, Vörös, and Fekete (2004); Lecomte and Fornes (1998); Lester and Saito (1998); and Sandin, Chorot, Santed, Valiente, and Joiner Jr (1998). Additionally, alcohol and substance abuse have been included within the subjective domain of Mann et

al.'s model. Although alcohol and other harmful substance use have been implicated as risk factors potentially contributing to suicidality (e.g., Ali et al., 2013; Delfabbro, Winefield, & Winefield, 2013; L. Sher, 2006), examination of this matter is beyond the scope of this thesis.



Although, the stress-diathesis model has been widely accepted, and it has been acknowledged that the processes of suicide are fuelled by unique and diverse configurations of external environmental, social, and inner psychological functioning factors, including conscious and unconscious thoughts, behaviours, as well as neurobiological predispositions; it has not yet been established which factors raise suicidal vulnerability and essentially render the act of self-destruction realisable (Simon, 2006). Thus, the search for the unequivocally essential suicide-vulnerability and suicide-enabling factors continues.

An intriguing, and intuitively commanding further investigative perspective has been construed by Israel Orbach. It purports that suicidal behaviour is underscored by self-destructive processes, such as negative focus and self-attributions, as well as self-punishing tendencies driven by an inward aggression, “which erode the person’s sense of well-being and self-love and result in mental pain” (Orbach, 1997, p. 211). In other words, suicidal tendencies appear to emerge as the remnants of a “lack of early love, and the learning and internalization of negative self-attitudes and modes of perceiving and treating oneself” (Orbach, 1997, p. 211). This proposition ties closely with the core of this thesis, and will be further explicated in the remaining chapters. Prior to that, a brief outline of other suicide-process theories, those referenced most frequently in scientific literature, is presented. This will allow familiarisation with many of the notions that will subsequently be invoked in the ensuing chapters of the thesis.

## **1.2 Contemporary theories and approaches to suicide**

Although there are many different theories about suicide, the following broad account emphasises the diversity of theory in the field, with more detailed description

limited to theories relevant to the central focus of this thesis, psychache and a sense of self.

### **1.2.1 Early sociological approach.**

The late nineteenth century brought an influential sociological perspective on the nature of suicide, as presented by sociologist and philosopher, Émile Durkheim. Initially, Durkheim drafted a suicide classification system based on the types of mental disturbances (*melancholic*, *'manical'*, *obsessive*, and *automatic*); however, attempting to apply these categories to suicide rates, Durkheim noted the dependency of suicidality rates on societal influences (Pickering & Walford, 2000). Thus, according to the type of motivational factors, firmly attached to societal contexts, Durkheim classified suicide into four categories: 1) *altruistic*, fulfilling identification with communal principles or group; 2) *egoistic*, reflecting inadequate integration with the social group, 3) *anomic*, bereaved by status or financial losses; and 4) *fatalistic*, driven by oppressive circumstances inflicted by their society (Dohrenwend, 1959; Durkheim, 1966). Durkheim suggested that the precursors to suicide were to be found predominately in social conditions, specifically in the insufficient social integration and impositions of overly impeding regulations on societies (Dohrenwend, 1959; Durkheim, 1966; Pickering & Walford, 2000).

From a psychological perspective, suicidology focus shifted from societies to smaller units of human affiliations, i.e., immediate family circles, and the inner dynamics of the suicidal individual, as advocated by Sigmund Freud and his followers. However, as it will be seen later in this thesis, the postulates of Durkheim are still relevant to contemporary understandings of suicidal behaviours (Chapter 10, section 10.3.1). The following paragraphs broadly outline the traditional Freudian approach, and most prominent contemporary perspectives. It will also be shown later in the thesis how the Freudian

school approach and other theories described here relate to the underlying theory and focus of this dissertation (Chapter 10, section 10.3.1).

### **1.2.2 Psychoanalytic approach.**

The psychoanalytic principles of suicide dynamics, proposed by Freud, suggested that self-destructive desire dwells in the entanglement of the innate life and death forces, which he figuratively called *Eros* and *Thanatos*, respectively (Freud, 1962; Menninger, 1938a; Stengel, 1962). A self-inflicted death desire, according to Freud, emerges as an unconsciously-driven response to preoccupying disavowal or loss of a vital emotional investment, i.e., a cathected person or object (Leenaars, 2004; Menninger, 1938a). Fostering this idea, the 1910 International Psychoanalytical Congress made a mark with the since popularised premise of Wilhelm Stekel, that “suicide was hostility directed toward the introjected love object – [...] murder in 180<sup>th</sup> degree” (Shneidman, 1969, p. 8). Thus, in psychodynamic terms, suicide in its core symbolises a death wish for that other, psychically bonded loved-hated relation, who provoked a feeling of anger and need for vengeance (Adler, 1967). Further, the anger or guilt of a *narcissistically-identified* individual, prompted by the demands and uncompromising aggression, turns into self-loathing and self-aimed hostility. Such affective displacement may result in self-satisfying or relief-bearing self-punishing violent actions, even though, the retribution may end in a non-reversible self-annihilation (Cain, 1961; Freud, 1922, 1961/1995; Goldblatt, Herbstman, & Maltzberger, 2014; Woodmansey, 1966). Zilboorg (1937) extended the notion of self-directed unconscious aggression to the effects of non-fulfilment of familial relationships, coupled with incapacity to love others—a proposition later revised by more recent psychoanalysts (for example, Kohut and his followers). Karl Menninger saw the act of suicide as comprising of three parts: the wish to kill, the wish to be killed, and the wish

to die (Menninger, 1938a, 1938b). This premise, although frequently cited in psychoanalytical literature, has not been supported by evidence, with many suicidology experts observing that suicidal individuals display ambiguity about their wish to live/die. Such ambivalence (continually noted in current views on suicidality; Chapter 1, section 1.1.1) was discussed by Erwin Stengel (1962), who suggested that suicide carries a message of two concurrent purposes; to end something unwanted but, at the same time, to inspire a desired change. This ambiguity is especially observed in non-lethal suicide attempts, where the attempt serves to signal the individual's crisis and need for help, and additionally solicits assistance or evokes an emotional reaction from the recipients of this message (Stengel, 1962). Similarly, according to Adler, suicide has a dual meaning; it communicates distress, protest, or hurt to the perceived transgressors and raises one's fallen self-esteem (Ansbacher, 1969). Horney presented a complementary view of suicide as a beatifying act of martyrdom, through which one strives for an *idealised self*, while destroying the *actual*, imperfect and despised self (Horney, 1950). Goldblatt and Maltzberger (2010) extended the psychoanalytic view, describing suicide as *narcissistic malice*, by which suicide serves a self-preserving function, counteracting affective devastation and re-instating a sense of self-cohesion within the tormented self.

Hendin (1963) explored these notions and distinguished six types of suicide, based on a primary motivation of the suicidal individual: 1) Suicide as *retaliatory abandonment* in response to rejection; 2) as *retroflexed murder*, outrage inverted towards the self as a revenge towards an introjected person; 3) suicide as a *re-union*, re-joining the loved one in death; 4) suicide as *rebirth*, re-establishment of a desired relationship with the loved one; 5) suicide as *self-punishment*, self-blame for unmet grandiose aspirations or for inability to fulfil one's own social role; and 6) suicide as a physical *completion of*

*emotional death*, underscored by emotional detachment from others, and the belief that the self had already perished in the emotional sense of being. At least four of these suicide types display a high degree of interpersonal complications, and all of the types appear to entail pronounced inner conflicts or affective struggles to reach a gratifying emotional outcome (ideas explored in the subsequent studies of this thesis).

Fundamentally, while recognising the weight of interpersonal conflict and love-hate entanglement in the suicide process, the psychoanalytical movement has asserted that “suicide can be traced to intrapsychic processes” (Stoff & Mann, 1997, p. 2), implying further need for the exploration of the inner psychic dynamics if the understanding of suicide is to be improved. This notion was strongly supported by Shneidman (see Chapter 2, section 2.3) and also expressed by Goldblatt (2008); Hendin (1991); Leenaars (1996); Maltzberger (1993); and O’Shaughnessy (1999).

### **1.2.3 Classical and operant conditioning approach.**

Based on the theories of Albert Bandura and Lev Vygotsky, suicide, as any other behaviour, is held to be a learned event, mostly shaped via learned associations (Frederick & Resnik, 1971), and reinforced in childhood by environmental and interpersonal experiences. Children adopt ways of directing emotional burdens in the expectation of achieving desired effects (reinforcers), be it their own sense of emotional relief, or punishment, or manipulation of others. The cognitive stance of a suicidal individual is underscored by learned helplessness (Abramson & Seligman, 1978; Maier & Seligman, 1976), often combined with other cognitive symptoms of depression. Similarly to Durkheim’s postulates, at the base of suicide is a diminished cohesion or affiliation with cultural values or exposure to psychologically toxic external influences, inappropriate

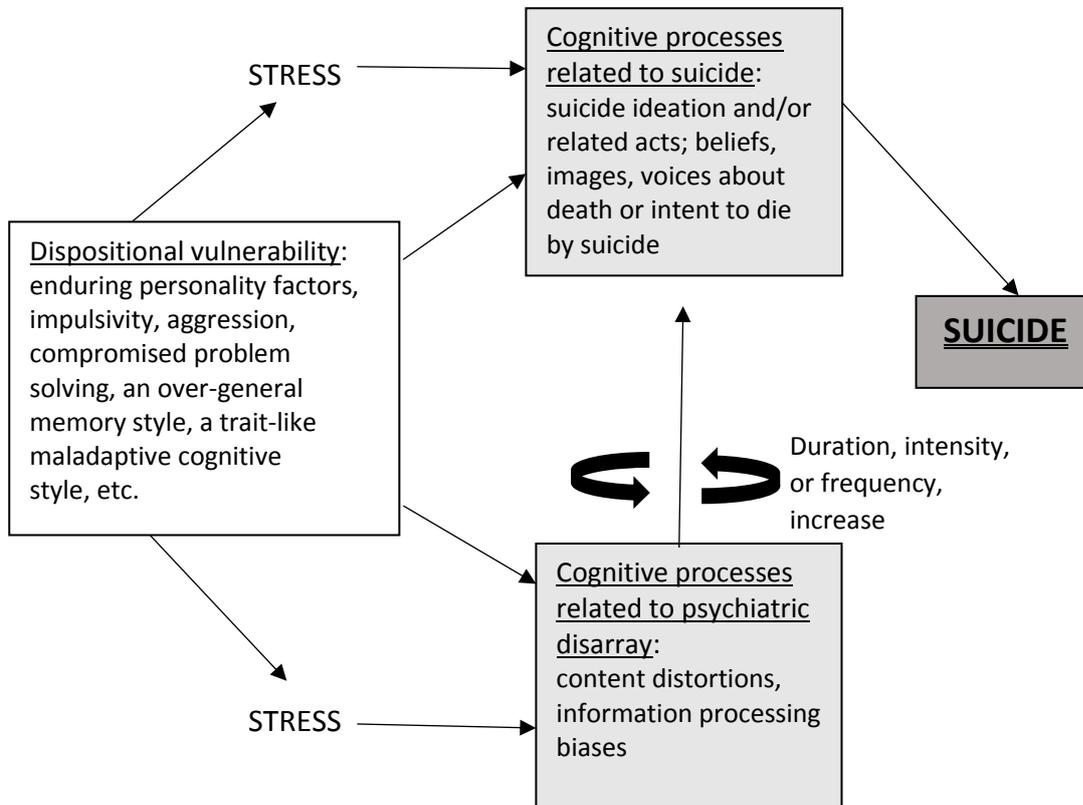
role-modelling, and lack of societal support, underscored by inadequately engrained respect or appreciation of life (Leenaars, 2004).

#### **1.2.4 Cognitive-behavioural approach.**

The cognitive-behavioural approach, advocated by Aaron T. Beck and his supporters, has viewed the suicidal process as stemming from the symptoms of depressive illness. These mainly encompass hopelessness (negative appraisal of prospects and coping resources); cognitive distortions, underlying a triad of negative views of the self, the world, and the future (Beck, Kovacs, & Weissman, 1975; Beck, Steer, Beck, & Newman, 1993); and impoverished cognitive and practical problem-solving aptitude or skills (as demonstrated by Orbach, Bar-Joseph, & Dror, 1990; Zeyrek, Gençöz, Bergman, & Lester, 2009). A sense of hopelessness or destitution is often coupled with a distorted, overly critical self-image and self-disdain, frequently overlapping with a self-blaming perspective (Leenaars, 2004; Ross, 2013; S. Yen & Siegler, 2003). Along with cognitive restrictions and strong emotional envelopment, the sufferer is unable to access thoughts beyond his/her own deleterious and erroneous interpretation of circumstances, and becomes constricted within his/her own self-condemning perspective (Leenaars, 2004). The mental suffering culminates in the belief that death is the only means of attaining relief from the painful and unsolvable situation, a view shared by Shneidman (as will be discussed further in Chapter 2, section 2.2).

Wenzel and Beck (2008) aligned their individual empirical findings and theoretical insights, proposing a cognitive model of suicidal behaviour (presented in Figure 3).

**Figure 3. Suicide Process Model by Wenzel and Beck (2008)**



*Figure 3.* Heuristic suicide model adapted from Wenzel and Beck (2008; Figure 1, p. 190). The degrees of shading represent proximity/relatedness to suicide.

This model positions dispositional vulnerability factors as providing the basis for the suicide process, with life stressors contributing to the development of symptoms of psychiatric disorders and associated maladaptive cognitions (refer to Figure 3). Additional stress activates suicide-related cognitions, which may give rise to suicidal action to follow. Wenzel and Beck acknowledged variability between and within individuals as to the content of the model, as well as the severity of internal and external experiences (Wenzel & Beck, 2008).

### 1.2.5 Biological approach.

As indicated previously in sections 1.1.4 and 1.1.6, there is growing evidence of malfunctions in neuro-biological processes linked to suicidal intent or behaviour. One of the pioneering studies in this area was conducted by Åsberg, Träskman, and Thorén (1976). They found that lower 5-HIAA levels (metabolite of serotonin) in the cerebrospinal fluid (CSF) were associated with higher suicide rates in depressed and hospitalised patients (similar reports have been provided by Apter et al., 1990; Bortolato et al., 2013; Chistiakov, Kekelidze, & Chekhonin, 2012; Joiner Jr, Johnson, & Soderstrom, 2002; Miller et al., 2013; Orelan et al., 1981; Pompili et al., 2010; Roy, Jong, & Linnoila, 1989; Träskman, Åsberg, Bertilsson, & Sjöstrand, 1981; Van Praag, 1982; Wasserman, Geijer, Sokolowski, Rozanov, & Wasserman, 2007). Further, Kohyama (2013) made associations between serotonin functioning, sleep, and suicide, with the hormones oxytocin and estradiol, contributing to gender differences in serotonergic processes. Fawcett, Busch, Jacobs, Kravitz, and Fogg (1997) proposed an interactive four-element clinical-biochemical model of suicide in depression, implicating: excessive amounts of corticotrophin-releasing factor (CRF) in the HPA axis, trait and state hopelessness, severe anhedonia, and impulsivity-related low levels of serotonin and cholesterol. Further, a recent study by Keilp et al. (2016) showed lower levels of cortisol in suicide attempters relative to non-attempters.

Additionally, Courtet et al. (2015) suggested that the likelihood of suicide attempts increased according to the levels of C-reactive protein (CRP) in blood (a marker indicative of bodily inflammation). Courtet et al. (2015) found that 79.8% of participants in their study to investigate a history of suicide attempts had also demonstrated anxiety disorders. The odds ratio of attempted suicide in respect to anxiety was high (2.63; CI<sub>95</sub>

[1.60; 4.33]) and statistically significant ( $p < .001$ ). Schrepf, Markon, and Lutgendorf (2014) found a weak correlation between anxiety and CRP ( $r = -.008$ ;  $p$  not provided), but relatively stronger correlations for anxiety with markers of childhood trauma (with Pearson's correlations for emotional abuse .36; physical abuse .28; sexual abuse .21; emotional neglect .31; and physical neglect .30). Relationships between those childhood adversities and CRP were between .06 and .11,  $p < .034$  (Schrepf et al., 2014). These findings will be later shown to have special significance, aligning with the theory and findings of this thesis, as discussed throughout Chapters 8, 9, and 10.

Investigations of anatomic brain structures have shown structural brain changes related to suicidality (Brüne et al., 2011; Gifuni et al., 2015; Spoletini et al., 2011; Vang, Ryding, Träskman-Bendz, van Westen, & Lindström, 2010). In a more recent review, Zhang, Chen, Jia, and Gong (2014) concluded that there was sufficient evidence to suggest that the brains of suicidal individuals differed on various anatomical and functional aspects from those of non-suicidal counterparts. They proposed a model of suicidal behaviour in depressed persons, with the suicidal pathway progressing from a suicide-vulnerability gene, abnormal expression of the gene, depression, suicide ideation to suicide, with peripheral agents influencing this path; specifically, adverse childhood experiences, psychosocial factors (the authors did not specify their nature), structural alterations in certain brain areas (the striatum, orbital frontal, and anterior cingulate cortices), altered neural transmission patterns, cognitive impairment, potential substance abuse, impulsivity, adverse life events, and depressive episodes. A number of themes, such as depression, childhood adversities, and psychosocial factors, as indicated by Zhang et al., will be given further consideration in the light of the results from the studies reported in this thesis.

An array of physiological functioning components, such as immunological responses, have also been linked to increased suicidal ideation, and lethal and non-lethal suicide attempts (Ganança et al., 2016). Further, endocrinological functioning (testosterone, oxytocin, and prolactin levels) has also been associated with suicidality (e.g., Engert, Koester, Riepenhausen, & Singer, 2016; Jokinen et al., 2012; R. Lee, Ferris, Van de Kar, & Coccaro, 2009; Padurariu et al., 2016; Pantazatos et al., 2016; Pompili et al., 2012; Leo Sher et al., 2012; Stefansson et al., 2016). The potential role of oxytocin has been considered when drawing inferences from the results of studies reported in this thesis (Chapter 10, section 10.3.1).

A review of suicidality research in the developing area of molecular genetics can be found in Fiori and Turecki (2010); as one of the many findings, it has been shown that suicidality is linked to the expression of the spermine/spermidine *N*1-acetyltransferase gene (SSAT) and its variant, SSAT342A/C, examined in various brain regions (Sequeira et al., 2006). Further support for a genetic influence on suicidality has been presented, for example, by Du, Faludi, Palkovits, Bakish, and Hrdina (2001); Pantazatos et al. (2016); Rao et al. (2016); and Yanagi et al. (2005).

The genome area of study is still evolving, and limitations of genetic investigations have been outlined by Tsai, Hong, and Liou (2011), who emphasised that suicidal propensity “involves multiple genes interacting with non-genetic factors. A better understanding of the SB [suicidal behaviour] genes [can be achieved] by combining whole genome approaches with case–control association studies” (p.809). Genetic contribution to suicidality has not been investigated in this thesis but, nonetheless, some of the inferences contained in later chapters are consistent with theoretical genetic links with suicidality (discussed in Chapter 10, section 10.2.2).

### **1.2.6 Neurocognitive approach.**

Neurocognitive approaches recognise that suicide may be underscored by the presence of trans-diagnostic cognitive difficulties, such as: “motor impulsivity, decision making, response inhibition, flexibility of response generation, self-monitoring/error-processing, sensitivity to others’ anger, and impaired response to positive emotional stimuli, hopelessness, harm avoidance, and delayed rewards” (National Action Alliance for Suicide Prevention: Research Prioritization Task Force, 2014, p. 18).

From a growing number of diverse neurocognitive studies that have examined suicidal proclivity (for example, studies by Fan, Wu, Yao, & Dong, 2013; Jollant et al., 2010; Marzuk, Hartwell, Leon, & Portera, 2005; Matthews, Spadoni, Knox, Strigo, & Simmons, 2012; Tsai et al., 2011), it can be concluded that “vulnerability to suicidal behaviour and the triggering of the suicidal crisis is related to a combination of trait and state deficits, including valuation processes on one side and cognitive control and self-referential processes on the other side” (Jollant, 2016, p. 110). The self-referential processes and anomalies in perceiving positive emotional events are most intriguing and, as will be seen later in this thesis, self-referential emotions and impaired positive affect are of particular interest in terms of potential suicide vulnerability (Chapter 9, section 9.6; Chapter 10, section 10.3.2; also see Pompili, 2010).

Although these advances in neurology hold promise for improved pharmacological remedies for suicide, various psychological theories continue to offer leads about how psychotherapeutic interventions might usefully be applied to the treatment of suicide.

### **1.2.7 Existential-constructivist approach.**

An existential-constructivist approach to treating suicidal persons has developed from the merging of Victor Yalom and James Bugental’s proposals, emphasising the

importance of an all-embracing subjective and objective self-awareness in the present moment (Yalom & Bugental, 1997), combined with the constructivism insights of Robert A. Neimeyer (J. R. Rogers, Bromley, McNally, & Lester, 2007). The theory proposes that meanings are created proactively, rather than reactively, with individuals organising their mental constructions into hierarchical categories of meaning and appropriately designing suitable actions to address the demands of their social world (Neimeyer, 1995; Neimeyer & Winter, 2006). The act of suicide stems from a sense of impoverished meaning about one's own existence within the perceived constraints or demands of the world (J. R. Rogers, 2001). In other words, "individually constructed meaning-based expectations and anticipations regarding self, others, relationships, and the world are motivated by existential meaninglessness and isolation", influenced by mediation of inner and outer experiences (J. R. Rogers & Soyka, 2004, p. 16). This view of suicide was validated by J. R. Rogers et al. (2007), who demonstrated that thoughts about suicide were accompanied by some or all of four motivational factors:

- *psychological* (often reflected in psychological pain or suffering; a notion corresponding to Shneidman's theory about the suicide process);
- *relational* (referring to interpersonal considerations; a motive in line with psychodynamic, cognitive, classical and operant conditioning and Kohutian premises);
- *somatic* (attitudes towards intolerable bodily conditions; having similarities with the perspective of Orbach (1996)); and
- *spiritual* (often shown by loss of life-purpose or identifying with spiritual tenets; matching the propositions of Kohut, as this will be seen in Chapter 2, section 2.6.2).

From an existential perspective, mental constructions of the world, oneself, others and relationships are continually, and to various degrees, challenged by social and natural dynamics. When the environmental pressure exceeds an individuals' capacity to endure the disturbance, the individual is compelled to respond with action. Responses to the unnerving adversities or stress may be selected from three options: change in the mental construction/view via adaptive restructuring of the pre-existing perspectives; preservation of the existing view, pacifying its impact either via compensatory or mollifying actions; or suicide (J. R. Rogers et al., 2007).

Another existential perspective explicating a possible suicide motive, is the notion of suicide as a *dedicated act*, performed in order to validate one's imperatives, ideologies, and prized meaning, in order to preserve and emphasise the value of that meaning, even if this necessitates self-sacrificial annihilation (Kelly, 1961).

The existential approach, with emphasis on self-knowledge and self-perception in the context of relational dynamics as underlying features of a healthy personhood and life meaning, resonates with the Kohutian theory (outlined in Chapter 2, sections 2.6 – 2.8).

### **1.2.8 Other and amalgamated approaches.**

More than one hundred years past the early Freudians' discussions of suicide, the number of approaches to suicide has considerably expanded. Plausibly, interactions between gene variations, neuro-biological networks and, associated with those networks, molecular components (neurotransmitters, post-synaptic receptors, and various forms of proteins, lipids, metabolites, hormones and catalysts/enzymes), as well as social environments and developmental factors, are implicated in psychopathology and suicidal inclinations (Hawton & Van Heeringen, 2009). The hypothesis of distorted or impaired neuro-bio-psycho-socio-cultural functioning appears to be the most readily accepted

approach to defining a phenotype that displays vulnerability to suicide (Hankoff & Einsidler, 1979; Hawton & Van Heeringen, 2009; Leenaars, 2004; van Heeringen, 2001).

A number of specific suicide-related premises, embedded in or co-existing with the interactional context of bio-psycho-socio-cultural-spiritual approaches, have emerged, with Linehan's model being one of those theories (Linehan, Chiles, Egan, Devine, & Laffaw, 1986). Linehan, having mostly, but not exclusively, examined the propensity for suicidal behaviour in patients with borderline personality disorders, recognised the complexity behind suicide, and placed interpersonal dynamics at the heart of suicidal acts (Linehan, 1993; Linehan et al., 1986). Next to interpersonal context, Linehan gave weight to the cognitive, behavioural and emotional aspects of functioning, such as self- invalidation and emotional dysregulation. These triggers were held to be prompted by social conditioning, biological predispositions, and developmental influences (Brown, 2006; Kehrer & Linehan, 1996; Linehan, Comtois, & Ward-Ciesielski, 2012; Linehan & Shearin, 1988). Similarly, Faza'a and Page (2003) found that self- invalidation contributed to suicidal behaviour.

Further, new insights into the process of suicide were introduced by Joiner (2005), who proposed the interpersonal-psychological theory of suicide encompassing three elements: *thwarted belongingness* (a sense of disconnection with others); *perceived burdensomeness*; and *acquired capability* for suicide via habituation to fear and pain . According to Joiner, ambivalence about life and death represents unpreparedness for the act, that is, insufficient capacity for suicide. A parallel notion of habituation to or tolerance of pain, as pre-requisites of a suicidal act, was also suggested by Orbach (1994). Orbach delineated theoretical and empirical indices of physical dissociation as one of the catalysts for suicidal actions, and associated the phenomenon with problematic early

childhood attachment to carers, bodily and emotional experiences, negative relationship with one's own body, diminished awareness of the self, self-love, and self-care (Chapter 1, section 1.1.6; Orbach, 2006).

R. C. O'Connor (2011) proposed a three-stage model of suicidal behaviour (the Integrated Motivational-Volitional model of suicidal behaviour; IMV), which incorporated some of Joiner's postulates and comprised:

- pre-motivational phase: a combination of diathesis, environment, and life stressors;
- motivational phase: "threat to self" emerging from an impoverished social problem-solving capacity, memory biases, rumination, which act on the individual's sense of defeat and humiliation; and socially-bound motivational cognitions, such as burdensomeness and/or thwarted belongingness, contributing to the sense of entrapment; all progressively leading to suicidal ideation and intent; and
- volitional phase: suicidal behaviour arising from intent, access to means, impulsivity, and socially acquired capacity for the act.

The motivational element of O'Connor's IMV model resonates with self psychology premises of the suicidal process, as pertinent to this thesis, and presented in Chapter 2.

Lester promoted a holistic approach to the study of suicide, considering totality of life-situations of suicidal individuals. Having submitted 15 suicide theories to factor analysis, Lester formed five descriptive clusters of theoretical processes relevant to suicidality:

- inner, unconscious, and early traumatic processes - as promoted by Sigmund Freud, Karl Menninger, Henry A. Murray, Edwin Shneidman, Harry Stack Sullivan, and Gregory Zilboorg;
- irrational maladaptive cognitions - as proposed by Antoon Leenaars and Aaron Beck;
- social learning via awards and punishment - as endorsed by David Lester, Andrew Henry, and James Short;
- impoverished psychological coping with stress - premises of George Kelly and Ronald Maris;
- narcissistic (self-esteem and self-preoccupation) - as suggested by Alfred Adler and Ludwig Binswanger (Lester, 1994).

### **1.3 Main Implications of Current Knowledge and Theoretical Approaches to Suicide**

Based on extensive relevant literature searches, current suicidology research, although having access to diverse contributions of valid and informative theories and evocations as described in this chapter, appears to have been predominantly focused on suicide predictors or risk factors. Nonetheless, it has been acknowledged that psycho-socio-demographic, genetic, and biological predictors do not consistently account for all suicides. Moreover, such predictors are not always modifiable (Flamenbaum & Holden, 2007), and would therefore not always be suited as targets for suicide intervention or prevention. It is possible, therefore, that a research focus limited to psycho-socio-demographics, genetics, and biological predictors, while providing valid contribution to science, may have limited effects on progress in suicidology. This suggestion is supported by persistently high suicide rates across the world, with certain communities, for

example, Indigenous Australians, showing especially critical vulnerability to suicidality (Chapter 1, section 1.1.5). It has been suggested that, to advance the understanding of suicidality, suicide needs to be viewed, not essentially as a manifestation of psychiatric illness or neurobiological malfunction, but from a phenomenological perspective, as:

[...] the result of fractures with oneself, with other people, with nature, with the opportunity to experience feelings of well-being and to appreciate that which surrounds us. [...] Such experience is not necessarily related to a psychiatric disorder such as depression, but rather it is a separate, peculiar dimension that, often momentarily, overwhelms the individual. One can be profoundly depressed or psychotic, yet seeking treatment and hoping to get better, never thinking of endings one's life. (Pompili, 2010, p. 234)

This perspective thus implies that at the basis of suicide is a propensity for an inner psychological maladjustment or disconnection; a characteristic which is neither necessarily universal nor permanent. This approach could perhaps account for some rare, nonetheless existent, exceptions in the homogeneity and universality of vulnerability to suicide in different communities or cultures, as expressed by Mishara:

Even though suicide occurs in every culture, we may wonder if the phenomenon of suicide is essentially universal, or if we are dealing with a specific behavior whose etiology varies from culture to culture. Or, we may ask how much of our general understanding of suicide is applicable across cultures and when cultural factors may have a predominant influence. (Mishara, 2006, p. 1)

Mishara's suggestion of a culturally-bound aetiology of suicidality appears to be supported by an incidental finding of Everett about the Pirahã people, who reportedly are free of suicidal tendencies (see Chapter 1, section 1.1.4). The Pirahã's alleged

invulnerability to suicide implies that there must be some crucial psychological differences between Pirahã individuals and persons from modernised or developing cultures. Furthermore, the example of the Pirahãs, who by western standards are economically disadvantaged, contradicts the common portrayal of suicide as related to economic poverty (for example, WHO estimated that 85% of suicides occur in economically disadvantaged countries; Khan, 2005). Shneidman and his colleagues swiftly summarised the economics-suicide debate, stating that suicide is neither “*the curse of the poor*” nor “*the disease of the rich*” (Shneidman, Farberow, & Litman, 1961, p. 14), instead being found across all levels of society (Leenaars, 2004).

Concluding this discussion, it is reasonable to assert that suicidal vulnerability is not universal and suicidality is not always well described by models expressed in terms of suicide-risk factors. Suicidality appears to be culturally influenced and unique to each individual, i.e., underscored by the features of the very composition of personhood (details are presented throughout Chapter 2).

Some of the current trends in suicidology have adopted this phenomenological approach, supporting the premise that suicide is preceded by either a subjective or objective traumatic psychological event, which evokes intolerable psychic suffering or excruciating tension, also referred to as *psychological pain* or *psychache* (Leenaars, 1996, 2004; Shneidman, 1993). Death in itself is not a goal of suicide; instead it may be cessation of consciousness, which keeps psychological pain alive. Thus, metaphorically, suicide can be understood to be an escape from one’s own painful and disturbing negative self-perception, self-blame, suddenly diminished self-esteem (but not essentially chronically low self-esteem), or a sense of inadequacy, rather than a forthright volition to die (Baumeister, 1990). For Shneidman and Kohut alike, the inner constitution of

selfhood is the force behind motivational and behavioural patterns leading a suffering individual onto the path of suicide. Shneidman and Kohut's theories of suicide and the self are presented in detail next, in Chapter 2.

## Chapter 2

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### The Notion of Self, Psychache, and Suicide

*Make no mistake about people who leap from burning windows. Their terror of falling from a great height is still just as great as it would be for you or me standing speculatively at the same window just checking out the view; i.e. the fear of falling remains a constant. The variable here is the other terror, the fire's flames: when the flames get close enough, falling to death becomes the slightly less terrible of two terrors. It's not desiring the fall; it's terror of the flames. And yet nobody down on the sidewalk, looking up and yelling 'Don't!' and 'Hang on!', can understand the jump. Not really. You'd have to have personally been trapped and felt flames to really understand a terror way beyond falling.*

- David Foster Wallace (1996, pp. 696 - 697)

#### 2.1 Shneidman's View on Self and Suicide

Shneidman's early theoretical conceptions and clinical research findings in the area of phenomenology of suicide emerged in the 1950-60s (e.g., Shneidman & Farberow, 1957). Having studied over 700 suicide notes, therapeutically engaged with numerous suicidal patients, and written extensively on the topic, Shneidman was recognised as a prolific suicidologist and thanatologist. As a protégé of Henry A. Murray, Shneidman became a supporter of the pragmatic epistemological approach to the study of psychology, endorsed earlier by William James (Shneidman, 1998). The Jamesian paradigm combined philosophical and scientific methods towards the investigation of

consciousness or self (James, 1890). Shneidman assigned highest importance to the mind and its processes (i.e., consciousness) as an orchestrator of human activity. He believed that “suicidal drama, [is] played out on the stage of the mind” (Shneidman, 1998, p. 249) and that introspection provides the method for studying suicidal tendencies (Shneidman, 2001; further details will be presented in section 2.3).

Based on extensive clinical experience, Shneidman asserted that the most dominant emotion in suicidal malady is *psychache*, an umbrella term that includes feelings of despair, loneliness, shame, anguish, frustration, disappointment, or other negative emotions, as well as states which have been medicalised and formulated as anxiety, depression, schizophrenia, or affective disorders (Shneidman, 1998). Shneidman distinguished between psychopathology and suicide and emphasised that, at times, psychiatric disorders, especially depression, may result in suicide, although these conditions cannot be equated with suicide (Farberow & Shneidman, 1961).

## 2.2 Shneidman’s Model of Suicide

Shneidman’s early conceptualisations of suicide, particularly when enacted impulsively, was a four-component model comprising: 1) self-hate, termed *inimicality*; 2) psychological disturbance denoted as *perturbation*; 3) tunnelling of vision, representing mental constriction; and 4) the conviction that death (i.e., termination of consciousness) provides a solution to an unbearable state or situation (Shneidman, 1978). Subsequent clinical research inspired Shneidman to revise the model, and his final proposal of suicide entailed the negative emotion of *psychache*, as a principal and essential element of suicide. This model has met with a broad support from suicidology experts (e.g., Berlim et al., 2003; Chávez-Hernández & Leenaars, 2010; Chodkiewicz, 2013; Davie, 2005; DeLisle

& Holden, 2009; Mee, Bunney, Reist, Potkin, & Bunney, 2006; Meerwijk, Ford, & Weiss, 2013; Orbach, Mikulincer, Gilboa-Schechtman, & Sirota, 2003; Pompili, Lester, Leenaars, Tatarelli, & Girardi, 2008).

Shneidman conceptualised psychache as pronounced psychological pain; “the introspective experience of negative emotions such as anger, despair, fear, grief, shame, guilt, hopelessness and loss”, which stems from and is maintained by unfulfilled or thwarted psychological needs (Shneidman, 1999, p. 287). This overwhelming ache of negative emotions motivates the sufferer to seek release from the affliction, even if this results in death (Shneidman, 1993). According to Shneidman, the suffering individual’s intention is cessation of unendurable consciousness, rather than death (Shneidman, 1984, 2001).

Psychache, according to Shneidman, is necessarily embedded within an interpersonal context, which is the source of meeting psychological needs (Farberow & Shneidman, 1961; Shneidman, 1984). The unmet psychological needs (as outlined by Murray, 1938; Figure 4, presented on the next page), and how an affected individual relates to those psychological disappointments, constitute the root of emerging suicidality (Shneidman, 1998).

According to Shneidman, fewer than 20 psychological needs may be involved in a suicidal process. The challenge, however, for both clinicians and researchers, lies in the fact that psychological needs do not occur in a standard or predictable pattern. Each individual forms a very private idea of what he/she perceives as psychologically fulfilling and unfulfilling (Shneidman, 1998). Thus, constellations of personal needs vary between individuals. However, according to Shneidman, those needs fall into two categories of *modal* and *vital* needs (Shneidman, 1998). Modal needs are daily-living flexible needs

that allow one to establish, maintain and define one's own self. Vital needs are deployed in times of psychological crisis, the crisis marked by constricted cognition and inability to see or conjure options; when only death seems a plausible or attractive option (Shneidman, 1984, 1998).

#### ■ Figure 4. Murray's Psychological Needs

Abasement - to submit passively, to belittle self;  
 Achievement - to accomplish something difficult, to overcome;  
 Affiliation - to adhere to a friend or group, to affiliate;  
 Aggression - to overcome opposition forcefully, fight, attack;  
 Autonomy - to be independent and free, to shake off restraints;  
 Counteraction - to make up for loss by restriving, get even;  
 Defendance - to vindicate the self against criticism or blame;  
 Deference - to admire and support, praise, emulate a superior;  
 Dominance - to control, influence, and direct others;  
 Exhibition - to excite, fascinate, amuse, entertain others;  
 Harm avoidance - to avoid pain, injury, illness, and death;  
 Inviolacy - to protect the self and one's psychological space;  
 Nurturance - to feed, help, console, protect, nurture another;  
 Order - to achieve organisation and order among things and ideas;  
 Play - to act for fun, seek pleasure for its own sake;  
 Rejection - to exclude, banish, jilt, or expel another person;  
 Sentience - to seek sensuous, creature-comfort experiences;  
 Shame-avoidance - to avoid humiliation and embarrassment;  
 Succorance - to have one's needs gratified, to be loved;  
 Understanding - to know answers, to know the hows and whys.

*Figure 4.* Adapted from Shneidman (1998); originally developed by Henry A. Murray, and presented in *Explorations in Personality* (1938).

Shneidman concluded that vital needs are the key to therapeutic intervention, and specified those as: "affiliation, counteraction, defense, inviolacy, shame-avoidance, and succore [*sic*; Murray's succorance], and the combined needs for order and understanding" (Shneidman, 1998, p. 248). Thus, a suicidal individual, as proposed by Shneidman, is a person who may have experienced any combination of frustrated needs,

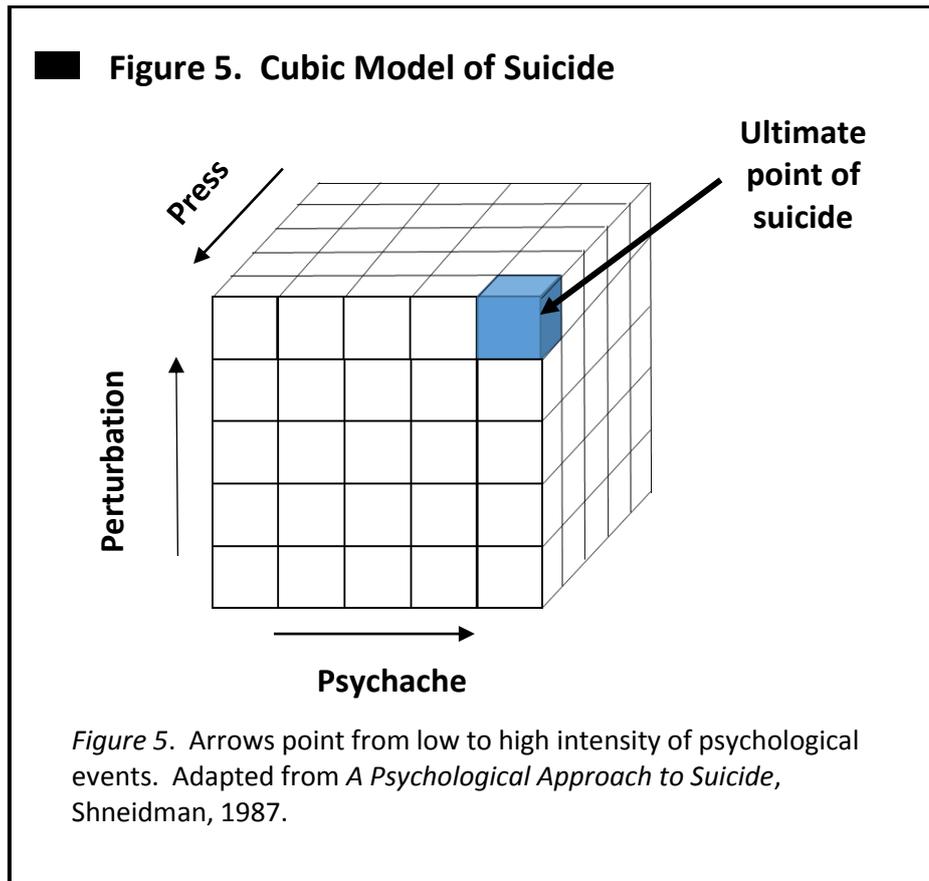
accompanying thwarted love/a sense of belonging; fractured control and a sense of order; shattered self-image, humiliation or shame; damaged or lost relations; and grief and/or hostility and anger (Shneidman, 1998).

While assigning psychache with fundamental importance within a suicide process, Shneidman recognised that, despite the deleterious nature of psychache, its presence does not necessarily result in suicide (Shneidman, 2001). The painful emotion can be tolerated to some degree, with tolerance thresholds varying between individuals. Suicide may occur when, along with psychache, other conditions, labelled by Shneidman *perturbation* and *press*, infiltrate the sufferer's psyche. Shneidman's complete theory of suicide, therefore, comprises a three-dimensional model, represented as a cube, with each aspect representing one of the cube's dimensions (Figure 5). Perturbation represents the state of upset, agitation, or mental disturbance (Shneidman, 1987a). Press constitutes external and internal influences, both actual or imagined; that an individual perceives as untoward events, rendering psychological discomfort (Shneidman, 1987a). Shneidman contended that the way in which the mind manipulates information, even in respect to seemingly or realistically favourable events, might contribute to suicidality:

There is positive press (e.g., good genes and happy fortune) and negative press (e.g., conditions and events that perturb, stress, threaten, or harm the individual). It is the latter—even success is negative if it is threatening—that are relevant to suicide. [...] the press that comes as the mind mediates, exaggerates, or even imagines the negative press that it perceives or misperceives. (Shneidman, 1987a, p. 174)

Although this contention that positive events exert negative pressure on the individual appears logical and plausible in real life situations, the current author has not

encountered reports by suicidal individuals attributing their suicide intent to joyous or pleasing events. This would imply that such pressure may operate at a subconscious level, beyond or without purposeful direction of attention to one's own inner events, i.e., beyond self-awareness or introspection.



Overall, the cubic model demonstrates that an individual can be highly disturbed (as indicated by the perturbation axis, Figure 5), yet not suicidal. The lethality (medical seriousness) of suicide is described by Shneidman by “how deathfully [*sic*] suicidal he is” (Shneidman, 1984, p. 322), which is ascertainable by collating intrapersonal conscious and unconscious intentions, interpersonal and environmental aspects, and rating implementation methods and rescue potentiality (Tabachnick & Farberow, 1961).

Maurizio Pompili equated Shneidman's idea of suicide lethality with *suicidality*, that is, "the likelihood of an individual's being dead by his or her own hand in the future" (Pompili, 2010, p. 241). However, although Shneidman recommended establishing lethality levels in order to inform about the potential for suicide, he also held that addressing high lethality itself is most often ineffective (Shneidman, 1984). Nonetheless, lethality levels can be reduced by addressing mental perturbation (Shneidman, 1984) and, as suggested by the model's interactive dimensionality, where possible, by interpersonal and environmental pressure.

Suicide can often be seen by others as pointless or excessive, especially in the absence of an understanding that suicide is promulgated or influenced by pathological *cognitive constriction* and *dichotomous thinking*; i.e., an uncompromised assent to either an instant resolution of painful consciousness or, if no such resolution is deemed viable, an utter cessation of consciousness (Shneidman, 1984). Whilst in the midst of cognitive impoverishment and rumination over perceived adversities, positive aspects of one's own existence are beyond the vision of the sufferer, inhibiting the potential to capitalise on those positive qualities and summon an alternative solution (Shneidman, 1984). Again, this implies that suicidality is underscored by limited potential for objective or thorough introspection.

Shneidman believed that there is "never a needless suicide" (Shneidman, 1984, p. 321). He held that, unless committed in a psychotic or impulsive state, suicide is a rational act to those engaging in it, because they have construed the reason behind the act as counteracting the painful frustration of unfulfilled needs (Shneidman, 1984). Further, Shneidman found that emotional disturbance fuels logical thinking errors (Shneidman, 1985), which may capitalise on the perceived/misperceived reasons. One of

those mental processes he called “concludifying – coming to conclusions” about one’s reasons, justification, or inevitability of suicide (Shneidman, 1982, p. 54). When evaluation of a situation leads to a conclusion that “therefore, I must kill myself”, the word *therefore* often becomes an inflexible prerogative, ‘must-do-itness’, the only logicity or purpose (Shneidman, 1982). Thus, suicide to large degree can be seen as an emotionally charged act, where “illogical conclusions may seem "sensible" when they occupy and sway the mind” (Shneidman, 1985, p. 136).

For Shneidman, there are no universal truths or rules in suicidal equation, and no single suicide pathway. He recognised suicide as unique to each individual, idiosyncratic phenomenon (Shneidman, 1987a) but also noted 10 common features, which may frequently accompany suicidal behaviour:

- I. suicide purpose: to seek a solution;
  - II. suicide goal: the cessation of consciousness;
  - III. suicide stimulus: unbearable psychache;
  - IV. suicide-related stressor: frustrated psychological needs;
  - V. suicide recurrent emotion: hopelessness-helplessness;
  - VI. suicide-accompanying attitude: ambivalence towards the suicide;
  - VII. suicide-related cognitive state: constriction;
  - VIII. suicidal action: egression (escaping, aborting the situation);
  - IX. interpersonal motivation: communication of intention;
  - X. recurrent patterns/consistency: perpetuation of lifelong coping patterns
- (Shneidman, 1987a).

From those suicide commonalities, it is evident that Shneidman diverged from the ideas of Wilhelm Stekel and those of Karl Menninger, who referred to suicide as a largely

self-serving, murderous wish of death upon another or one's own self (Chapter 1, section 1.2.2). Shneidman saw suicide as a self-defence mechanism against agonising psychache, the means of achieving psychological peace, promising a sense of psychological freedom from this negative emotion, rather than a drive for self-destruction or killing of another (Shneidman, 1984). A similar notion of suicide as the means of escape from intolerable suffering, in a self-preserving gesture, was expressed in Baumeister (1990), Maltzberger (2004), and later reinforced in Goldblatt and Maltzberger (2010).

### 2.3 Shneidman's Approach to Treatment of Suicidality

Shneidman held that consciousness (the self) is central to human activity, and labelled efforts towards the discovery of the workings of the self "a neo-introspectionism" (Shneidman, 1998, p. 245). He emphasised that socio-demographic, medical, and biological approaches to suicidality are "ancillary" and unable to address the problem of psychache and other psychological maladies (Shneidman, 2001, p. 8). He strongly advocated use of introspection to explore underlying causes of suicidality, stating: "We need to give back to introspection its good name [...]. The mind—that mysterious micro-temporal substance-free "secretion", called consciousness, of an organ made up of billions of specialised cells—has a mind of its own" (Shneidman, 2001, p. 7), and within consciousness, thus, lies the key to understanding and healing a suffering individual. Further, recognising that a suicidal state is "a more-or-less transient psychological constriction of affect and intellect" (Shneidman, 1984, p. 323), Shneidman's approach to treating suicidality was that of *anodyne therapy*; that is, in a first line of intervention, mollifying the pain by refurbishing or redefining the blocked, frustrated, or thwarted vital needs (Shneidman, 2001, 2005a). This, Shneidman suggested, can be

achieved by addressing cognitive and emotional constriction in light of unmet psychological needs, in a necessarily genuinely empathic therapeutic alliance that enables transference of nurturance and life-sustaining hope (Shneidman, 1984, 2005a). Anodyne therapy further encompasses creating effective action to assist the distressed client, and this could involve allocating helpful resources, mobilising other professionals and clients' family or friends, or initiating other actions as appropriate to clients' circumstances (Farberow, Shneidman, & Leonard, 1961; Shneidman, 1984).

#### **2.4 Validity of the Construct of Psychache**

The idiosyncratic and subjective emotional experience of inner suffering/pain, has been the focus of significant scientific interest, resulting in a number of theoretical and psychometric validations of the construct (e.g., Baumeister, 1990; Bolger, 1999; Fleming, 2008; Holden, Mehta, Cunningham, & McLeod, 2001; S. S. O'Connor, Jobes, Lineberry, & Michael Bostwick, 2010; Orbach, 2003; Shneidman, 1993). Moreover, studies applying neuroimaging techniques, such as functional magnetic resonance imaging (fMRI) and single-photon emission computed tomography (SPECT), have confirmed an observable evidence of the construct, by demonstrating an association between intense psychological pain and activity in neurological structures: heightened activity in the dorsolateral areas (van Heeringen, Van den Abbeele, Vervaeke, Soenen, & Audenaert, 2010) and decreased activity in the frontal cortical regions (Reisch et al., 2010). Further, it has been suggested that physical and psychological pain share the same neurological networks (Eisenberger, Lieberman, & Williams, 2003; Gündel, O'Connor, Littrell, Fort, & Lane, 2003; Mee et al., 2006).

Prior to, as well as concurrently with Shneidman's introduction of the label of psychache, other terminology describing this negative emotional state has been circulating in scientific literature. For example, the term psychological pain is asserted to be first applied by Belgian psychiatrist Joseph Guislain (1797–1860), in reference to a commonly observed feature of psychopathology (Beer, 1996; Masson & Muirheid-Delacroix, 2014). Subsequently, an extensive range of construct-related lexicon has been introduced, for example: soul-pain (Freud, 1926); psychic pain (e.g., Kersten, 1958); emptiness, existential frustration or existential vacuum (Frankl, 1962); central pain (Carroll, 1994; Klein, 1974); social pain (e.g., Fitzgerald, 1986); mental pain (e.g., Orbach, Mikulincer, Gilboa-Schechtman, et al., 2003; Silvestrini, 1986); psychological pain (e.g., Thornhill & Thornhill, 1990); perturbation (Kral & Sakinofsky, 1994); suffering (e.g., Cassell, 1999); emotional pain (e.g., Bolger, 1999); and negative emotionality (Deeley & Love, 2012).

Consensus on the psychological suffering/pain nomenclature has not yet been reached, although an examination of the diverse terms and definitions of this construct has been previously published (Meerwijk & Weiss, 2011; Orbach, 2003; Tossani, 2013). For example, Israel Orbach argued for five mental pain models based on the paradigms of Shneidman, Baumeister, Styron, Bolger, and Orbach and Mikulincer, positing that each of the formulations focussed on different attributes of mental suffering, with the most common features comprising "intense negative emotions", "loss of self", and "surfeit of the negative" (Orbach, 2003, p. 200).

More recently semantic concept analyses have been conducted by Meerwijk and Weiss (2011), examining five independent of each other contributions to the knowledge of equivalence of the labels denoting psychological suffering: a) Joffe and Sandler's (1967)

discord due to incongruity in the ideal-actual self; b) Shneidman's (1993b) psychache theory; c) Bolger's (1999) emotional pain; d) Morse's (2001) enduring and emotional suffering; and e) Rehnfeldt and Eriksson's (2004) notion of bearable and unbearable suffering. Meerwijk and Weiss concluded that the diverse labels applied to the painful psychological experience reflect the same phenomenon of psychological pain.

Shneidman's psychache model has been repeatedly validated in the context of suicide and across a variety of populations (Orbach, Mikulincer, Gilboa-Schechtman, et al., 2003), including with psychopathological presentations (Berlim et al., 2003; Mills, Green, & Reddon, 2005; Patterson & Holden, 2012; Pompili et al., 2008). Associations of psychache with anxiety and depressive symptomologies, hopelessness, and suicidality have been uncovered, and the construct's unique distinctiveness has been demonstrated (e.g., Gvion & Apter, 2012; Lester, 2000; MacDonald & Leary, 2005; Mee et al., 2011; Meerwijk, Chesla, & Weiss, 2014; Orbach, 2003).

In summary, a theoretical and empirical validation of the construct of psychache has been earlier achieved, with scientific testing demonstrating psychache's unique distinctiveness and association with suicidality. Nonetheless, this conclusion is drawn from a series of studies which deployed diverse psychache-assessing methodologies. To date, it has not been investigated whether or not psychological pain measures and its proxy methods can be treated as equivalent in the results they render. Thus, to avoid confusion, it is imperative that psychache operationalisation methods are reviewed, to confirm compatibility of the psychache-related findings and validity of the emerged from those findings conclusions—a brief review of psychache measuring methods thus follows in next section, 2.4.1.

### 2.4.1 Measurement of psychache.

Several psychoanalytic/projective (free-response) and objective (self-reporting/self-rating) measures have been developed in an attempt to quantify the construct of psychological pain. One of the earliest self-rating tests published is the *Pictorial Representation of Self Measure* (PRISM), modelled on the Cassell's interpretation of suffering and tailored to those experiencing physical illness (Büchi & Sensky, 1998, 1999).

Another early measure, the *Psychological Pain Assessment Scale* (PPAS; Shneidman, 1999), captures theoretical features of the idiosyncratic inner pain experience, and merges both the objective and psychoanalytic testing means. The free-response Thematic Apperception Test contained in the PPAS was modelled on Murray and Morgan's projective testing premise, which purports that underlying unconscious feelings and motives can be extracted from interpretations of visual stimuli (Morgan, 2002; Shneidman, 1999). The PPAS also incorporates the thematic test analysis technique to examine respondents' narratives of their worst psychache events. An objective self-rating system is additionally applied to evaluate the intensity of the *current* and *worst* psychache (Shneidman, 1999). The PPAS has been occasionally used in research (e.g., Pompili et al., 2008), although Leenaars and Lester (2004) reported the scale's modest test-retest reliability of 0.36 in respect to the assessment of *worst* experienced psychache at a 4-weeks interval, in the sample of 41 undergraduate social sciences students (mean age = 25.4 years;  $SD = 7.5$ ). The scores of *current* psychache returned a statistically non-significant result, and the validity of PPAS has been considered undetermined and requiring further investigation (Leenaars & Lester, 2004). In his earlier study, Lester (2000) demonstrated a *current* psychache association with depression ( $r = .39$ , two-tailed,  $p < .05$ ); and the *worst* psychache association with suicidal ideation ( $r = .35$ ), mania ( $r$

=.46), and depression ( $r = .64$ ) in a sample of 51 undergraduate New Jersey college students (mean age 24.8 years;  $SD=7.1$ ).

In addition, Pompili et al. (2008) investigated the PPAS properties and found inconsistent results in respect to psychache theory; for example, no statistically significant differences were found in the scores of those participants who previously attempted and did not attempt suicide; the PPAS item of Picture ratings returned no statistically significant results for differences between those at risk at no-risk of suicide, and both *current* and *worst* psychache did not show association with a history of suicide attempts (though showed association with a current risk of suicide). Pompili et al. (2008) suggested that psychache, within the complexity of suicidality, should likely be addressed with a higher number of wider-ranging items, to capture the broadness of an individual's experience.

Orbach (2003) deployed the premises of grounded theory and content analyses to inspect the narratives of psychological suffering in mental health disorder-diagnosed and non-diagnosed populations. This led to the development of an objective (self-rating) test, the *Orbach and Mikulincer Mental Pain Scale*, encompassing nine factor clusters: irreversibility, loss of control, narcissistic wounds, emotional flooding, freezing, self-estrangement, confusion, social distancing and emptiness (OMMP; Orbach, 2003). This 44-item scale has been frequently used by Orbach and his team, as well as non-affiliated researchers.

Holden et al. (2001) constructed the *Psychache Scale* (PS), built on the premises of Shneidman's psychache postulates. Holden et al. (2001) reported that the measure differentiates between former suicide attempters and non-attempters (showing a medium effect size) and has been validated on a non-clinical sample via correlations with

a battery of other theoretically related measures, with some of these comprising the *Beck Hopelessness Scale* (Beck, Weissman, Lester, & Trexler, 1974); the *Unusual Thinking Scale* (Mazmanian, Mendonca, Holden, & Dufton, 1987); the *Reasons for Attempting Suicide Questionnaire* (Holden, Kerr, Mendonca, & Velamoor, 1998); and the *Suicidal Manifestations Questionnaire* (Johns & Holden, 1997). Further details on the OMMP and PS are presented in section 3.3.1.

A more recent and brief self-rated measure, *Mee-Bunney Psychological Pain Assessment Scale* (MBPPAS), pertinent to the frequency and intensity of psychological pain, was developed by Mee et al. (2011), with the aim to assist clinicians in a suicide-risk assessment. Extensive electronic literature searches did not identify other studies incorporating this measure.

The newest addition to the self-rating psychological suffering measures, the *Three-dimensional Psychological Pain Scale* (TDPPS), was located in Xie et al. (2014) and H. Li et al. (2014); The scale adds a fresh dimension to the measuring psychological pain by targeting pain arousal, pain avoidance, and painful feelings (Xie et al., 2014).

Despite the availability of the aforementioned psychological pain measures, some researchers elect explicit psychological pain related questions over the validated measures (e.g., Olié, Guillaume, Jausent, Courtet, & Jollant, 2010) or substitute psychological pain scales with quality of life assessment indices (e.g., Berlim et al., 2003). Moreover, the proponents of qualitative approaches favour face-to-face clinical interviewing—*clinimetrics*—to obtain verbal descriptions of the occurrence, context, severity, and frequency of psychache, and the intentions evoked by the mind-tormenting experience (Fava, Tomba, & Sonino, 2012; Tossani, 2013).

A review of the Scopus, PsycInfo, and Embase literature was conducted, incorporating the terms: 'psychological pain scale', 'psychache scale', 'mental pain scale', and 'emotional pain scale'. The databases revealed that the two most frequently to-date utilised scales were:

- the PS (e.g., Cáceda et al., 2014; Lam, Bond, Chen, & Wu, 2010; H. Li et al., 2014; Mills et al., 2005; Owoeye, Aina, Omoluabi, & Olumide, 2007; Patterson & Holden, 2012; Troister, Davis, Lowndes, & Holden, 2013; You, Song, Wu, Qin, & Zhou, 2014) and
- the OMMP scale (e.g., Levi et al., 2008; Nahaliel et al., 2014; Ohana, Golander, & Barak, 2014; Orbach, Mikulincer, Gilboa-Schechtman, et al., 2003; Reisch et al., 2010).

The other identified scales were not commonly utilised, being mainly restricted to either research by their authors, or limited to specific populations.

As it appears, there are two major camps of suicidology researchers, using the measure of their preference, either the OMMP or PS, yet it is not clear to what extent the two measures are psychometrically equivalent, i.e., reflect the same construct of psychache, and assess its intensity correspondingly. The question for consideration is thus: are the two measures equally effective in terms of capturing psychache as a distinct construct, allowing generalisations of their unique scores from one measure to another?

Following from this enquiry, this thesis' project explores both of these two measures simultaneously via factor analyses, with additional selected measures which pertain to psychological well-being and the self. The indices of self are included in the analyses throughout this investigation (Studies 1 to 5), because, the notions of self and psychache, on a theoretical level, appear to be intertwined. That is, one cannot discuss

the most inner experience of psychache without an acknowledgement of the consciousness that evokes or brings that psychache to light. This notion, called by Shneidman consciousness, and formulated by Kohut as self, is therefore explained next (section 2.5), and then empirically tested in both, factor analysis (Chapter 5) and in a series of regressions in respect to suicidality (Chapters 6 and 7).

## 2.5 The Self: Overview

Adopting Shneidman's position, that intention to suicide unfolds in the mind, and involves a conscious experience of psychological suffering, that is psychache (Shneidman, 1993), it is important to consider the psychological conception of Wilfred Bion, who stated that this mental suffering "is inherent to the functioning of the personality" (Fleming, 2008, p. 34). What Bion refers to as "personality" appears to embrace the notion of the "self" as conscious of its own being (Bion, 1957, 1962b). This suggests that the constructs of psychache and a sense of selfhood are entwined, possibly giving momentum to a range of inner experiences.

The quintessence of a human being, be it called *self*, *I*, *personhood*, *selfhood*, *self-awareness*, *psyche*, *mind*, or *consciousness*, has been of interest to philosophers and academics from diverse disciplines, including psychological, sociological, spiritual, and religious schools. Perhaps the most influential postulates were formulated by René Descartes (1596 - 1650), who stimulated the interest of the scientific community with his famous aphorism "*je pense, donc je suis*" (*I think, therefore I am*) and his theory of dualism; i.e., separation of mind and matter as two discrete substances (Gregory, 1987, p. 189). Descartes recognised that, while he stressed the role of cognition in the ability to sense one's own existence, he did not elucidate the essence of '*I*' (Newman, 1997). The

elusive nature of self, as a conscious agent and subjective experiencer of internal and external events, remained a puzzle, which many philosophers since Descartes have attempted to address. John Locke (1632 - 1704) and Immanuel Kant (1724–1804), for example, conceptualised the self as necessarily intact throughout time and space consciousness, functioning as an agent, capable of detecting external (perceptual) and private (mental) events, and transmuting those inner and outer occurrences into knowledge and inspiring action (Gertler, 2003; Rohlf, 2010).

For William James (1842 - 1910), the self was a dualistic construct: 1) an experiential and pragmatic self as an object, *Me*; and 2) a stream of consciousness, the core subject, *I*; further divided into four aspects of self: material, social, spiritual, and the ego (Cooper, 1992; James, 1890; Meares, 1996). Similarly, Carl Jung (1875 - 1961) saw the essence of self as evident only in its outward manifestations and ethos, rather than attestable by scientific process. Thus, the idea of the metaphysical abstraction of the self as a unity of total experience, *central archetype* (Jung, 1954), has been acknowledged, although it has been recognised that studying consciousness empirically faces significant difficulties (Meares, 1996).

From the psychoanalytical perspective, Sigmund Freud advocated the notion of a tripartite selfhood, comprised of conflicting parts: *id*, *ego*, and *superego*, and functioning across unconscious, preconscious, and conscious dimensions. Fundamentally, Freud attributed disturbances in the psyche to the inner conflicts between innate libidinal drives and motivations of the higher structures (Freud, 1962). This conceptualisation, however, could not explain individual differences in the presence/absence of suicidal wish and ways of approaching personal challenges.

Amongst more recent hypotheses about the nature of self, Carl Rogers, an advocate of a humanistic and experiential approach, regarded the self as a distinct entity, separate from interactions with a physical environment. A social environment, on the other hand, for Rogers, constitutes a source of an *unconditional positive regard*, the crucial factor that promotes a sense of self-worth (C. R. Rogers, 1964, 1980). As will be outlined later in this chapter, this perspective corresponds not only to social learning theory, but is also highly relevant to the premises of Kohut, and thus of interest to the line of enquiry developed in this thesis.

Ulric Neisser, a cognitive psychologist, distinguished five presentations of the self: 1) *ecological*, relating to perceptions of physical reality; 2) *private*, having the awareness of outward imperceptibility of one's mental processes; 3) *interpersonal*, being derived from emotive and cognitive cues of acceptance and belonging; 4) *conceptual*, comprising ideas about self as moulded by one's social environment and that of one's inner self; and 5) *extended*, a memory-dependent self-awareness, relating to a sense of continuity throughout past, present, and future (Neisser, 1988). Again, the interpersonal dimension of selfhood has been extracted by Neisser, meeting with other prominent theories, and complementing the notion of self as that of ongoing self-awareness.

Endel Tulving, cognitive neuroscientist, placed the nature of the self on a spectrum of memory functioning. Tulving (2001) inferred that the self comprises a cohesive entity or *autonoetic awareness*, which is contingent of episodic memory and monitors a sense of constancy (i.e., continuity in space and time). This kind of awareness appears to relate to the sensing of one's own continuity of being, although it seems somewhat removed from the awareness of the inner workings that constitute that being.

Further, neuroscientist Joseph E. LeDoux related the concept of self to the accumulation of one's implicit and explicit memories, brought about by life experiences and supported by genetic configurations. This concept of self was assumed to be located within brain structures at all levels of its architecture, from the cellular blocks and synapses, to the networks for storing and processing information (LeDoux, 2003). LeDoux, while acknowledging the self as a conscious and self-directed entity, also emphasised the role of unconscious mechanisms in the successful formation and preservation of the self (LeDoux, 2003). This implies that a self is set to a 'default' mode, unable consciously to guide its own developmental trajectory. Other theories, however, have suggested that the self is flexible and responsive to external and internal stimuli (as will be explicated further in section 2.6.2).

Elements of each of these theories about the self (e.g., a self-experiential awareness, interpersonal nurturance, and a sense of self-value), can be detected in the insights of Heinz Kohut, despite the fact that Kohut did not categorise or define the self.

## **2.6 Heinz Kohut and Self Psychology Premises**

Heinz Kohut (1913 – 1981), an Austrian-American psychoanalyst, introduced a novel perspective into psychodynamic theory and psychoanalytical practice, a school of thought which he termed *psychology of the self*, also referred to as *self psychology* (Kohut, 1991; Strozier, 2001). Although many of Kohut's postulates stemmed from a *narcissism* framework, the proposed insights about self, personality development, and therapeutic stance have found support within the scientific community as broadly informative (Banai, Mikulincer, & Shaver, 2005) and applicable across populations (Ornstein, 2011). Kohut proposed that psychology of the self denoted "a psychology in which the self is a content

of the mental apparatus. [...] a psychology in whose theoretical framework the self occupies a central position" (Kohut, 1977, p. 207). This conception therefore is inclusive of, but not constrained to, psychopathological presentations. Kohut maintained that psychology of the self complements earlier achievements of psychodynamic perspective, and extends the understandings of the notion of self, from the notion of *disorders of narcissism*, i.e., a disturbed development of the self, to a *narcissistic personality disorder* in a pathological sense (Kohut, 1971, 1977; Kohut & Goldberg, 1978). Further, Kohut held that the term "narcissism" stands for a "libidinal investment in the self" (Kohut, 1966, p. 243). Narcissism is therefore not regarded as a largely negative construct, as commonly conceived, but instead denotes a primary, inherent predisposition for a positive self-approach or self-attitude that necessarily serves beneficial and adaptive functions. Kohut believed that the role of this inborn self-invested aptitude and its implications had not been scientifically explored and exhaustively utilised in clinical practice (Kohut, 1966).

The following paragraphs outline Kohut's premises of a developmental framework of the self.

### **2.6.1 Kohut and the self.**

For Kohut, defining the self appeared an elusive endeavour and, even though he frequently articulated his perspective using Freudian theory labels to denote aspects of the self, he did not embrace the notion of libidinal aggression and sexual drives as primary mechanisms or sustaining forces of personality structure. Instead, Kohut offered thought-provoking descriptions of the construct of the self as a core aspect of personality, named a *nuclear self* (Kohut, 1977, 1994, 2011; Kohut & Wolf, 1978). He proposed that the self is a continually developing psychic structure, organised through the subjective experience of gratification of inherent developmental needs, and:

This structure is the basis for our sense of being an independent center of initiative and perception, integrated with our most central ambitions and ideals and with our experience that our body and mind form a unit in space and a continuum in time.

This cohesive and enduring psychic configuration [...] forms the central sector of the personality. (Kohut, 1977, pp. 177-178)

Thus, for Kohut, the self cannot be simply defined or conceptualised, because the self is a principal sense of being that can only transpire as a unification of all bodily, mental, and emotional experiences of the individual, bonded with and influenced by its context, and presenting itself through manifestations of the mental dynamics (Videgård, 2013). Although Kohutian understanding of the self largely resembles the metaphysical notions of James and Jung, Kohut encapsulated this rather complex essence of the self within developmental pathways of the self. Kohut proposed that interruptions within two qualitatively diverse potential developmental trajectories may lead to a weakened or pathologically impaired self.

### **2.6.2 Kohut's theory of development of the self.**

Kohut suggested that, at the core of psychological needs of each developing infant, lie innate *narcissistic needs*. These require appropriate nurturance and care provided by others, initially usually parents or caregivers (Kohut, 1994). (In the remaining text, those caregivers will be referred to as parents but this should be taken to mean any adult who has a significant role in caring for and raising a child). These needs, satisfied by and through a parent, form two main categories:

- **mirroring**: the needs for recognition of one's own presence, competence, and importance, as reflected by adoring and caring parents;

- **idealising**: the needs for virtuous ideals and identification with the qualities of admired, powerful parents; transference of confidence and security from those composed and trustworthy parents—termed by Kohut as *idealised parental imago* (Kohut & Goldberg, 1978).

Further, embedded in the mirroring needs are the needs of **alter ego/twinship**, i.e., the need for likeness and affiliation, a merger with an idealised adult, in time extrapolated to forming close relations with others, based on similarities in interests, attitudes, or aptitudes (Finlay, 2015; Kohut, 1984; Kohut & Goldberg, 1978).

In infancy, the ‘I’ and ‘you’ cannot be differentiated; the infant experiences his/her own selfhood through and in the infant-parent dyadic mental structure; an empathic connection described by Kohut as *self-object* (Kohut, 1966, 1977)—the concept which to some degree is comparable with the notion of *significant other*, first known to be introduced by Sullivan (1953) and later commonly applied to denote close relations. The Kohutian term self-object, however, essentially implies oneness with and performance of mental functions for the child, or on behalf of the child, by his/her parent.

The infant’s psychological wellbeing is initially underscored by *grandiose fantasy* of unrestrained bliss, perfection, and exhibitionistic tendencies, seeking confirmation and approval of his/her own potential from and through self-objects (Kohut, 1966). The unconditionally admiring and approving “gleam in the mother’s eye” (that is, the display of parental pleasure), reflects and celebrates the child’s own goodness and perfection, fulfilling the child’s needs for recognition and esteem (Kohut, 1966, p. 252). This fulfilment is complemented with opportunities to idealise and gain strength from the perceived or conceived parental excellence, omnipotence, and dedicated protection (Kohut, 1966). Minor disappointments (*optimal frustrations*) in both recognition and

idealising needs are naturally encountered and these result from an ordinary temporal unavailability of a parental presence, feedback, or attention. These empathic *ruptures* introduce an appropriate amount of discord to the original primary grandiose narcissism, and prompt the child to re-organise his/her mental structures, to maintain a sense of subjective perfection (Kohut, 1966). The child's needs for ongoing mirroring and idealising gradually become qualitatively different, i.e., tempered in intensity and more realistic, adjusted to cognitive maturational stages and experiential learning from broader social environments, as well as to the child's own limitations. The child integrates its own primary narcissism and selectively adopts the desired parental qualities (Kohut, 1966; Kohut & Goldberg, 1978), and begins to engage his/her own self mental structures of ambitions, goals, and values (Kohut, 1966; Kohut & Wolf, 1978). This developmental process transforms the innate grandiose narcissism into healthy self-esteem, supplemented by realistic aspirations, self-direction, and interpersonal qualities needed for successful coping with future life situations.

Kohut's notion of infantile needs of recognition and integration with idealised role-models, parallels and expands on the premises of the Bowlby-Ainsworth attachment theory (Bowlby, 1977; Rajecki, Lamb, & Obmascher, 1978), which emphasised the crucial role of significant others to achieving healthy infant growth. It also has similarities with Bion's model of a mother as a *container* and the infant as a *contained* receiver of emotional nurturance and guidance (Bion, 1962a). However, additionally, it delineates the specifics of the developmental paths through which the sense of an independent self forms; provision of empathic opportunities for recognition, idealising, and affiliation. In this process, primary narcissism becomes a basis for the emergence of a healthy *bipolar self*, which comprises a self-esteemed, ambitious, and vigorous *narcissistic self*, alongside

the self of valued principles and aspirations (Kohut, 1966; Kohut & Wolf, 1978). Kohut summarised the dynamics of this self bipolarity in a statement: “man is *led* by his ideals but *pushed* by his ambitions” (Kohut, 1966, p. 250). This denoted the interdependence of the two parallel lines of development. Kohut held that the meeting point or the gap between these two developmental mental structures, a metaphorical *tension arc*, stimulates the self’s natural enthusiasm for activity. On the one hand, it drives the individual to fulfil ambitions and experience success; and, on the other hand, it guides that action by adhering to one’s ideals and goals (Kohut, 1977). Negotiating the tension between the poles of ambitions and ideals promotes an emergence of one’s skills and talents (Kohut & Wolf, 1978), and the balance between the two poles sustains a sense of self-cohesion and self-fulfilment (Kohut, 1977).

Even though the primary grandiose narcissism undergoes transition, a residue of its original form is retained over one’s lifetime, as “a basic narcissistic tonus which suffuses all aspects of the personality” (Kohut, 1966, p. 246). Thus, the process of self-realisation never ceases (see section 2.6.1; Kohut, 1977), and sourcing to meet psychological needs continues within later adolescent and adult relationships (Ornstein, 2011; Smith, 2015). Throughout life, utilising the qualities of the established self, and recognising and taming remnant overindulgent or unrealistic ambitions allows further mental forms to emerge; i.e., creativity, humour, empathy, and understanding and acceptance of the transience of life (Kohut, 1966). For some, the process of narcissism transformation may culminate in an achievement of *cosmic narcissism*, denoting transcendence, i.e., going beyond “the bounds of the individual” (Kohut, 1966, p. 266), a sense of participating in something grander than one’s own reality (Halling, 2008). This psychological stance is often described as a fresh perspective or an accomplishment of an inner deeply peaceful state,

underscored by a sense of undisturbed existential continuity, and an absolute acceptance of limitations, life, and death (Videgård, 2013). The pinnacle of the integration of the transformed primary narcissism is an attribute which Kohut identified as wisdom (Kohut, 1966).

### **2.6.3 Fragmentation and psychopathology.**

As specified in the preceding section, brief and beneficial optimal frustrations to the infantile grandiosity of a developing self are essential for healthy development. However, unlike these minor and temporary disappointments, chronic parental empathic failures, insensitivity to the child's needs, negligence, or major psycho-traumatic events were seen by Kohut as forces thwarting development (Baker & Baker, 1987; Kohut & Goldberg, 1978). Such inadequacies in the child's upbringing could happen unintentionally and most likely under the conditions of the "specific pathogenic personality of the parent(s) and specific pathogenic features of the atmosphere in which the child grows up" (Kohut, 1977, p. 187). In such circumstances, the child's needs are overlooked, ignored, or outwardly criticised or rejected and would likely become inhibited (Kohut, 1966, 1971). Once repressed, the innate grandiose narcissism could not be transformed into a healthy self-esteem (Kohut, 1966).

Kohut observed in his clinical practice that a primary reaction to threats of temporary losses, either emotional or physical disconnection from a close relation, or punishment worries, presents as castration anxiety (Kohut, 1971). However, a chronic psychological absence of an empathic parent renders the self to become aware of its own vulnerabilities, and insecure in its state of emotional disequilibrium (Kohut, 1981/2010). This is the ground for fragmentation or *disintegration anxiety*, which may manifest as an "anxious grandiosity and excitement, on the one hand, to mild embarrassment and self-

consciousness, or severe shame, hypochondria, and depression, on the other” (Kohut, 1971, p. 20). Similarly to Cattell, who considered anxiety as a symptom of disorganisation of the self rather than a force that motivates action (Cattell, 1964), Kohut saw anxiety as a force capable of triggering and perpetuating fragmentation of the self.

Fragmentation, as suggested by Kohut, is a potentially chronic, but not inevitably pathological, consequence of developmental flaws in the self (Kohut, 1977; Kohut & Wolf, 1978). Some forms of fragmentation may happen in instances when one aspect of the developmental process is satisfied, providing an adequate source of self-esteem, and the other aspect has specific shortcomings; metaphorically speaking, a vertical split in the sense of wholeness can occur (Kohut, 1977). On the other hand, when needs are repressed and the individual experiences a diminished ability to connect consciously to his own sense of worthiness and self-respect, or self-esteem, fragmentation may be symbolized as a horizontal split in one’s sense of self (Kohut, 1977).

Self-cohesion breakdowns occur on a spectrum “in states of varying degrees of coherence, from cohesion to fragmentation; in states of varying degrees of vitality, from vigour to enfeeblement; in states of varying degrees of harmony, from order to chaos” (Kohut & Wolf, 1978, p. 414). Fragmentation can be seen in a range of psychological difficulties, from minor inner challenges (e.g., boredom; Baker & Baker, 1987) and frustration, anger, confusion, self-invalidation, to a pathology onset in affective and cognitive functioning, and personality traits (Kohut, 1994). When fragmentation reaches intolerably high levels, a psychological crisis may ensue, accompanied by often anxious or desperate attempts to stop a crumbling sense of self-fragmenting, and restore inner calm and self-composure, possibly via self-destructive actions (Goldblatt & Maltzberger, 2010).

This proposition seems to correspond to Shneidman’s notion of psychache, a suggestion that will be empirically tested in this thesis (see Chapter 5, Study 2).

According to Kohut, the self enters a state of *self disorder* once the three inner aspects of the self: self-cohesion, vitality, and harmony are impaired (Kohut & Wolf, 1978). Depending on the type of developmental failures, different kinds of personality impairments could emerge (description of those is beyond the scope of this thesis; examples of the writings include: Kohut, 1966, 1971, 1977, 1984; Kohut & Wolf, 1978).

#### **2.6.4 Kohut’s emphasis on empathy.**

Kohut ranked empathy the highest of all influences on the self, asserting that “empathy is that “glue” that holds together the self-cohesion of individuals” (Randall, 1986, p. 141). Empathy maintains our sense of self, thus our meaning of life, acting as an avatar of our values and goals (Kohut, 1984; Kohut & Wolf, 1978; Ornstein, 2011). It is the most crucial psychological resource which allows the “recognition of the self in the other”, and promotes the identification and bond with idealised others; the deep and empowering union which infuses positive affect and “counteracts man’s destructiveness against his fellows” (Ornstein, 2011, p. 84).

Kohut described empathy as having two dimensions, which necessarily operate concurrently: 1) collecting objective data without imposing judgements or subjective interpretations; and 2) an amiable and “powerful emotional bond” (Kohut, 1982, p. 397). Thus, the process of empathy is a quality of unbiased tuning into the inner experience (Kohut, 1982), “a mode of cognition” (Kohut, 1971, p. 300), an “experience-near mode of observation” (Maclsaac, 1997, p. 246), a “vicarious introspection” (Maclsaac, 1997, p. 247), a holistic view of the self, accessible only via one’s own capacity for inner self-examination (Maclsaac, 1997), and accompanied by a positive emotional investment.

Further, Kohut asserted that a human developmental task is to establish “the ability of empathizing with ourselves, i.e., with our own past mental organization” (Kohut, 1959, p. 467). Kohut’s strong advocacy for empathy as a mental health promoting factor will be re-visited in Chapter 10, section 10.3.2.

## **2.7 Merging Kohut and Shneidman’s Theories**

### **2.7.1 Psychological needs and suicidality as portrayed by Shneidman and Kohut.**

Both Shneidman and Kohut’s work emerged from traditional contemporary psychodynamic theory, which suggests that there is a critical period during an infant’s life when psychological trauma, either objective or subjective experience of deprivation of emotional nourishment of a loving parent/caregiver, sows a “suicidogenic seed” in the psyche of the child (Draper & Margolis, 1976, p. 377). Developmental flaws have been found to have “a greater effect on lifetime suicidality than any other factor” (Ledgerwood, 1999, p. 67). In ideal, trauma-free circumstances, parental empathy and affection serve as lifetime suicide-protective factors, with individuals drawing on early-life emotional resources, provided by robust connection with their parent (Draper & Margolis, 1976; Lichtenberg, 1996). A child learns how to manage painful experiences from a “good enough mother”, who intuitively responds by sharing and alleviating her child’s pain in the state of emotional unity (Wille, 2011). Kohut did not diverge from this perspective, although he organised the developmental experiences into metaphorical trajectories, noting that certain experiences provided by parents (mirroring vs. idealising opportunities) have different functions in establishing the totality of the child’s self.

Further, both Shneidman and Kohut implicated childhood experiences in suicidality and emphasised the role of the fulfilment of fundamental psychological needs in creating

and maintaining a healthy psychological milieu for a personhood (Shneidman, 2005b; Chapter 2, section 2.2; further discussion will follow in section 2.8). This referred not only to early developmental needs, but, as indicated earlier, the inherent needs persistent throughout life. Even though the types of the psychological needs, specified by Shneidman and those indicated by Kohut, on face value, may appear to differ, a theoretical overlap between those needs can be detected. Figure 6 presents a matrix of the needs, with an interpretation of their correspondence.

■ **Figure 6. Psychological Needs of the Self**

Vital needs <sup>a</sup> (Shneidman)	Developmental Needs (Kohut)		
	Mirroring	Idealised parent	Twinship
Love, acceptance and belonging: needs of 'succorance' and affiliation	√		√
Sense of control, predictability, arrangement: needs of achievement, autonomy, order, and understanding	√	√	
Secure self-image and avoidance of shame, defeat, humiliation, and disgrace: needs of affiliation, 'defendance', and shame-avoidance	√		√
Working/fulfilling relationships: needs of affiliation, and nurturance	√	√	√
Self-protection/defence, self-assertion: needs of dominance, aggression, and counteraction	√	√	

<sup>a</sup>Categories of needs as adapted from Shneidman (1996, p. 25)

*Figure 6.* Childhood needs from two perspectives: those of Edwin Shneidman and Heinz Kohut.

It can be seen from Figure 6 that a method of classification of crucial psychological needs, when considering the two theories, is inconsequential; regardless of the labels, these categories reflect similar notions. Moreover, it appears that the needs, as indicated by the two authors, are distinctively relational, i.e., could not exist in isolation from the social environment.

Further, referring back to the relevant theories of Shneidman and Kohut, there is no single specific frustrated need that can conclusively flag a potential for suicide; what matters is “the intensity of the frustration of whatever need is basic in the functioning of that personality; and, of course, there is almost always more than one need involved” (Shneidman, 1996, p. 68). Similarly for Kohut, unfulfilled needs lead to impaired functioning (fragmentation of the self) but, nonetheless, frustration of one need only would have less severe consequences on self-cohesion than frustration across the spectrum of needs (see horizontal and vertical split; section 2.6.3). For Kohut, a degree of ensuing fragmentation would likely influence the point of desperation, demoralisation, or suicidal intention.

Shneidman’s observation, that different needs from within the cluster of vital needs are perceived by their beholders as crucial, is comparable to the Kohutian metaphor of a *tension arc* (section 2.6.2). That is, it is inferred from Kohut’s descriptions that imbalance within a bipolar self (unequal fulfilment of idealising vs mirroring needs) does not automatically evoke a deathful wish; the extent of disturbance or disintegration of self would likely depend on which of these two domains was most pertinent to adequate functioning of the affected individual. Thus, the content of the unfulfilled need is not the most unsettling factor; instead, it is the severity of anguish caused by tension between the two figurative polarities of the structure of self.

Furthermore, according to Shneidman, maladaptive chronic patterns of unfulfilled needs in time may turn into “unmanageable dissatisfaction” with oneself (Shneidman, 1996, p. 69). This is consistent with Kohut’s suggestion that interpersonal childhood experiences can either boost or deflate one’s own outlook on the self (e.g., Alaggia & Mishna, 2014), resulting in a self which is fractured and experienced as defective (Baker & Baker, 1987; Terman, 2012).

### **2.7.2 Merging Shneidman and Kohut’s implications of psychological needs with attachment theory.**

As aforementioned in section 2.6.2, the postulates of both Shneidman and Kohut about psychological needs are in close concordance with attachment theory. This has been supported by the findings from extensive research within the framework of attachment theory by Mikulincer and his colleagues. For example, according to attachment theory, flaws in interpersonal relations during early childhood interfere with development of a secure attachment, resulting in an ambivalent or avoidant attachment style, with both styles accompanied by anxiety (Mikulincer & Orbach, 1995).

Further, Zisk, Abbott, Ewing, Diamond, and Kobak (2017) found that insecurely attached adolescents, who perceived their caregivers as not adequately available, displayed the highest intensities of suicidal ideation, relative to those who perceived their caregivers as more readily available. Falgares et al. (2017) reported stronger needs for approval, lower levels of self-confidence, discomfort with closeness, and preoccupation with relationships as relating to suicidal ideation in a sample of Italian adolescents and, notably, with self-criticism mediating effects of anxious and avoidant attachments on suicidal behaviours. Anxious and avoidant attachment styles in adolescents also were found to be correlated with suicide attempts in the study by Sheftall, Schoppe-Sullivan,

and Bridge (2014). However, according to Sheftall et al., when controlling for depressive symptoms and family alliance, attachment anxiety did not predict suicidal behaviour. Palitsky, Mota, Afifi, Downs, and Sareen (2013), conducted analyses of attachment styles in respect to suicidality with a sample of 5692 adult participants. They reported that anxious and avoidant attachment styles were associated with both suicidal ideation and attempts, after controlling for sociodemographic variables, psychiatric diagnoses, and childhood adversities. Similar conclusions have been presented by Lizardi et al. (2011), McKeown, Clabour, Heron, and Thomson (2017), and Stepp et al. (2008). Thus, childhood anxiety, in line with Kohut's suggestion, appears to underscore both insecure attachments and disturbance in the sense of self, and potentially leads to deleterious psychological consequences.

### **2.7.3 Unmet childhood needs and suicidality: Other research.**

Child maltreatment and its mental health consequences have been the foci of many contemporary psychology and psychiatry research investigations. At the time of composing this thesis, the PsycInfo database alone returned 29,626 articles related to terms "child\* abuse"; adding the term "suicid\*" to the search yielded 1065 entries). In the Scopus database, close to 50,000 articles have addressed an impact of childhood trauma on affective development and depressive symptoms, with 588 of those focused on anxiety outcomes. Empirical studies frequently show an impact of childhood maltreatment (sexual, physical, verbal/emotional abuse) on emergence of both anxiety symptoms and lifetime suicidal behaviours (Lara, Navarrete, Nieto, & Le, 2015). Considering specific childhood maltreatment and hardships (physical and sexual abuse, neglect, parental death, parental divorce, other parent loss, family violence, physical illness, and financial strife), Bruffaerts et al. (2010) concluded that "childhood adversities

(especially intrusive or aggressive adversities) are powerful predictors of the onset and persistence of suicidal behaviours” (p.20).

The study which stood out in terms of relevance to this thesis had a sample of 5027 Taiwanese high school population, conducted by C. F. Yen et al. (2014), using a Taiwanese version of the Multidimensional Anxiety Scale for Children (MASC-T). Yen et al. reported a high association of anxiety with suicidality, with the strength of association exceeded only by that of depression. Low self-esteem was the third strongest statistically significant associate of the suicidal ideation, followed by low family functioning problematic alcohol consumption, and victimisation (with all three variables at  $p < .001$ ).

Summarising this chapter, psychological maladies are rooted in failed childhood empathic connections, initially manifesting as anxiety, and inhibiting the transformation of infantile narcissism into healthy self-esteem (Kohut, 1977). From a clinical perspective, understanding of the role of self-esteem and its establishment is of crucial importance because, theoretically, self-esteem regulation determines self-cohesiveness; and, self-cohesion seems to be a pre-requisite of psychological health characterised by vital energy, self-awareness, emotional adjustment, and a sense of meaning in and appreciation of one’s own existence. Thus, theoretically, self-cohesion may constitute a shield, safeguarding individuals from suicidal vulnerability. Advocates for self psychology, however, have discussed the issue of suicide only sporadically, perhaps due to the limited empirical evidence for a relationship between the self and suicide. Further details on how suicide is viewed from the perspective of self-psychology are presented next in section 2.8.

## 2.8 Self Psychology and Suicidality

A small number of published dissertations and reports have addressed the malady of suicide from a theoretical perspective shaped by self psychology. Reiser (1986) collated, interpreted, and summarised the conclusions of self psychology advocates about suicide, with a focus on unexpected suicide, i.e., suicide other than for altruistic or political reasons. Reiser (1986) concluded that self psychology advocates have viewed suicide as a consequence of an “impaired nuclear self” that undergoes “sudden disintegration in the face of disrupted narcissistic homeostasis” (p. 229). Thus, the breakdown in the nurturing and comforting equilibrium of the narcissistic needs of self-appreciation, self-respect, and acceptance by others, is purported to occupy the centre of a suicidal act.

While no explicit method of prediction or cure of suicide is offered by self psychology (Reiser, 1986), this theoretical perspective of the suicide process does help to identify the potential suicide-protective mechanisms: the development and maintenance of a cohesive, largely self-assured, self-nourishing, and self-compassionate self (Kohut, 1977; Reiser, 1986).

Kohut, himself, only sporadically offered his insights on the phenomenon of suicide (Kohut, 1972, 1977, 1984; Kohut & Wolf, 1978), although he frequently stressed the generally protective value of a strong and cohesive sense of self across a spectrum of psychological unrests:

If our self is firmly established, we shall neither be afraid of the dejection that may follow a failure nor of the expansive fantasies that may follow a success—reactions that would endanger those with a more precariously established self. (Kohut & Wolf, 1978, p. 415)

In addressing the ways in which individuals deal with life challenges, Kohut sketched a metaphorical portrait of human existential position. It was a depiction of a *Tragic Man*, the man who ambitiously sets out to accomplish aspirations of the nuclear self, though challenged by unavoidable disappointments or ‘failures’, becomes vulnerable to ruptures in the sense of self or self-cohesiveness (Kohut, 1977). The struggle of Kohut’s Tragic Man arises from the deficits of the self and a lifelong dependence on externally provided empathic reinforcements (Kohut, 1994). Without the current and ongoing empathic reassurance, the existence of an impoverished and dispirited self is only maintained by the remnants of past nurturance or by the hope for future fulfilling circumstances or relations (Klugman, 2002). If hope cannot be evoked, and no remedy can offset the frustrating state, the impending sense of self fragmentation may trigger an overwhelming feeling of disintegration anxiety (Chapter 2, section 2.6.3; Kohut, 1984). This may be experienced as a sense of emptiness, falling apart, ‘loss of ground’, or dread in the face of a threat of a loss of one’s own psychological cohesiveness and existence (Kohut, 1984). Although physically alive, the core self feels already lifeless and deprived of anchoring in the sense of self-esteem and self-assurance; the individual becomes dreadfully terrified by the “inner deadness and depression” (Kohut, 1977, p. 5). The prospect of participating in the non-empathic, loveless, and meaningless world petrifies the fragmented self beyond the idea of physical death (Kohut, 1984). Kohut thus held that some suicides “are in the main based on the loss of the libidinal cathexis of the self. [...] Characteristically, these suicides are preceded, not by guilt feelings, but by feelings of unbearable emptiness and deadness or by intense shame” and/or despair (Kohut, 1972, pp. 376-377). Suicide, in such circumstances, becomes a desperate attempt to resurrect the painfully depleted and disintegrating self, rather than an act of self-punishment or revenge (Kohut, 1984).

Kohut asserted suicide is not homogenous in respect to its motivations.

Understanding of deleterious psychological states which underlie suicide could be drawn from his dissertations on differences in emotional experiences across pathologies. For example, Kohut had written on a number of occasions about *narcissistic rage*, a hostile state occurring in diverse psychopathology, in face of perceived transgressions (Kohut, 1972). Kohut did not essentially link rage to a suicidal proclivity. He noted that it was not unusual for clients who displayed neurotic tendencies to make explicit threats of suicide but these were articulated within a context of their angry demands of fulfilment of their “infantile wishes” for love and acceptance (Kohut, 1972, p. 370). However, in case of psychotic behaviours, Kohut saw the *rage*, aimed at particular despised body parts (i.e., those parts, which felt offensive, dead, or foreign), as the force enabling self-mutilating acts (Kohut, 1972). Analogously, suicide would become an option when a suffering individual has lost the narcissistic investment in the own self or self-respect/appreciation (lost the *narcissistic libidinal cathexis*), rendering the self shrouded in indifference, thus redundant and disposable (Kohut, 1972).

According to Kohut, the period of the highest psychological vulnerability to suicide is that of an approaching older age; the time when evaluations of life accomplishments expose an unfulfilled void in one’s sense of personal achievements, and an emerging from this sense of humiliation or worthlessness (Kohut, 1977). Having reached later middle age and come to a critical realisation of the expiration of time and energy to satisfy yet unaccomplished aspirations, may evoke the feelings of mortification (Kohut, 1977).

The contention that suicide represents a disintegration in the sense of self, often with the self seeking restoration of its own cohesion, more so than death, has also been proposed by De Rosis (1961), Baumeister (1990), M. Chandler (1994), and also reiterated

by Lester (2013). Further, as De Rosis (1961) noted, an “*alienation of the self*” (p. 239), according to Horney, is a suicide-predisposing factor, because it creates a gap between the idealised self and the real or perceived self, evoking a feeling of self-hatred.

This Kohutian view appears tentatively viable but nonetheless only partially explains a suicidal act. To experience shame consciously, the use of introspection would be required. Theoretically, a capacity for introspection would demand some level of self-awareness or self-cohesion (Morrison, 1997). Thus, this seems to be a circular dilemma; to be aware of one’s own shame or despair, one needs to have some level of self-cohesion, although for Kohut, shame and despair are associated with disintegration anxiety, thus with a diminishment in the sense of self-cohesion. Following from this, the relationship between negative emotions and self-cohesion, and their role in a suicidal wish appears to be complicated and unexplained. Perhaps, simplifying the enquiry, one could ask: are disintegration of the self (lack of self-cohesion) and negative emotions, such as Shneidman’s psychache, independent of or related to each other; and could these constructs, self-cohesion and psychache, represent the opposite ends on the same spectrum of self-preserving motivation? These questions are explored in Chapters 5, 6, and 7, along with the investigation of the earlier posed questions in respect to psychometric equivalence of the psychache measures, and relationship between psychache and the self/self-cohesion.

In order to investigate those relationships, however, a psychometric method of assessing the essence of self or self-cohesion, corresponding to the Kohutian theory, needs to be identified and verified for its validity and suitability for statistical analytic procedures. Thus, the existing measures of the self are outlined next (section 2.9), and an

examination of a selected for this project measure of the sense of self follows in Chapter 4 (Study 1).

## 2.9 Capturing the Self: Self-cohesion Measures

Psychology literature contains numerous references to the construct of self (e.g., Scopus search alone returns 186,032 articles). Nonetheless, reported attempts to measure the construct are few. Several measures of *self-concept* and *self-esteem* have been devised within behavioural and cognitive research, and these have been shown to be useful in capturing individual differences in self-image, self-concept, or self-appreciation (e.g., Beck, Brown, Steer, Kuyken, & Grisham, 2001; Beck, Steer, Epstein, & Brown, 1990). Nevertheless, these psychometric tools do not appear to capture the essence of a self-experiential and autonomous sense of being, as an effective or influential agent, who emerged from an essentially relational context, as theorised by Kohut (1977). Kohut believed that attempting to encapsulate the construct of the self presents difficulty; it is an impractical or unfeasible undertaking, because the self could not be extracted from its presentations:

We can describe the various cohesive forms in which the self appears, can demonstrate the several constituents that make up the self . . . and explain their genesis and function. And we can, finally, distinguish between various self types and can explain their distinguishing features on the basis of the predominance of one or the other of their constituents. We can do all that, but we will still not know the essence of the self as differentiated from its manifestations. (Kohut, 2011, p. 450)

Although acknowledging the difficulty in capturing certain constructs, the modern science paradigm requires quantifiable evidence of constructs being studied. Therefore,

to obtain an approximate that bears a resemblance to the crux of the self, the observable or detectable features of the self could only be appraised. This could be achieved by assessing the self in terms of self-cohesion, that is an outcome of its own developmental processes or pathways, as per Kohutian theory, and taking into account that the appraisal represents an approximated state of a sense of self at the time of that assessment.

Literature searches of PubMed, PsycInfo, and Scopus databases identified reports of the independent development of five different self measures consistent with the theory of self psychology. In short, in the opinion of these researchers, Kohut's theoretical principles of the self, emerging from a traditional psychodynamic perspective, could be studied using experimental and statistical methods.

The first measure, intended to monitor therapeutic progress, was the *Client Cohesion of Self-Schemata Scales*, comprising six indices based on Kohut's developmental theory, and four markers relating to the core implicit functions undertaken by the self (Patton, Connor, & Scott, 1982). The 10 subscales denoted the extent of mastery in the self-cohesion areas: self-presentation style; ability to express one's own needs; the extent of ambitious effort; individuality/separation from others; respect towards others; ability to establish goals; capacity for empathic reaction; self-esteem maintenance strategies; ability to endure emotions;; and deployment of one's skills. The authors, however, reported shortcomings in the internal consistency and inter-rater reliability of the measure (Patton et al., 1982), and it appears that the use of this measure has since been discontinued.

The second measure, based on Kohut's developmental principles, was the 20-item *Superiority and Goal Instability Scales*, aiming to predict students' career choices (Robbins & Patton, 1985). The utility of the scale was shown to be limited but it was deemed

sufficiently informative for use within the college counselling environment (Robbins & Patton, 1985).

A third known attempt, the *Experiencing of Self Scale* (EOSS), reportedly first presented by Parker, Beitz, and Kohlenberg in 1996 and originally named the *Experience of Self Scale*, comprised 20 items rated on a 7-point scale, based on behavioural premises of environmental stimulus-response contingencies (Kanter, Parker, & Kohlenberg, 2001). The scale was designed to measure the intensity of the impact of social environment on the sense of self and it therefore failed to isolate the core sense of self from a socially constructed self-conceptualisation of the self.

Similarly, the fourth measure, acknowledging the relational nature of the self, was presented by Schott and Bellin (2001). The scale was a context-dependent measure, the *Relational Scale*, which attempted to assess the functioning of the self within a specific setting. The scale items formed six subscales of the average internal consistency, and represented aspects of the self: public competence; relative academic achievement; social inclusiveness body-image; relations with caregivers; and seeking relational enhancements. Again, the construct measured appeared to be that of a socially-dependent self-concept, rather than the self in its holistic expression.

The fifth scale, devised by Banai et al. (2005) was a 38-item *Selfobject Needs Inventory* (SONI), which addressed the child's needs to experience esteeming mirroring, the availability of self-objects, whom could be idealised, and identification with self-object's desirable qualities, as well as narcissistic defensiveness (avoidance of mirroring and twinship). The measure was originally presented in Hebrew, incorporated a 7-point rating scale (Banai et al., 2005). The SONI scores were validated in a series of correlational analyses, mainly by its authors, and indicated associations with anxiety,

depression, self-esteem, emotional self-regulation, attachment, interpersonal sensitivity, and narcissistic qualities such as self-adoration, superiority, and manipulative tendencies (Banai et al., 2005).

The most recent, to date unpublished addition to this collection of self-related measures is the 23-item *Adelaide Self-Cohesion Scale* (ASCS), grounded in the theory of self psychology and designed to capture the experiential sense of self-wholeness (Chamberlain, 2010). The ASCS quantifies the extent of the current sense of self-completeness by collating the scores of current self-esteem, past childhood relational experiences (mirroring and transference needs), and current brooding presentations (denoting the degree of assertive lifelong coping with life challenges). Thus, Chamberlain's operationalisation of the sense of self-cohesion differs from the earlier measures by the embracing the Kohutian bipolar organisation of the self, reflecting the extent of the mirroring and idealising needs being met, and additionally including development of stress-coping skills (details of the structure of the ASCS are presented below in section 2.9.1). Further, the scores of the measure were validated by Chamberlain using both suicide-attempters and non-attempters, confirming a relationship between self-cohesion and self-destructive tendencies. This result was consistent with theory about suicide from the perspective of self psychology, as presented in the previous section, 2.6.

### **2.9.1 Rationale behind selection of the ASCS.**

The selection of the ASCS over the other scales was dictated by its two main qualities: 1) the scope of coverage of developmental premises advocated in Kohut's self psychology theory, and 2) the original validation of the measure on suicidal and non-suicidal samples. Specifically, the ASCS was devised in a progressive manner via a series

of Rasch analyses (analyses based on the premises of item response theory, determining the fit between the trialled items and the algorithmically derived model). First, the transformation of the original childhood mirroring and idealising needs into a healthy self-perception has been reflected with self-esteem items (eight of the Beck self-esteem scale items were retained and supplemented with five additional items). Second, the fulfilment of early psychosocial/relational needs, denoting the extent of twinship/merging with the idealised parents, has been addressed via subjective evaluation of transference experiences (five items; e.g., being *heard* and *acknowledged* by parents). Supplementing the derived items relating to self-esteem and realisation of the childhood needs of a merger, the consequent lifelong coping patterns have been assessed via five items of the Brooding subscale of the *Ruminating Response Scale* (RRS; Treynor, Gonzalez, & Nolen-Hoeksema, 2003).

These quantitative procedures were then enriched with qualitative analyses examining the experiences and reflections of interviewed suicide attempters. This consolidated a three-part scale organisation, with the subscales denoting: Self-concept; Transference Needs; and Ruminating Style. The ASCS has then been validated by confirmatory factor analysis and univariate statistical procedures, ratifying the robust three-factorial arrangement of the scale items, and demonstrating statistically significant co-variance of the ASCS scores with suicidality scores. Specifically, the ASCS was shown to isolate the scores of suicide attempters and ideators from those of persons with no suicidal inclinations.

For ease of interpretation of the results, throughout the remaining parts of this thesis, the Ruminating Style subscale is referred to as Rumination (with higher scores

indicating more intense ruminative tendencies) and the Transference Needs subscale as Childhood Needs (with higher scores indicating higher quality interpersonal encounters).

No reports of the ASCS being used and validated by any other research team have been found. Thus, apart from the investigations of the ASCS psychometric qualities by the author of the scale, there is no record of the scale's performance in respect to other populations or in light of other psychological constructs. Therefore, verification of the scale's structure and utility in diverse populations is required before proceeding with further analyses, and importantly, prior to drawing inferences and conclusions based on the ASCS's scores. Chapter 4 presents an examination of the ASCS structure in a different context to that applying to the original sample made by Chamberlain (2010). Prior to that, the method of this thesis' investigation and other involved measures are specified, in Chapter 3.

## SECTION B: EMPIRICAL INVESTIGATION OF THE SELF AND PSYCHACHE

### Chapter 3

#### The Survey and Method

This investigation used empirical statistical methods to explore the psychodynamic constructs relating to the innermost experiences of the self and psychache. To address the research questions (see *Preface* to this thesis), a battery of psychometric instruments were collated from a bank of measures of psychological functioning. These were selected on theoretical grounds to provide a comprehensive survey of the experiences of psychache, self as self-cohesion, self-esteem, psychological distress, and suicidality; the validity of which could be tested subsequently. It was anticipated that this approach would allow insights into the psychological experiences of the self, as described by Kohut and Shneidman and, further, provide leads as to how those inner events relate to psychological distress and suicidal tendencies.

A sequence of explorative studies was designed, permitting a progressive interrogation of the main questions that the investigation sought to answer, with the results from each study informing the methodologies of subsequent studies.

Importantly, suicide research requires vigilance due to the many ethical and legal issues that can arise, ensuring that no psychological harm results from research participation. Suicidology literature suggests that participants are not generally distressed by questions relating to suicidality. Indeed for those who have previously experienced suicidality, the process of validating their experiences can be cathartic

(Chamberlain, 2010). More recently, the study by Whitlock, Pietrusza, and Purington (2013) revealed that internet-based questionnaires relating to suicide and psychological distress had no adverse effects on the majority of respondents, with only those with a prior suicide history (2.7% in their study) reporting some level of discomfort. The researchers also found that those reporting questionnaire-related discomfort admitted that the engagement with the survey triggered greater self-awareness and insightfulness into their lives. Respecting that “bringing up memories of the circumstances surrounding suicidal intentions or attempts may either have benefits for a participant or may result in increased risk” (Mishara & Weisstub, 2005, p. 34), the progress of the survey was carefully monitored daily and appropriate action taken when participants’ responses appeared concerning or ambiguous (described in section 3.2.2).

### **3.1 Participants**

The intention was to avoid a homogenous sample or a sample exclusively targeting individuals who had attempted suicide. The aim was to obtain a sample that included persons without suicidality, with different levels of suicidality, with and without psychiatric diagnoses, from diverse cultural and ethnic backgrounds, education, age, gender and other sociodemographic factors. The rationale was that a sample approximating the ideal of a population-representative sample would reduce sampling bias and optimise the likelihood that results could validly be generalised to the broader South Australian population. Participants were therefore recruited from the South Australian community, beginning with a convenience sample of undergraduate and postgraduate students from the University of Adelaide, and extending to University staff. Further, additional participants were then recruited by an indirect snowballing procedure

whereby initial survey respondents could provide the website address with the study information and survey, to other potential respondents from outside the university community. The study was titled “Psychological pain and self cohesion: A comparative study” and described to potential participants as an opportunity to contribute to knowledge on suicide and its prevention, by informing about their own indicators of psychache, self-esteem, self, emotional distress, and thoughts in respect to ending one’s own life. Interested people were then able to participate in the study. All university participants engaged with the project via an online survey. University students and staff were invited through the University’s Experiment Management System (the university’s electronic research database), to which they have voluntary access. Community members were given the opportunity to participate, with invitations and information sheets being posted at various community centres, such as medical and dental practices, and small services and retail outlets. Psychology students received credit towards research participation requirements of their course but other participants were not rewarded or reimbursed in any way.

All participants resided in Australia, had English language competency skills and, as self-reported, met exclusion criteria. In addition to competency in English, these were: no current diagnosis of brain injury; no evidence of cognitive impairment. Six volunteers did not complete the survey and were removed from the data set. The survey was completed by 359 respondents, with 258 (72%) females and 101 (28%) males, aged between 18 and 67 years ( $M = 28.72$ ;  $SD = 12.29$ ). The study was approved by the University of Adelaide Human Research Ethics Committee (HREC).

## 3.2 Procedure

### 3.2.1 Pilot study.

Prior to distribution of the survey (content is described below in section 3.3) a pilot study was conducted with a group of 10 respondents. Participants were university postgraduate students, invited via a generic email or by personal invitation. The purpose was to analyse the functionality of the survey items and to test planned statistical procedures. Participants were asked to provide feedback about clarity and any problems with the survey items and instructions. Feedback from respondents was entirely satisfactory, as were results from analysis trials, and the survey was therefore deemed appropriate to administer to a larger sample. Because no changes were made to the survey's content, the pilot study sample was included in the final data pool.

### 3.2.2 Collecting data.

The survey was available between November 2013 and August 2014, both on-line (via the SurveyMonkey website) and in a paper version (distributed, with a reply paid envelope, to participants who preferred this method). The survey was completed independently at the place and time of a participant's choosing. It took approximately 20 minutes on average to complete. It contained a battery of psychological measures, as described below, and sought demographic information: age, sex, education, duration of Australian residency, and presence of mental illness diagnoses. As required by the HREC, participants' contact details were sought to enable a risk management strategy of direct intervention to be implemented if necessary and the survey was supplemented with contact details for counselling services and websites promoting emotional well-being.

Data were systematically and regularly screened for repetitive entries (a number of students attempted the survey on several different occasions), incomplete submissions,

and concerning responses that required follow-up. In the first instance, such cases (25 in total) were first referred to the clinical supervisor, Dr Peter Chamberlain. He was informed of all potentially concerning disclosures relating to distress or suicidality, which he followed up with a number of telephone consultations. Documentation of the interventions was retained. Several participants contacted the researcher to volunteer their participation in future research of a similar nature (as encouraged in the survey). To enable the analyses, the data, including those of the returned surveys on paper, were next transposed and formatted in the SPSS software. Data were subsequently de-identified prior to analyses.

### 3.3 Instruments

The measures described below were included in the survey and completed in the order described here.

#### 3.3.1 Psychache measures.

The psychache measures have been discussed earlier in Chapter 2, section 2.4.1. Additional brief details in respect to their use in this investigation, structure and validity are provided below.

*The Psychological Pain Assessment Scale (PPAS)*, developed by Shneidman (1999), comprises ratings of the presence of *current* and *worse* psychache on a 1 to 9 scale. Also, as earlier outlined, PPAS also uses a technique adopted from the Thematic Apperception Test (analyses of respondents' perceptions of visual stimuli), as well as thematic analysis of a psychache-related narrative (these parts were not included in the survey). The first two items were not incorporated in the analyses, due to feedback from the survey participants of perceived ambiguity on those two items, and consequently, inconsistency

in reporting. For the purpose of Study 5 in this thesis, the item specifying three most prevalent emotions underscoring *worst* psychache was utilised. In this item, respondents specified their three most enduring emotions in times of the most intense psychache; respondents had a choice to indicate their own emotions or select from the following list: abandonment, fear, powerlessness, anger, grief, rejection, anxiety, guilt, sadness, betrayal, helplessness, self-hate, confusion, hopelessness, shame, despair, loneliness, worthlessness, emptiness, loss, failure, and lure of death.

*The Orbach and Mikulincer Mental Pain scale* (OMMP; Orbach, 2003) is a 44-item self-rating test, developed on the basis of narrative analyses, deploying the premises of grounded theory and content analyses techniques, in both clinically-diagnosed and non-diagnosed populations. Validity has been established, based on its moderate positive association with anxious and depressive symptoms, as well as negative correlation with emotion-focused coping (Orbach, Mikulincer, Sirota, & Gilboa-Schechtman, 2003). For the purposes of exploratory factor analysis (EFA), the original Likert scale was modified so as to be consistent with scoring requirements of the other included scales; i.e. with responses recorded from 1 (*strongly disagree*) to 6 (*strongly agree*). Following the original procedure, reverse scoring was applied to two items: “*I need the support of other people*” and “*I can’t stay alone*”.

The OMMP was reported by Orbach, Mikulincer, Sirota, et al. (2003) to encompass nine factors, each with high within-subscale consistency. Coefficients for each subscale reported for the original sample of 513 Israeli adults recruited from a local university and community centres (aged from 18 to 57 years), were: a) irreversibility, .95; b) loss of control, .95; c) narcissistic wounds, .93; d) emotional flooding, .93; e) freezing, .85; f) self-estrangement, .79; g) confusion, .80; h) social distancing, .80; and i) emptiness, .75.

However, despite this reported evidence of good internal consistency for each of these subscales, a preliminary factor analyses of the OMMP with this study's sample did not return the original nine-factor solution; the nine factors found were defined by substantially different items to those reported by Orbach, Mikulincer, Sirota, et al. (2003). Therefore, the analyses in this study considered the OMMP's total scores, as well as individual items ratings, in two separate factor-analytic procedures, as will be described in Chapter 5.

*The Psychache Scale* (PS; Holden et al., 2001), based on Shneidman's theory, is a 13-item self-report measure, comprising two subscales; psychache frequency and intensity. The PS's validity has been demonstrated against other theoretically related constructs, such as hopelessness and suicidality motives (Holden et al., 2001). In prior studies, the PS demonstrated excellent internal consistency Cronbach's alpha equal to or greater than .90 in the samples of 587 undergraduate psychology students (age  $M = 18.72$ ,  $SD = 2.49$ ) and 136 male offender population; age  $M = 38$  years;  $SD = 11$  (DeLisle & Holden, 2009; Mills et al., 2005, respectively).

Because the response format of the PS frequency subscale is, for the purpose of factor analysis, incompatible with the format of the OMMP, the subscale was modified to provide six levels of measurement, in accord with the OMMP's adapted response format, permitting unambiguous comparison of items (detailed explanation can be found in Chapter 5, section 5.3.3.1).

### **3.3.2 Self-cohesion measure.**

*The Adelaide Self-Cohesion Scale* (ASCS; Chamberlain, 2010), as described earlier in Chapter 2, section 2.9.1, is a 23-item self-rating scale, quantifying the extent of sense of self as integral, fulfilled and valued, and comprising three subscales: Self-concept (13

items: current views about the self); Childhood Needs (5 items: childhood transference needs pertaining to relational aspect of early developmental years); and Rumination (5 items: ruminating style patterns/habits over time). To permit comparisons with other measures planned for inclusion in subsequent studies, the differential points of the three subscales were set at six levels. The Rumination subscale was reverse-scored to allow calculation of a cumulative score (as per the original scale). The ASCS construction sample comprised of recent suicide attempters (within 72 hours from attempt;  $N=13$ ; between 19 and 43 years old), first year and graduate psychology students, and community volunteers as control groups ( $N=214$ , 17-47 years old). The final testing of the measure involved 53 suicide attempters, and 334 university students and community volunteers. The rationale behind selecting this measure has been presented in Chapter 2, section 2.9.1.

### **3.3.3 Psychological distress measure.**

*The Depression Anxiety Stress Scales 21* (DASS 21; S. H. Lovibond & P. F. Lovibond, 1995) is a 21-item self-rating psychometric tool, quantifying and ascertaining the nature of emotional negativity over a recent week on a 4-point Likert scale. It has been reported that the three DASS subscales effectively distinguish between the emotional syndromes of depression, anxiety, and stress (Lovibond, 1998).

The normative sample of the DASS 21 returned the internal consistency Cronbach's alpha values of .91 for Depression, .84 for Anxiety, and .90 for Stress (P. F. Lovibond & S. H. Lovibond, 1995). The sample comprised 717 first year psychology students at the University of New South Wales (mean age = 21.0 years;  $SD$  not provided).

The measure has been frequently used in research, with its cumulative score serving as a proxy of psychological distress (e.g., Hayter & Dorstyn, 2014), and has

become an increasingly popular screen for distress in clinical settings in Australia. The measure demonstrates excellent psychometric properties, being a usefully brief alternative to the Symptom Checklist 90-Revised (SCL-90 or its modified versions; Rosen et al., 2000) or the psychological distress markers identified as depression, hopelessness, anxiety, and anger, and proposed by Elkins et al. (2012).

This specific operationalisation of psychological distress appeared most appropriate for this study, due to the earlier research evidence implicating depression (e.g., Beck, Lester, & Albert, 1973; Rui C. Campos, Besser, & Blatt, 2013), anxiety (e.g., Apter et al., 1990), and stress (Mann et al., 1999; Chapter 1, section 1.1.6) in suicidal ideation and actions. In particular, anxiety was reported as a valid predictor of a suicide risk, either as a factor independent of or in comorbidity with depression or other disorders or conditions in a large number of studies. For example, R. C. O'Connor, Connery, and Cheyne (2000) demonstrated that depression, hopelessness, and anxiety differentiated those who engaged in self-destructive behaviour from those in a non-suicidal comparison group. Similar findings in respect to anxiety were found across diverse populations, examining different sets of co-variables and using different methodologies (e.g., Boden, Fergusson, & Horwood, 2007; Busch, Fawcett, & Jacobs, 2003; Carter, Silverman, Allen, & Ham, 2008; Diefenbach, Woolley, & Goethe, 2009; Foley, Goldston, Costello, & Angold, 2006; Ghaziuddin, King, Naylor, & Ghaziuddin, 2000; Gould et al., 1998; Joe, Baser, Breeden, Neighbors, & Jackson, 2006; Pfeiffer, Ganoczy, Ilgen, Zivin, & Valenstein, 2009; Philip & McCulloch, 1968; Poeldinger, Gehring, & Blaser, 1973; Wanner, Vitaro, Tremblay, & Turecki, 2012; Weitoft & Rosen, 2005; C. F. Yen et al., 2014). Nonetheless, it is acknowledged that some earlier research found anxiety to be less influential in the

suicidal process, especially when investigated in the context of comorbid psychiatric diagnoses (e.g., Beautrais, Joyce, & Mulder, 1996).

The three subscales of DASS 21 were incorporated as separate manifest variables in subsequent factor analyses (Chapter 5), and then in series of hierarchical regressions (reported in Chapters 6 and 7). Further details about DASS 21 will be outlined in Chapter 5 (Study 2, section 5.5.2).

### **3.3.4 Self-esteem measure.**

*The Beck Self-Esteem scale* (BSE; Beck et al., 2001) comprises two self-rated subscales (the Self and the Other) and collates ratings on personal attributes, using a semantic differential scale, with each subscale encompassing 18 sets of descriptive opposites (e.g., *unsuccessful-successful*). The convergent validity of BSE's Self subscale with the measures of existential well-being and hopelessness was shown by Lamis, Wilson, Shahane, and Kaslow (2014), who found the relationships between the Self subscale and existential wellbeing measure to be  $r = .40$ , and for the hopelessness measure to be  $r = -.43$ , both  $p < .01$ . Also, both BSE's subscales were reported as demonstrating a statistically significant incremental validity in prediction of suicidal ideation, with the regression analysis effect size for the Self subscale ( $f^2$ ) = .02 (Bhar, Ghahramanlou-Holloway, Brown, & Beck, 2008). To avoid excessive collinearity in statistical analyses, given the high inter-correlation of the BSE's subscales of  $r = .82$  (Bhar et al., 2008), and considering that the focus of this investigation was on aspects of the sense of self (thus necessarily, how individuals perceive themselves, rather than how they think they are perceived by others), the survey included only the subscale of the Self ('self-based self-esteem'); a similar strategy was applied by Lamis et al. (2014). The range of the original 10 differential ratings was adjusted to six levels to permit comparisons with

other scales in the tests battery. The internal consistency in Beck et al.'s (2001) validation sample, which comprised 360 outpatients of a psychotherapy clinic (mean age = 36.6;  $SD = 10.83$ ) was Cronbach's alpha of .94.

### 3.3.5 Suicidality measures.

The rationale for electing to engage three different indices of suicidality are explicated in Chapters 8 and 9 (Studies 4 and 5). Suicidality measures were:

*The Psychiatric Symptom Frequency Scale.* This consists of 18 items addressing affective wellbeing, and is supplemented with five suicidality items, arranged in the progression of severity of ideation and action (Lindelov, Hardy, & Rodgers, 1997). The measure validation sample comprised volunteers recruited from the Medical Research Council's national survey of health and development targeting a general population of those born in England, Scotland, and Wales during the week 3-9 March 1946. In total, 5362 people completed the survey, and some were later interviewed at the age of 43 (only 4.1% of the total of 3262 respondents indicated making attempts on their life). The suicidality items ask if suicidal ideation or action occurred during the recent 12 months, with a binary yes/no response format, starting with: "Have you felt that life is hardly worth living", and culminating in: "Have you attempted to take your own life"? The scoring ranges from 0 (no suicidal ideation or acts) to 5 (a suicidal attempt). For the purpose of this study, the subscale was labelled *Suicidal Thoughts and Behaviour (STB)*.

*Lifetime Suicide Attempts (LSA).* LSA was a single question, enquiring about any past suicide attempts; respondents indicated the number of suicide attempts from 0 to 5 or more.

*Current Suicidality (CS)* measure, indicated the extent of the current intent or determination to end one's own life. Respondents indicated their intent from 0 (*non-*

*existent*), through 1 (*it is a remote possibility, but I know I won't do it*), 2 (*vaguely contemplating*), 3 (*seriously contemplating*), to 4 (*determined to do it*) in response to the question: “*What are your thoughts in relation to ending your life at the present time*”?

### **3.4 Analyses**

#### **3.4.1 Data screening.**

Prior to conducting statistical analyses, the data were examined for normality of distributions and presence of outliers. The scales' spread of scores acceptably resembled normal distributions, with the measures of Rumination and Self-concept from the ASCS measure forming exceptionally close fits to normality. The amount of skewness in the OMMP, PS, DASS-21, and BSE scales was deemed acceptable, and reflective of the nature of the constructs they measured. Scores on the measures of suicidality were not evenly distributed, as would be expected based on available statistics on suicide prevalence (further details are presented in Chapter 7, section 7.3.2). One outlier was found in each of the distributions of OMMP and BSE's scores, and four outliers in the summaries of DASS 21 scores. Given the overall aims of this thesis, it was a requirement that the sample data should be representative of the wider population, thus inclusive of all genuine responses provided by the survey respondents. Therefore, it was appropriate to retain potential outliers to the extent that the proportion of these was consistent with the prevalence of suicidal thought/behaviour within the general population.

#### **3.4.2 Statistical analyses.**

The chapters which follow next in the thesis describe separately a series of five analyses conducted using the data set from this survey. These analyses, hereafter referred to as Studies 1 to 5, have addressed different sub-aims of this investigation, as

stated at the beginning of each chapter, progressively leading to conclusions relevant to the main research questions.

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## **Chapter 4**

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### **Study 1: Structural Properties of the Adelaide Self-Cohesion Scale**

The core of our existential experience, specifically the unique experiential sense of self, has rarely been addressed in contemporary empirical reports, possibly owing to the complexity of the construct. As indicated in the earlier chapter (Chapter 2, section 2.9), it is therefore proposed that the extent to which an individual had developed a sense of self could be more reliably assessed via the measures of self-cohesion.

Because the self-cohesion measure ASCS is a relatively new and non-validated measure outside the original study by Chamberlain, it was important to ascertain whether the ASCS had wider applicability than with a sample of individuals who had attempted suicide, the focus of Chamberlain's research. It was anticipated on the basis of Chamberlain's research that, with a sample drawn from a nonclinical population, the ASCS would conform to the Kohutian theory as operationalised by Chamberlain.

#### **4.1 Study 1 Aim**

The aim of Study 1 was to test the structure and internal consistency of the ASCS measure in a sample drawn from community members, with a majority comprising university students. If the tripartite structure of self-cohesion, reported by Chamberlain (2010), was confirmed in a sample different to the sample that was tested by Chamberlain, this would suggest that the ASCS was suitable for the use in exploration of the wider utility of Kohut's theory about the centrality of a sense of self to sound and stable mental health.

## 4.2 Method

**4.2.1 Participants and procedure** – described in Chapter 3.

**4.2.2 Measures.**

Study 1 examined the *Adelaide Self-cohesion Scale* (ASCS; described in Chapter 3).

**4.2.3 Statistical analyses.**

Analyses were undertaken with *IBM Statistical Package for the Social Sciences* (SPSS) Version 21 software (IBM Corp, 2012).

The structural organisation of the ASCS was tested via exploratory factor analysis (EFA) with principal axis factoring (PAF) extraction. The EFA approach is recommended to determine the number of factors and amount of shared variance in a set of manifest variables, purporting to denote a latent construct (Fabrigar & Wegener, 2012). Moreover, EFA was chosen for its robustness in instances of data spread departing from a *normally* shaped distribution (Fabrigar, MacCallum, Wegener, & Strahan, 1999).

## 4.3 Results

**4.3.1 Reliability.**

Internal consistency for the ASCS measure was not reported by Chamberlain (2010) in the original validation sample but, for the current sample, the aggregate Cronbach's coefficient Cronbach's alpha = .94, with the subscales Self-concept, Childhood Needs, and Rumination having high internal consistency (.95, .93, and .81 respectively).

Given small numbers of items per subscale, item inter-correlations were explored. No weak or divergent correlations were found: for the Self-concept subscale, correlations ranged from  $r = .42$  to  $r = .80$ ; for the Childhood Needs subscale from  $r = .65$  to  $r = .87$ ; and for the Rumination subscale from  $r = .34$  to  $r = .66$  (Table A1; Appendix A).

Within each subscale, the corrected item-total correlations were above .30, with no indication that removing any single item would increase the corresponding subscale's internal consistency. Within the full scale, all three subscales had consistently high corrected item-total correlations, with no evidence of a decrease in reliability due to any item in the scale. Thus, the ASCS had excellent internal consistency.

#### 4.3.2 Participants' demographics.

Demographic details of participants are presented in Table 1 below.

**Table 1**

*Demographic information: age, sex, education, length of Australian residency, and psychiatric diagnoses*

Demographic	N	%	Mental Health	N	%
Age			Mental health diagnoses		
18 – 29	221	61.5	Not Reported	303	84.4
30 – 49	109	30.4	Reported	56	15.6
50 +	29	8.1	Single diagnosis		
Sex			Affective/Anxiety	25	7.0
Male	101	28.1	Psychotic	1	0.3
Female	258	71.9	Personality	0	0.0
Education			Other	4	1.1
Primary	2	0.5	Comorbid diagnoses		
Secondary	122	34.0	Various (no BPD)	24	6.7
TAFE	28	7.8	With BPD	2	0.5
Tertiary	207	57.7			
Residency duration					
< 1 year	11	3.1			
1 - 3 years 11 months	11	3.1			
4 - 10 years	27	7.5			
> 10 years	53	14.8			
Always	257	71.6			

Note. BPD = borderline personality disorder; Residency duration = Australian residency duration. N = 359.

Of note was that the percentages of endorsement by participants of a mental health diagnoses were similar to estimates from national health surveys, with approximately between 6% for affective disorders; 14% for anxiety disorders; to 20% for

any psychiatric illness, in the adult Australian population (Australian Bureau of Statistics, 2007; no recent statistics are available). Although the demographic composition of the sample differed from the general population, the psychological profile of the sample was closely representative of the Australian population.

#### **4.3.3 The ASCS structure: EFA.**

The factorability of the 23 ASCS items was very good, as shown by a KMO (Kaiser-Meyer-Olkin measure of the sampling adequacy) = .93, with individual values in excess of .86. Correlations between items were high, with Bartlett's test of sphericity returning  $\chi^2(253) = 6307.08, p < .001$ . Table 2 presents the loadings and items/manifest variables' dispersal against their respective factors and a higher-order factor of self-cohesion.

Based on the extraction method of eigenvalues  $> 1$ , and examination of the scree plot, three factors have been isolated from within the item pool, precisely matching the original arrangement of the three ASCS subscales. The three-factor structure accounted for 61.5% of variance. Additionally, the fit of the model was determined utilising the technique of the root mean square error of approximation, RMSEA = 0.08, suggesting acceptable consistency of the model with the data (MacCallum, Browne, & Sugawara, 1996).

**Table 2**

*Summary of the loadings and variance distribution of the scores of the Adelaide Self-Cohesion Scale items; Principal axis factoring with promax rotation*

Context	Item	Rotated factor loadings		
		Self-concept	Childhood Needs	Rumination
Current self-beliefs	Undesirable – Desirable	.97		
	Worthless – Worthwhile	.91		
	Unlovable – Lovable	.87		
	Unattractive – Attractive	.83		
	Unpopular – Popular	.79		
	Self-hating - Self-loving	.79		
	Boring – Interesting	.75		
	Powerless – Powerful	.75		
	Unpleasant – Pleasant	.71		
	Incomplete – Complete	.65		
	Lethargic – Energetic	.62		
	Empty – Full	.60		
	Not in control - In control	.57		
In childhood:	Not acknowledged - Acknowledged		.94	
	Not heard – Heard		.93	
	Not having - Having voice		.92	
	Not connected – Connected		.76	
	Betrayed - Treated loyally		.70	
Brooding in distress (R <sup>a</sup> )	I wish the bad situation had gone better			.76
	Why can't I handle things better?			.74
	Why do I always react this way?			.70
	What am I doing to deserve this?			.58
	Why do I have problems others don't have?			.58
<b>% Explained variance per factor</b>		43.5	11.3	6.7
<b>Cronbach's <math>\alpha</math></b>		.95	.93	.81
<b>Loadings on the higher-order factor</b>		.78	.60	.77

Note. Loadings values  $\leq .30$  suppressed.  $N = 359$ .

<sup>a</sup>(R) – reversed scoring.

#### 4.4 Study 1 Discussion

The Adelaide Self-Cohesion Scale (ASCS) is an empirically developed measure, derived from Kohut's object relations theory of self psychology. Self-cohesion can be considered an essential and fundamental *self*-state, "the central fulcrum of the total

personality”, which fosters healthy psychological functioning (Chamberlain, 2010, p.18). Because self-cohesion is not a binary, ‘all or nothing’ phenomenon, the ASCS assesses the extent of the individual’s sense of stability of self on a continuum from self-cohesion to fragmentation. The ASCS was initially validated on a sample of suicide attempters, compared with non-attempters, and ideators (university students and hospital emergency department patients), demonstrating the measure’s capacity to distinguish between those with and without suicidal ideation, or a history of suicidal attempts (Chamberlain, 2010). The current study has examined further the properties of the ASCS, as applied to a demographically diverse non-clinical community sample (but which would be expected to include suicide ideators/non-ideators and attempters/non-attempters), with the focus on structural composition of the scale and convergent construct validity. The composition of the ASCS was explored via EFA, and the scale’s internal consistency was confirmed.

Submitting the ASCS’s items to EFA demonstrated structural robustness of the measure, replicating its three subscales/factors (Self-concept, Childhood Needs, and Rumination), and distributing the items in accordance with their original arrangement within the measure. The factors of Self-concept and Rumination loaded more strongly on the higher-order factor of Self-cohesion than on their own respective factors, while Childhood Needs showed the opposite trend, i.e., had stronger loadings on its own factor, relative to Self-cohesion. This could perhaps be a reflection of the retrospective nature of the Childhood Needs factor, requiring an *ex post facto* adult value judgement of past childhood interactional experiences with parents. The time-lapse between the childhood experience and its self-evaluation may have distorted to some degree the appraisal, either due to memory flaws or transformed emotional investment. Nonetheless, despite the relative uniqueness of the factor of Childhood Needs, it explained a substantial

amount of variance in the model (11.3%, being a considerable variance proportion within the cumulative, accounted for total variance of 61.5%, as seen in Table 2). Most of the variance was reflected by the Self-concept factor (43.5%), corresponding to Kohut's emphasis on the crucial role of transposition of the *grandiose self-regard* to a healthily functioning self-esteem, as the major source of strength and constancy of the evolving self, shielding individuals from personality and emotional self-regulation/affective maladies (Kohut & Wolf, 1978; Patton et al., 1982).

The internal consistency coefficients of each of the subscales of the ASCS demonstrated high levels of commonality between the items, suggestive of an overall unity of the scale; the degree of items' independence within each subscale was found to be appropriately retained. All these combined EFA and internal consistency findings suggest that the ASCS reliably addresses the targeted psychological construct of self-cohesion across diverse populations.

#### **4.5 Study 1 Conclusion**

The exploration of the psychometric properties of the ASCS on a diverse community sample has reproduced the composition of the original measure. The scale has shown robust psychometric properties, reflecting the psychoanalytical conceptualisation of the self, as a deep sense of one's own dexterities, qualities and fulfilment; the self which transcends the cognitive-behavioural formulation and operationalised exclusively as self-concept or self-esteem indices. The ASCS has therefore been accepted as a valid psychometric means for measuring an approximation of the Kohutian notion of the self, quantified via self-cohesion, and utilised in combination with other measures of interest to this research (introduced in the following sections of this thesis). The ASCS has

therefore been included in a battery of measures for the subsequent study (Chapter 5), examining the validity and equivalence of operationalisation of psychache, another psychodynamic construct, which has not been investigated to date in respect to the notion of self (for details about the measurement of psychache refer to earlier Chapter 2, section 2.4.1).

## Chapter 5

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### Study 2: Equivalence of Psychache Measures and Relationship between Psychache, Self-Cohesion, Self-esteem, and Psychological Distress

To date, Shneidman and Kohut's theories have not been discussed together, possibly because of the seemingly disparate aspects of human pursuit that the theories contain. Shneidman's theory is focused on self-destruction, while Kohut's work is concerned with its opposite, the growth, organisation, and fulfilment of the self. Nevertheless, while on the surface un-related, these two theories encompass a number of common ideas and they complement each other's insights relating to human motivation and desire for continued life.

Chapter 2 outlined these two theories of inner experience, and posed questions in respect to some detected commonalities, as well as perceived incongruities that emerged from those theories. In addition, different methods of measuring the constructs of psychache and self have been reviewed. Briefly summarising, Shneidman's position has been that psychological pain, named psychache, is an overwhelming negative emotion and an essential element in suicidal malady, accompanying mental *perturbation* and *press* (external and internal stressors). According to Shneidman, there can be no suicide without this pronounced and intolerable pain, and this proposition having been confirmed by a number of studies employing two different measures of psychache, the OMMP and PS. Kohut regarded fragmentation of the sense of self, with its accompanying severe sense of overwhelming mortification and despair (*disintegration anxiety*), as a psychopathology and suicide precursor. It is suggested here that Shneidman's theory of psychache and Kohut's notion of fragmentation of the self appear to overlap, with both

events invoking a conception of a profound negative emotion, potentially leading to suicide. Moreover, as stated in previous section 2.4.1, addressing the experience of psychache in separation from the self may paint an incomplete picture of human functioning.

As indicated in section 2.4.1, a relationship between psychache and suicidality has been thoroughly explored with the use of the two most commonly used measures. However, the empirical examination of the relationship between self and suicide has been scarce, and limited to the unpublished study by Chamberlain (2010).

This theoretical deliberation generates four main research questions: 1) are psychache and fragmentation the same or distinct constructs?; 2) how does psychache relate to the sense of self/self-cohesion?; and necessarily, 3) can the relationship between a damaged sense of self-cohesion and suicide be replicated/confirmed? Further, and importantly, 4) is the construct of psychache, as operationalised by the OMMP, equivalent to the psychache approximation obtained via the PS (can we have confidence in the validity of merging findings obtained from these two measures which have been constructed independently of each other)? Questions about the equivalence of different psychache measures and about a potential relationship between psychache and the self are examined in this chapter (with a set of additional measures described in the sections below). Consideration of the question about the self/self-cohesion in the context of suicide will be investigated in Chapter 6.

## 5.1 Rationale Behind the Inclusion of Measures of Psychological Distress and Self-esteem

Apart from the measures of psychache and self-cohesion, this study included measures of psychological distress and self-esteem. This was dictated by the realisation that, despite the theoretical and empirical validation of psychache, the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition (DSM-5; American Psychiatric Association, 2013) makes no reference to this inner experience as a distinct psychological condition or state. The term *distress*, however, has been extensively employed throughout the manual, although a definition is absent. For example, DSM-5 denotes distress associated with: a “negative feeling/cognitive state” as one of the self-injury mechanisms (p. 801); “having prominent feelings of hopelessness” (pp. 167-168) as one of the indicators of suicide risk and dysthymia; and “other pains” (p. 164) as part of depressive symptomatology (American Psychiatric Association, 2013). The absence of psychache in the clinical guides is surprising, and perhaps could be attributed to the continued lack of consensus on the conceptualisation (Masson & Muirheid-Delacroix, 2014) and operationalization of the construct (Tossani, 2013). Thus, it could prove useful to clarify the relationship between psychological distress and psychache. Moreover, while psychache has been validated against anxiety and depressive symptomologies, such as hopelessness and suicidality (e.g., Gvion & Apter, 2012; Lester, 2000; MacDonald & Leary, 2005; Mee et al., 2011; Meerwijk et al., 2014; Orbach, 2003), there is a paucity of research into the relationship between psychache and stress, despite the evidence that stress is a significant risk factor for suicidality (Corona et al., 2013; Martin et al., 2013).

Theoretical demarcations between the notions of psychache, stress, and psychological distress have been earlier proposed (Martin et al., 2013; Olié et al., 2010; Shneidman, 1993; Wager-Smith & Markou, 2011), but the psychometric distinctiveness of these constructs has not been empirically tested. This is especially important, given that psychological distress and psychache are occasionally conflated in the literature (Edlund, Carlsson, Linton, Fruzzetti, & Tillfors, 2014; Kacel, Gao, & Prigerson, 2011; Kavanaugh & Ayres, 1998; Marcus, 2009; McMillan, 2005; Orenius, 2007; Smedstad, Vaglum, Moum, & Kvien, 1997).

Psychological distress, a ubiquitous and complex experience, has been characteristically conceptualised broadly (see McMillan, 2005, for a review). For example, the *Concise Dictionary of Modern Medicine* has defined psychological distress as “a general term for the end result of factors (psychogenic pain, internal conflicts and external stress) that prevent a person from self-actualisation and connecting with significant others” (Segen, 2006, p. 550). The definition allows the inference that: (1) “psychogenic pain” may be exemplified by psychache; and (2) “internal conflicts and external stress” entail a wide range of idiosyncratic distress-related afflictions, such as anxiety, depression, and stress.

The definition of psychological distress further suggests that detrimental factors of inner and outer perturbation potentially inhibit forming meaningful relations and “self-actualisation”. Both the needs for relations/affiliation and self-actualisation have been earlier delineated by Abraham Maslow in his hierarchy of fundamental bio-psycho-social human needs, with self-actualisation constituting a final achievement of the evolving self (Maslow, 1943). Maslow (1943) stipulated that self-actualisation necessarily requires a preceding and robust self-esteem. As outlined in Chapter 2 (section 2.6.2), and

resonating with Maslow, Kohut also emphasised the importance of the fulfilment of interpersonal needs and transformation of an infantile grandiose narcissism into a robust self-esteem, as a cumulative indicator of a successfully established healthy self. For Kohut, as for Maslow, self-esteem is a crucial stepping stone towards accomplishment of transcendence and wisdom, i.e., self-actualisation.

## 5.2 Aim of Study 2

Considering Shneidman's emphasis on the role of psychache in suicide, and contemplating other potentially related but, to date, unexamined variables in the context of suicide and psychache, the aims of study 2 were: firstly, to discern the extent of correspondence between the operationalization of psychache, as measured by the OMMP scale (Orbach, Mikulincer, Sirota, et al., 2003) and the PS (Holden et al., 2001); and secondly, to explore the relationships between psychache and self/self-cohesion, self-esteem, and psychological distress (the factors frequently associated with suicide, though rarely studied in the context of psychache).

## 5.3 Method

**5.3.1 Participants and procedure** – have been described in Chapter 3.

### 5.3.2 Measures.

The following measures, from the battery of tests included in the survey, were utilised in Study 2 (with all described earlier in Chapter 3):

*Orbach and Mikulincer Mental Pain (OMMP), The Psychache Scale (PS), The Adelaide Self-cohesion Scale (ASCS), Depression Anxiety Stress Scales (DASS 21), and Beck Self-esteem scale (BSE).*

### 5.3.3 Statistical analyses.

The statistical analyses utilised the *IBM Statistical Package for the Social Sciences* (SPSS) version 21 software (IBM Corp, 2012). Firstly, the values of internal consistencies for all involved measures were established via the statistic of Cronbach's alpha.

The main part of the analyses comprised a data-driven approach: exploratory factor analysis (EFA) with principal axis factoring (PAF) extraction. This approach is recommended in seeking to determine the number of factors and amount of shared variance from within a set of separate variables, which aim to capture specific latent constructs where there is no hypothesis, and when the assumption of data distribution normality has not been met (Fabrigar et al., 1999; Fabrigar & Wegener, 2012).

Additionally, a Schmid-Leiman solution (SLS) procedure was conducted to identify the relationships between the obtained factors. A comprehensive guide to the interpretation and implications of SLS derived factors has been provided in Reise, Moore, and Haviland (2010) and Sinharay, Haberman, and Puhan (2007), while general guidelines can be found in Wolff and Preising (2005). In brief, the method delivers uncorrelated loadings of the first- and higher-order factors on the manifest variables, contributing enhanced insights into factor interpretations (Wolff & Preising, 2005). The application of the procedure to a battery of tests allows identification of multidimensionality or scope of a general latent construct, manifested in the derived primary/first-order factors (Reise et al., 2010). The SLS has been widely utilised in psychological research across a variety of latent constructs, in relation to, for example: cognitive assessment (Canivez & Watkins, 2010), psychosis symptoms (Peralta, Moreno-Izco, Calvo-Barrena, & Cuesta, 2013), active and avoidant coping (Hansen et al., 2013), and other diverse psychological phenomena (e.g., Cicero & Kerns, 2010; Kellison, Bussing, Bell, & Garvan, 2010).

### **5.3.3.1 Counteracting potential measurement error.**

Because the response format of the PS frequency subscale is, for the purpose of factor analysis, incompatible with the format of the OMMP, the subscale was adjusted to the OMMP's response format, i.e., aligned to the same rating system of six levels with similar labels as for the OMMP and the PS intensity subscale. This permitted an unambiguous comparison of items, by assessing the items' communalities, leading to the identification of underlying latent constructs. Because primary concern was with the equivalence of the scales' content in terms of the targeted construct, rather than the exact values of measured psychache, this procedure was justifiable.

Another way of overcoming measurement error could have involved using statistical data transformations, which are intended to address robustness issues and are often applied in research to compensate for deficiencies in the data, such as variance heterogeneity, violation of normality in distributions assumption, overly high correlations in sequential data or incompatibility of measures formats. However, data transformations can present complications; for example, the interpretation of factor effects of the transformed scales may not be error-free, because it requires interpretation of the transformation statistic (e.g., lambda,  $\lambda$ ), while bearing in mind the presence of potential differences between an unknown 'true' value of the score and  $\lambda$  (refer to Box & Cox, 1964 for review). Transformations can also lead to conversion of constructs into its variants, empirically diverging from the originally intended variables (Grayson, 2004). Moreover and notably, transformations may not always be essential, because these have frequently been shown to result in almost indistinguishable outcomes from the analysis of transformed (e.g., dichotomised and parcelled) and non-transformed scores (DeLisle & Holden, 2009). In the absence of consensus on the utility of transforming data, with

critics positing that the technique depends on the data type and analyses purpose (Games & Lucas, 1966; Levine & Dunlap, 1982; Warton & Hui, 2011), it was decided to accept a trade-off between the validity of the PS and the minimisation of statistical error. An important implication of this procedure is that, by aligning the response formats of both PS and OMMP, the semantic formulation of the PS's frequency subscale response format was changed, which potentially compromised the validity of this subscale. It was thus acknowledged that the obtained scores on the PS may therefore slightly deviate from those likely to have resulted from the original format. To address this, the final results were verified against the results obtained from the analyses with the PS's frequency subscale being removed (see section 5.5.2 for details of the outcome of this procedure).

## 5.4 Results

### 5.4.1 Reliability.

Internal consistency of ASCS was described in section 4.3.1. Internal consistency of all 44 items of the OMMP measure was Cronbach's alpha level = .97. The overall alpha value for the original sample was not reported but internal consistencies within each of the nine OMMP subscales were satisfactorily high (Orbach, Mikulincer, Sirota, et al., 2003; see Chapter 3, section 3.3.1). Here, the corrected item-total correlations were all above .30, and all items were set closely and consistently around the level of the total Cronbach's value. Inter-item correlations values were between  $r = .22$  and  $r = .82$ . No item was specified for potential deletion.

For the PS measure, in the current sample, the Cronbach's alpha coefficient was .97, with inter-items correlations ranging from  $r = .53$  to  $r = .86$ . The subscale of nine items denoting the frequency of psychache had a Cronbach's alpha value of .95, with all the items consistently fitting together, confirming the subscale's reliability. The psychache

intensity subscale of four items had a Cronbach's alpha of .93, with one item only showing to decrease the subscale's internal consistency by a marginal .005 ("*My psychological pain affects everything I do*"). All corrected item-total correlations were above .30. This was consistent with the earlier PS internal consistency checks by DeLisle and Holden (2009) and Mills et al. (2005).

Cronbach's alpha for DASS 21 = .94, and no individual item negatively affected the full scale's reliability. All corrected item-total correlations were above .30. Similarly, when DASS 21 was divided into three subscales, the Depression subscale coefficient = .92 (inter-item correlations between  $r = .45$  and  $r = .73$ ), with no items recommended for deletion; the Anxiety subscale = .86 (inter-item correlations between  $r = .33$  and  $r = .63$ ) and no items reduced the subscale's reliability; and the Stress subscale = .88 (inter-item correlations between  $r = .35$  and  $r = .72$ ), with all items also consistently optimising reliability. As seen in Chapter 3, section 3.3.3, P. F. Lovibond and S. H. Lovibond (1995) obtained similar Cronbach's alpha values for their sample of university students.

Internal consistency of the BSE measure was Cronbach's alpha = .95, almost identical to the original value of .94 (Beck et al., 2001). Inter-correlations varied between  $r = .22$  and  $r = .79$ , corrected item-total correlations were all above .30, with no indication of problematic items that could reduce the scale's reliability.

The internal consistency analyses indicated that the measures to be used in the EFA analyses had strong internal consistency, with published metric properties closely reproduced here. The findings implied that the measures selected for this study are sensitive to individual differences within a non-clinical representative sample.

#### 5.4.2 Demographic information, descriptive statistics, and correlations between the involved measures.

Nine measures were subjected to principal axis factoring and Schmid-Leiman solution analyses: the OMMP, PS, BSE, Depression, Anxiety, and Stress (DASS 21 subscales), Self-concept, Childhood Needs, and Rumination (the ASCS subscales).

Demographic information has been provided in Table 1 (Chapter 4, section 4.3.2).

Descriptive statistics for the measures are presented in Table 3.

**Table 3**

*Descriptive statistics: the OMMP, PS, ASCS, DASS 21, and BSE scales*

Scale	Items	Score range	Obtained score range	<i>M</i>	<i>SD</i>
OMMP	44	44 - 264	52 – 240	107.02	41.83
PS	13	13 - 78	13 – 78	30.07	16.67
ASCS total	23	23 - 138	31 – 137	87.89	21.31
Self-concept	13	13 - 78	14 – 78	50.70	13.64
Childhood Needs	5	5 - 30	5 – 30	19.18	7.08
Rumination	5	5 - 30	5 – 30	16.99	5.48
DASS 21 total	21	21 - 84	21 – 82	37.06	12.17
Depression	7	7 - 28	7 – 28	11.98	4.75
Anxiety	7	7 - 28	7 – 27	10.94	4.20
Stress	7	7 - 28	7 – 28	14.14	4.65
BSE	18	18 - 108	20 - 107	77.13	15.80

*Note.* OMMP = Orbach & Mikulincer Mental Pain scale; PS = Psychache Scale; ASCS = Adelaide Self-Cohesion Scale; DASS 21 = Depression Anxiety and Stress Scales 21; BSE = Beck Self-Esteem scale. *N* = 359.

Correlations between the measures are shown in Table 4 (supplemented with confidence intervals). Generally, the direction and strength of correlations between the nine scales reflected theoretical assumptions about the likely relationships between the measured constructs. The strongest positive correlation noted was between the BSE measure and the ASCS Self-concept sub-scale; this was expectedly high, appropriately reflecting the content of the measures (previously explained presence of eight identical

self-esteem items). The second strongest positive association was found between the PS and OMMP scales, suggesting high correspondence between these two measures of psychache. Childhood Needs and Rumination showed comparatively weaker, i.e., moderate, associations with all the included scales.

**Table 4**

*Correlations and confidence intervals matrix: psychache (PS and OMMP); self-cohesion (ASCS) and its subscales Self-concept, Childhood Needs and Rumination; self-esteem (BSE); psychological distress (DASS 21) and its subscales Depression, Anxiety, and Stress*

Measure	PS	OMMP	ASCS	Self-concept	Childhood	Rumination	BSE	DASS 21	Depression	Anxiety
OMMP	.86	-								
Cl <sub>95</sub>	[.83, .88]									
ASCS	-.68	-.73	-							
Cl <sub>95</sub>	[-.73, -.62]	[-.77, -.68]								
Self-concept	-.66	-.73	.91	-						
Cl <sub>95</sub>	[-.71, -.60]	[-.77, -.68]	[.89, .93]							
Childhood	-.35	-.37	.71	.44	-					
Cl <sub>95</sub>	[-.44, -.26]	[-.46, -.28]	[.65, .76]	[.35, .52]						
Rumination	.55	.54	-.70	-.49	-.38	-				
Cl <sub>95</sub>	[.47, .62]	[.46, .61]	[-.75, -.64]	[-.56, -.41]	[-.46, -.29]					
BSE	-.55	-.64	.82	.89	.41	-.43	-			
Cl <sub>95</sub>	[-.62, -.47]	[-.70, -.57]	[.78, .85]	[.87, .91]	[.32, .49]	[-.51, -.34]				
DASS 21	.73	.74	-.73	-.69	-.41	.57	-.59	-		
Cl <sub>95</sub>	[.68, .77]	[.69, .78]	[-.68, -.77]	[-.74, -.63]	[-.49, -.32]	[.49, .63]	[-.65, -.52]			
Depression	.73	.73	-.71	-.72	-.37	.47	-.63	.89	-	
Cl <sub>95</sub>	[.68, .77]	[.68, .77]	[-.76, -.65]	[-.77, -.67]	[-.46, -.28]	[.38, .55]	[-.69, -.56]	[.87, .91]		
Anxiety	.61	.62	-.58	-.55	-.31	.49	-.48	.89	.69	-
Cl <sub>95</sub>	[.54, .67]	[.55, .68]	[-.64, -.51]	[-.62, -.47]	[-.40, -.21]	[.41, .56]	[-.55, -.40]	[.87, .91]	[.63, .74]	
Stress	.62	.62	-.66	-.58	-.41	.57	-.47	.90	.70	.72
Cl <sub>95</sub>	[.55, .68]	[.55, .68]	[-.71, -.60]	[-.64, -.51]	[-.49, -.32]	[.49, .63]	[-.55, -.38]	[.88, .92]	[.64, .75]	[.67, .77]

*Note.* PS = Psychache Scale; OMMP = Orbach & Mikulincer Mental Pain scale; ASCS = Adelaide Self-Cohesion Scale; Self-concept = ASCS subscale of Self-concept; Childhood = ASCS subscale of Childhood Needs; Rumination = ASCS subscale of Rumination; BSE = Beck Self-esteem scale; DASS 21 = Depression Anxiety Stress Scales.  $N = 359$ .  $p < .001$  (1-tailed)

### 5.4.3 EFA results.

The EFA procedure was performed first on the scores of the nine measures, incorporating the PAF extraction method, with promax rotation set at  $\kappa = 4$ . Factorability of the data was established, based on sufficiently large correlations and a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy = .882, with Bartlett's test of sphericity  $\chi^2(36) = 2554.88, p < .001$ .

Both the scree test (Cattell, 1966) and parallel root analysis (Horn, 1965) suggested a five-factor model. The five-factor solution, however, proved to be unacceptable because one manifest variable's loading on the first derived factor exceeded the value = 1.0; additionally, the interpretability of the five factors was poor. Parallel analysis eigenvalues frequently overestimate the number of factors (Hayton, Allen, & Scarpello, 2004), and therefore an exploration of proximate solutions of four, three, two, and one-factor models was conducted. The only solution demonstrating an excellent fit of the model was the four-factor model, returning the RMSEA statistic of 0.02 (see MacCallum et al., 1996, for interpretation of RMSEA values). In addition, no discrepancies between the observed and model correlations (referred to as non-redundant residuals with absolute values higher than 0.05) were present.

The four-factor model accounted for 74.01% of variance, with eigenvalues of 5.62, 0.84, 0.78, and 0.56 for each consecutive factor respectively. These have been named: (1) Self-beliefs, comprising Beck Self-esteem and ASCS Self-concept; (2) Inner Turmoil, the cluster of Stress, Anxiety, and Depression subscales (DASS 21), initially representing psychological distress, though renamed here to adjust for the findings presented below; (3) Psychache, encompassing the PS and OMMP; and (4) Fragmentation, merging ASCS Rumination and Childhood Needs. Strong correlations emerged in the EFA between the

four factors (from .58 to .76). This prompted further analyses of these relationships, incorporating the SLS procedure.

The higher-order factor analyses (the SLS; detailed in Table 5) revealed two uncorrelated (orthogonalized) factor sets: a single second-order factor, accompanied by a quartet of first-order factors, referred to as group factors. This arrangement of the factors implied that the second level of analysis was the highest obtainable stratum for the included set of variables, with the second-order factor thus denoting a general factor (Wolff & Preising, 2005). This type of hierarchical solution is referred to as a bi-factor solution (Holzinger & Swineford, 1937; Yung, Thissen, & McLeod, 1999). Notably, because the general factor loadings are associated with each manifest variable (individual scale) rather than the derived group factors, the solution is hierarchical only in respect to the scope of the direct effects of the general factor, rather than superiority of ranking (Yung et al., 1999).

As illustrated in Table 5, the general factor demonstrated strong significance, because the extracted commonalities (the general factor) accounted for a large proportion of the total variance (78.6%), and, relative to the remaining group factors variance of 21.4%, this extent of variance is regularly regarded as high (see Gorsuch, 1983). Having considered the directions of loadings, the general factor was assumed to express a construct of psychological distress (further elaboration is presented in the Discussion, section 5.5). The remaining model variance, distributed among the four group factors, implied a small degree of independence of these factors from the factor of Psychological Distress (Reise et al., 2010). The group factor of Self-beliefs was assigned the highest amount of the unique variance unaccounted for by the general factor. The

Psychache factor was attributed the second highest, while the Inner Turmoil and Fragmentation factors were apportioned the least of the unique variance.

**Table 5**

*Schmid-Leiman solution for mental pain (OMMP), psychache (PS), psychological distress as Depression, Anxiety, and Stress (DASS 21 subscales), self-cohesion as Self-concept, Childhood Needs and Rumination (ASCS subscales), and self-esteem (BSE)*

Scales	General factor	Group factors loadings			
	G	Self-Beliefs	Inner Turmoil	Psychache	Fragmentation
BSE	-.70	<b>.62</b>	.02	.03	-.02
ASCS Self-concept	-.81	<b>.54</b>	-.01	-.03	-.02
DASS 21 Stress	.86	.05	<b>.29</b>	-.04	.13
DASS 21 Anxiety	.77	.01	<b>.28</b>	.03	-.02
DASS 21 Depression	.82	-.14	<b>.20</b>	.11	-.08
PS	.85	.05	-.01	<b>.46</b>	.03
OMMP	.85	-.08	.02	<b>.34</b>	.02
ASCS Rumination	.71	.00	.02	.08	<b>.30</b>
ASCS Childhood Needs	-.50	.17	-.01	.03	<b>-.20</b>
Variance explained	78.6%	10.9%	3.0%	5.2%	2.3%
Group factors correlations with G		-.78	.94	.89	.85

*Note.* G = general factor = second-order factor. Group factors (first-order factors) loadings  $\geq 0.20$  are indicated in bold.  $N = 359$ .

In terms of the primary aim of this study, to determine the equivalence of the OMMP and PS, it is evident that the clustering of the third group factor's loadings merged the OMMP and PS scores, creating a distinct factor, with weak loadings on the remaining group factors. This result clearly indicated that the OMMP and PS are operationally closely equivalent scales.

Importantly, it was found that the nine investigated subscales, representing separate psychological constructs, were strongly associated with each other, due to the

large amount of their common variance, i.e., the general factor's variance (Gorsuch, 1983). Further, all the scales conferred higher loadings on the general factor than on their respective group factors, implying that their cumulative measurement utility holds mostly in respect to the general factor. It can therefore be inferred that the OMMP, PS, BSE, ASCS, and DASS 21 measures could be refined and reduced into one combined measure, capturing the construct represented by the general factor, labelled here Psychological Distress (see Wolff & Preising, 2005 for factors interpretation).

A detailed higher order PAF and SLS analysis of the scales' individual items (with a total of 119 manifest variables) was also conducted. The factorability of the data was confirmed: KMO = .963 and Bartlett's test of sphericity  $\chi^2(36) = 42780.06, p < .001$ . Further, the model demonstrated a good-to-adequate fit, RMSEA = 0.06 (see MacCallum et al., 1996). The procedure returned a similar outcome to the previously obtained bi-factor solution, with all manifest variables configuring their loadings onto one uncorrelated general factor of Psychological Distress (accounting for 68% of the total variance) and four distinct, although potentially related to each other, group factors: Self-beliefs, Psychache, Inner Turmoil, and Fragmentation, cumulatively explaining 32% of the total variance. A single exception in the pattern of the assigned individual items' loadings comprised one of the OMMP items, "*my feelings change all the time*". This item associated predominately with the general factor of Psychological Distress (.568), with its loading of .240 being allocated to the group factor of Fragmentation rather than Psychache, bringing into question the item's utility in the psychache scale. The unique group factors variance of 32% was distributed in the following manner: Self-beliefs (12%), Psychache (11.5%), Fragmentation (5%), and Inner Turmoil (3.5%).

Additional PAF and SLS analyses, of the measures' total scores, comparing the results in the absence of the PS's frequency subscale scores (as aforementioned in section 5.3.3.1), revealed the following correlations of the general factor of Psychological Distress with the group factors: Self-beliefs,  $-.779$ ; Psychache,  $.888$ ; Inner Turmoil,  $.942$ ; and Fragmentation,  $.858$ . Psychological Distress accounted for 78.8% of the model variance, while the remaining variance of 21.2% was approximated among the group factors in the following order: Self-beliefs (11.2%), Psychache (5.1%), Inner Turmoil (2.7%), and Fragmentation (2.2%). The pattern of the variance distribution was thus consistent with the earlier SLS results and confirmed the original EFA and SLS results as valid.

## 5.5 Study 2 Discussion

### 5.5.1 Psychometric properties of the used measures.

In this study sample, the analyses of homogeneity of the scales' items have revealed high degrees of internal consistencies within each of the selected for this study measures, yielding their high reliability. This not only indicates the extent of reliability of the included tests, but also, and importantly, the reliability of the obtained scores, and in turn, reinforces confidence in the interpretations and conclusions from this research (Henson, 2001).

In respect to validity of the measures, conducting EFA on individual items of all scales, revealed one item only (of the OMMP scale: "*my feelings change all the time*") as loading more strongly on the obtained first order factor of Fragmentation rather than Psychache (Chapter 5, section 5.4.3). Given the strong correlation between the two scales of OMMP and ASCS ( $r = -.73$ ; Table 4), this was not a surprising finding, and it appears to follow theoretical premises of self psychology, suggesting that a sense of

fragmentation of the self is underscored by chaotic shifts and contradictions along the emotional scale. Therefore, fluctuations in the negative affect characteristically depict fragmentation of the self (Chapter 2, section 2.6.3). With this specific item tapping into both the factors of fragmentation and psychache, it has been construed that it represents a shared feature of the two constructs.

However, the strong correlation between the PS and OMMP measures flags the potential for collinearity when the measures are applied together in statistical analyses, such as regression. For future analyses (as it will be seen in later chapters of this thesis) only one of these two measures will be employed, to avoid the likely emergence of competing effects, which may confound regression coefficients and affect interpretations.

### **5.5.2 Discussion of Study 2 findings.**

The aims of the study were to test the equivalence of the two most frequently reported research measures of psychache: the OMMP scale (Orbach, Mikulincer, Sirota, et al., 2003) and the PS (Holden et al., 2001), and to examine the relationship between psychache, distress (the DASS 21 subscales: Depression, Anxiety, and Stress), self-esteem (the BSE), and self-cohesion (the ASCS subscales: Self-concept, Childhood Needs, and Rumination).

Earlier semantic analyses and interpretations of psychache (Shneidman, 1993) and mental pain (Orbach, 2003) suggested correspondence between the two terms (Meerwijk & Weiss, 2011; Tossani, 2013). However, the psychometric equivalence of psychache and mental pain measurement, by the means of the PS and OMMP scale, has not previously been established (Chapter 2, section 2.4). The analyses of the scales by EFA, incorporating PAF and SLS, have supported the notion of the measures' correspondence. The solution demonstrated a hierarchical structure, recognised as a bi-factor model (Reise

et al., 2010), with one general factor (Psychological Distress), and four group-factors (Psychache, Inner Turmoil, Self-beliefs and Fragmentation). Results revealed that the OMMP and PS scores loaded mostly on the second-order Psychological Distress factor and, to a lesser extent, on the distinct first-order factor of Psychache. The loadings distribution demonstrated that both the PS and OMMP address the same construct of psychache, although, predominantly, reflect the state of psychological distress. This implies that the two measures could be combined and reduced to form a subscale of the psychological distress measure (a statistical inference based on Wolff & Preising, 2005). Essentially, the verification of the PS and OMMP's equivalence promotes increased confidence in the comparability of research which utilises either of these two measures.

Moreover, the near-equivalence of the two measures permits flexibility in their application, with the PS being appropriate, for example, when a brief scale is required, while OMMP would be useful when a detailed description of idiosyncratic inner experiences is of particular research interest and the length of the scale is inconsequential. The results have supported the strong correlation between the scales, as reported by Meerwijk et al. (2014) in the only previously published study incorporating both the PS and OMMP. These authors, however, found a discrepancy in the performance of the scales in respect to one of their study variables, named a low-frequency heart rate variability (LFHRV). Their results suggested a positive, although not statistically significant ( $.16, p > .05$ ) association of LFHRV with the PS, whereas what they labelled the '*current*' OMMP's association was negative and statistically significant ( $-.38, p < .05$ ). Meerwijk et al. suggested that the discrepancy could have been the result of structural differences between the two scales. That is, the PS comprises two subscales, assessed on different rating scales (one of psychache frequency and the other, of its

intensity). Additionally, Meerwijk et al. (2014) pointed out that this might have created differences in the respondents' interpretation of the PS's timeframe instructions, leading to inconsistencies in the reporting.

Respecting Meerwijk et al.'s suggestions, it is important to note an earlier study by Mills et al. (2005), which examined the PS utilising principal components analysis and higher order analysis with orthogonal Procrustes rotation. Mills et al. (2005) reported that the two subscales of the PS are more strongly associated with a single higher-order factor than with their respective first-order factors. This suggests that the PS measures a single dimension of psychache via the two seemingly disparate aspects of psychache: frequency and intensity subscales. Furthermore, the subscales' methodological diversity does not extend far, because originally both incorporate the same quantitative range of 1 to 5 rating levels, and result in a single cumulative psychache score.

Aside from this single performance discrepancy between the PS and OMMP, for all the other variables examined by Meerwijk et al. (2014), both the measures performed similarly; that is, negative associations may exist between psychache and other considered variables, although this outcome did not reach statistical significance. Therefore, noting the small sample size in Meerwijk et al.'s study ( $N = 35$ ), it may be suggested that their investigation has lacked power, limiting interpretability, though warranting further research. Thus, replication of analyses involving the LFHRV on a large sample size could prove informative in respect to the scales' corresponding performance.

Study 2 analytical procedure was informed by the findings of DeLisle and Holden (2009), allowing an adaptation of the PS's response format in alignment with the OMMP's structure. As discussed earlier in section 5.3.3.1, DeLisle and Holden (2009) applied rigorous statistical analyses designed to protect against a different-response-format error

in the EFA and CFA procedures, and reported that the transformed and non-transformed scores of various scales were almost indistinguishable from each other. DeLisle and Holden's finding suggests that, although methodological variance due to the response formats differences cannot be ruled-out, variations in the response formats are responsible for very minor effects on the overall results of factor analysis. In this study, aligning the response formats resulted in a compromise between the validity of the PS scores and interpretability of the factor analysis results. To gain further confidence that the analyses reported here sustained a minimal impact of measuring error, additional PAF and SLS procedures were conducted, with the PS frequency subscale removed from the analysis (retaining the form compatible with the format of the OMMP). This closely replicated the PAF and SLS analyses of results with the full scales, revealing a bi-factor solution, with one second-order and four first-order factors, and markedly similar explained variance values. The amount of the total variance accounting for the individual factors here was highly similar to initial results, indicating that the potential methodological differences have not biased the overall interpretations of the results. It is understood that the retained PS subscale may not fully reflect psychometric properties of the standardised PS scale but, nonetheless, the outcome is a valid confirmation that the items in PS and OMMP are operationally closely equivalent.

As results indicated, subjecting the psychache, mental pain, self-esteem, self-cohesion, and depression, anxiety, and stress scales to the PAF and SLS procedures resulted in a bi-factor model, with a derived common variance of 78.6%, representing a latent characteristic of Psychological Distress. The remaining 21.4% unaccounted for variance represents the external or uncorrelated influences, associated with the four group factors. The group factors comprised the following scales: Self-beliefs, as a cluster

of the Beck Self-esteem scale and ASCS self-concept subscale items; Psychache, as an amalgamation of the PS and OMMP items; Inner Turmoil, composed of all the DASS 21 items of Depression, Anxiety, and Stress; and finally, Fragmentation, combining the Rumination and Childhood Needs items of the ASCS scale. This pattern of the individual scales items merging into corresponding group factors, even though in the context of a general factor, demarcates the measures and validates them as distinct, though related, constructs.

The strong relationship between the scales, as reflected in the direct effects of the general factor of Psychological Distress on each included measure (Table 5), suggests their cumulative, rather than individual, function as a measure of psychological distress levels. Further, with their loadings being higher on the Psychological Distress factor, relative to their own corresponding group factors, all the measures could be pooled together and reduced into a shorter, psychological distress, scale (Wolff & Preising, 2005). Another implication of such high loadings with the general factor is that the scores on individual subscales are less reliable than the combined general factor score, meaning that the performance of the new and all-encompassing psychological distress measure would surpass the performance of the individual scales, even in respect to their own corresponding constructs (Sinharay et al., 2007). This finding supports Tossani's recent extrapolation that a psychache assessment, when merged with other psychological distress markers "may offer a better specification of the criterion on clinically significant distress that frequently recurs in DSM-IV" (Tossani, 2013, p. 71).

Therefore, these results have provided evidence that the two constructs, psychological distress (reflected here as a general factor) and psychache, are not synonymous, and it is suggested that their interchangeable use should be avoided.

Psychache is better perceived as a constituent of psychological distress, among various other factors, such as Inner Turmoil (depression, anxiety, and stress); Self-beliefs (referred to as both self-esteem and self-concept); and Fragmentation (signs of a self-cohesion rupture). Furthermore, these factors represent the “inner conflicts” described within Segen’s definition of psychological distress, and likely represent only a fraction of potential factors implicated in this vulnerable/fragile psychological state (the definition has been provided in section 5.1 of this chapter).

Several psychological distress measures circulate in clinical and research settings (see Elkins et al., 2012 for a comprehensive list), but their content varies, depending on their authors’ opinions about the nature of psychological distress. For example, Elkins et al. (2012) developed a brief measure of psychological distress which comprises depression, hopelessness, anxiety, and anger indices, but excludes stress and the sense of self-integrity/wholeness. Another measure, often used in clinical work, Kessler 10, consists of two factors only: depression and anxiety (S. S. O’Connor, Beebe, Lineberry, Jobes, & Conrad, 2012). Derived from the SCL-90, Rosen et al. (2000) devised the Symptom Checklist 6 and 10-revised (SCL-6 and SCL-10), which consider the factors of depression, anxiety, psychoticism, with somatisation and phobic avoidance being added to the 10-item scale (Derogatis & Cleary, 1977). SCL’s items exclude a sense of self and socio-environmental aspects, and comprise nine clusters of indices: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic-anxiety, paranoid ideation, and psychoticism (Derogatis & Cleary, 1977).

The DASS 21 is a popular measure quantifying three aspects of psychological distress (depression, anxiety, and stress), and, considering this study’s results, it may serve as a distress proxy, given its high association with the psychological distress factor.

Nevertheless, the results have also indicated that the scores of DASS 21 loaded more strongly on the general factor, Psychological Distress/Frailty, than on the first-order factor of Inner Turmoil. This finding supports the earlier claims that the utility of the DASS 21 as a psychological distress measure has not been validated (Parkitny & McAuley, 2010). A similar conclusion had been also reached by Shea, Tennant, and Pallant (2009), who conducted two separate Rasch analyses on the scores of the DASS subscales of depression, anxiety, and stress, and all individual items. A structural model of the DASS differed from the original three-factor model, with depression items forming one factor, and anxiety and stress items merging into another, single factor. Further, the results of Study 2 have supported the findings of Henry and Crawford (2005), who demonstrated through CFA that the three DASS 21 subscales fused into a single higher-order factor, though the authors were undecided whether this factor represents negative affectivity or psychological distress. Ultimately, Henry and Crawford (2005) asserted that DASS 21 is a measure of negative affectivity, low positive affectivity, and physiological arousal. In line with Lovibond, who developed the DASS measure and specified that its three dimensions constitute “syndrome-specific vulnerabilities” (Lovibond, 1998, p. 520), the scale may comprise a useful screening tool, detecting the nature of emotional challenges (separating an inner perturbation malady into depression, anxiety, and stress indices).

Extensive literature searches revealed no psychological distress measure that comprehensively incorporates all its possible elements, yet retains desirable brevity. Such a scale still awaits construction. The SLS procedure conducted in this study, suggested that, along other indicators, such as psychache and inner perturbations, the indices of self-esteem/self-beliefs and self-cohesion need to be included in psychological distress assessment. This confirms an earlier finding of a mediating role of self-esteem in

psychological distress (Park, Heppner, & Lee, 2010). The role of the sense of wholeness of the self in psychological distress, however, has largely been overlooked in the empirical studies of psychache and distress, with the unpublished dissertation by Chamberlain (2010) being an exception. Further validation of self-cohesion in the context of psychological distress would thus be advisable, contributing to the development of an optimal measure of psychological distress.

### 5.6 Study 2 Conclusion

The lack of consensus on nomenclature of psychache undermines research by introducing unwelcome variability to definitions and interpretations of the construct and potentially impairing transparency in the communication of reported symptoms, clinical hypotheses, and research findings (Meerwijk & Weiss, 2011; Tossani, 2013). This issue is also evident in the lack of acknowledgement of psychache within a leading clinical guide, the *Diagnostic and Statistical Manual of Mental Disorders, fifth edition* (DSM-5; American Psychiatric Association, 2013). Instead, references are made to some undefined “distress” state. In light of this study’s results, this peculiar absence of mention of psychache from DSM-5 becomes less alarming, having empirically confirmed that psychache is, to a large extent, embedded in the construct of psychological distress.

This study has demonstrated that, despite the independent construction and diverse theoretical underpinnings driving the development of the PS and OMMP measures, the two scales are near-equivalent in both the identification of psychache and contribution towards the assessment of psychological distress. SLS results have shown that the combined array of constructs selected for this study retained their distinctiveness, but that combined, they approximated psychological distress, due to their

stronger association with psychological distress than with their own respective constructs.

While it has been decided to label this cumulative factor as psychological distress for the purpose of clarity in this thesis, it is acknowledged that psychological distress has a broad definition, and therefore the obtained factor can perhaps be more safely assumed to reflect psychological frailty. Potentially, psychological distress comprises of other constructs, un-examined here, and discovery of those would complete the understanding of the experience commonly termed psychological distress. Further, because definitions—and therefore operationalisations—of psychological distress vary, construction of a uniform and all-embracing definition and corresponding operationalization of psychological distress is advocated, with the prospect of assisting those experiencing this debilitating infirmity.

Psychological distress has been linked to suicidality (R. C. Campos, Besser, Abreu, Parreira, & Blatt, 2014; Eskin et al., 2016; McKelvey, Davies, Pfaff, Acres, & Edwards, 1998). Therefore, given the finding that all measures included in this study have formed a single higher order factor of psychological distress/frailty, it is to be expected that all of these measures would also be associated with suicidality. This proposition is tested in Chapter 6, Study 3.

From this point in the thesis, the construct measured by DASS 21 (originally labelled psychological distress) will be referred to as *inner turmoil* or as the individual aspects of this composite construct: depression, anxiety, and stress, to distinguish this combined construct from the general factor of psychological distress/frailty.

## **Chapter 6**

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### **Study 3: Relationship between Self-cohesion/Fragmentation, Psychache, Depression, Anxiety, and Stress in the Context of Suicide**

To date, no empirical examination of self/self-cohesion and psychache in the context of suicidal tendencies has been published. A report of a statistically significant association between self-esteem (which constitutes an element of self-cohesion) and psychache was found in one report only, presented by Orbach (2003). The relationship between self-esteem and psychological distress, on the other hand, has been exhaustively documented (e.g., Cai, Wu, & Brown, 2009; Cénat et al., 2014; Cooper-Evans, Alderman, Knight, & Oddy, 2008; Dang, 2014; Den Heijer et al., 2011; Feng & Xu, 2014; Flett, Biggs, & Alpass, 1995; Lakey, Hirsch, Nelson, & Nsamenang, 2014a; Mikulincer & Florian, 2002; Peteet, Brown, Lige, & Lanaway, 2014), but the lack of consistency in the operationalisation of psychological distress impedes drawing clear conclusions. Consequently, the extent of relationships between a sense of self and the constructs of self-esteem, psychache, and inner turmoil markers (depression, anxiety, and stress), specifically in light of suicide, remains unknown.

The SLS analyses reported in the preceding study have demonstrated that the constructs of psychache, self-cohesion/fragmentation, self-esteem, depression, anxiety, and stress are distinct, yet closely related in that, when combined, they reflect a construct of psychological distress or psychological frailty. How these constructs, in combination, relate to suicidal tendencies was examined next.

## 6.1 Study 3 Aim

Chamberlain's unpublished dissertation (2010) found a link between a fragmented sense of self and suicidality. Because no study has investigated the relationship between a sense of self and psychache, Study 3 aimed to examine the extent of relationship between suicidal inclinations and the constructs of self-cohesion (and its opposite, fragmentation), self-esteem, psychache and factors denoting inner turmoil (depression, anxiety, and stress). It was expected that such examination, incorporating the ASCS measure, would not only demonstrate the extent of these relationships, but also further inform about the ASCS's usefulness in detection of suicidal propensity. It was predicted that higher levels of suicidality would be associated with higher levels of psychache and psychological distress indices, and lower levels of self cohesion and self-esteem.

## 6.2 Method

**6.2.1 Participants and procedure** – described in Chapter 3.

### 6.2.2 Measures.

Study 3 utilised the following measures from the battery of tests previously described in Chapter 3: ASCS, OMMP, BSE, and DASS 21, as potential predictors of scores on the Suicidal Thoughts and Behaviour (STB; the subscale of the *Psychiatric Symptom Frequency Scale*).

### 6.2.3 Statistical analyses.

OMMP was chosen to assess psychache so as to prevent any potential confounding effects or measurement error due to the earlier described adaptation of the PS's response format (see previous Chapter 5, section 5.3.3.1). This decision was justified by confirming the psychometric equivalence of both psychache measures, the OMMP and

PS, as described in section 5.5. The PPAS measure of psychache, as described earlier in Chapter 3, section 3.3, is not frequently applied in suicide research, and its format is not conventionally psychometric, thus it is not compatible with the statistical procedures employed in this study. However, one of its psychometric components will be used in one of the subsequent studies in this thesis' investigation (Study 5; details are explicated in Chapter 9).

A series of hierarchical regressions was conducted in the SPSS 21 software, with the variables entered in three steps. Variables embedded within each step were entered simultaneously using an SPSS *enter* function. The enter method technique is appropriate when the degree of predictive power for small sets of independent variables is unknown. The method assesses each of the independent variables in the context of other predictors entered within that step, assessing their shared variance with the outcome variable (Cramer, 1998). Entering individual or sets of predictors in steps, in a hierarchical manner, permits sequencing predictor variables entered into the regression equation as determined by the examiner (on a theoretical basis), and allows computation of the incremental validity of the entered predictors and the degree of their convergence and impact on the outcome variable. This mathematical-analytical approach was selected, because it has been reported to overcome random variations in the data, boosting the likelihood of results replicability, and increasing the likelihood of generalizability from this study's sample to other populations (Studenmund, 2006). See Chapter 6, Endnote<sup>1</sup>, for additional information about the statistical method.

## 6.3 Results

### 6.3.1 Reliability.

The measure of suicidality, Suicidal Thoughts and Behaviour (STB; introduced earlier in Chapter 3) returned an appropriately high reliability coefficient of Cronbach's alpha = .80, suggesting good internal consistency across all five items of this measure. Lindelow et al. (1997) did not specify the internal consistency for the suicidality subscale of *the Psychiatric Symptom Frequency Scale*, but reported a Cronbach's alpha = .88 for the full scale of 18 items.

Inspection of item-total correlation coefficients for the five items found that items 1-4 contributed to the satisfactory overall internal consistency, and removing item 5 (*"Have you attempted to take your own life?"*) would improve reliability by only .02. Because removing this item would adversely impact the contribution of the other items, the item was retained.

### 6.3.2 Descriptive statistics.

Frequencies of STB are shown in Table 6. The overall STB's  $M = .97$  ( $SD = 1.4$ ;  $SE = .08$ );  $CI_{95} = [.83, 1.12]$ . Descriptive statistics for predictor variables were shown earlier in Table 3 (Chapter 5, section 5.4.2).

**Table 6**

*Frequencies for the outcome variable of Suicidal Thoughts and Behaviour over the last 12 months (STB)*

Suicidality	Frequency	Percent
No ideation and acts	222	61.8
Ideation	128	35.7
Ideation and acts	9	2.5
Total <i>N</i>	359	100.0

### 6.3.3 Inspection of correlations between all variables to determine order of entry in hierarchical regression models.

Inter-correlations between all predictor variables are shown in Chapter 5, section 5.4.2, Table 4. There were strong negative correlations between the ASCS scores and other predictor measures: OMMP, Depression, Anxiety, and Stress. Thus, lower scores on ASCS were strongly associated with higher levels of psychological frailty/distress markers, consistent with theory. Robust positive correlations between the ASCS and its Self-concepts subscale with the BSE scale were also expected, because the ASCS and BSE contain eight identical items (the arrangement in line with the theoretical premises of Kohut, positioning self-esteem in the centre of a sense of self-cohesion). Correlations within the measures composed of subscales (ASCS and DASS 21) are also positive and strong, as expected. Table 7 shows the correlations of predictor measures with the outcome measure of STB.

**Table 7**

*Correlations and confidence intervals of predictor variables and the outcome variable: Suicidal Thoughts and Behaviour (STB)*

Measure	Suicidal Thoughts and Behaviour	CI <sub>95</sub>
OMMP	.57	[.49, .63]
ASCS	-.55	[-.62, -.47]
Self-concept	-.57	[-.63, -.49]
Childhood Needs	-.26	[-.35, -.16]
Rumination	.37	[.28, .46]
BSE	-.50	[-.57, -.42]
DASS 21	.56	[.48, .63]
Depression	.59	[.52, .65]
Anxiety	.48	[.40, .55]
Stress	.43	[.34, .51]

*Note.* OMMP = Orbach & Mikulincer Mental Pain scale; ASCS = Adelaide Self-Cohesion Scale; Self-concept = ASCS subscale of Self-concept; BSE = Beck Self-esteem scale; DASS 21 = Depression Anxiety Stress Scales. *N* = 359.

*p* < .001 (1-tailed)

It can be seen in Table 7 that correlations between a number of predictor measures and STB were closely comparable (Depression, OMMP and ASCS's Self-concept, total DASS 21, and total ASCS). In order of strength, these were followed by BSE, Anxiety (from DASS 21), Stress (from DASS 21), and ASCS's Rumination and Childhood Needs. Direction of all these correlations was as theoretically expected, with self-esteem and self-cohesion measures showing negative associations, and psychache and inner turmoil (depression, anxiety, stress) measures having positive associations with the STB index.

#### **6.3.4 Hierarchical regression.**

A hierarchical regression analysis was conducted to identify the best predictors of the outcome measure, Suicidal Thoughts and Behaviour (STB). The predictors were: DASS 21 (appraising Depression, Anxiety, and Stress), OMMP (assessing psychache), ASCS (approximating self-cohesion, as Self-concept, Childhood Needs, and Rumination); and BSE (estimating levels of self-esteem). Variables were entered sequentially, following their correlational strength with STB. Depression was entered on Step 1, Self-concept (from the ASCS) on Step 2, OMMP on Step 3, BSE on Step 4, Anxiety and Stress subscales of the DASS 21 were entered simultaneously on Step 5, and Rumination and Childhood Needs (from the ASCS) also together on Step 6.

A test of serial correlations in residuals, Durbin-Watson statistic, was 2.04, suggesting the absence of autocorrelation in residuals; this provided confidence in the estimation of the standard error and indication of significant predictors. Analysis of the regression assumptions based upon the inspection of standardised residuals indicated no violation of linearity, homogeneity or normality assumptions. Further inspection of outliers based on Cook's Distance indicated no evidence that any outlier had exerted substantive influence on regression coefficients (maximum value of Cook's distance was

.084). The variance inflation factors (VIF) on the initial three steps were low (between 1 and 2.6), and gradually increased as of step 4, when the measure BSE was introduced into the model (6.79 for ASCS's Self-concept and 4.99 for BSE). Nonetheless, the VIF values did not reach 10, which implied no detrimental multicollinearity effects.

A summary of the regression results is provided in Table 8. As indicated by the R-squared values, Depression explained 35% of the variance in STB. R square change values showed that Self-concept explained an additional 5% variance in STB (Model 2), and OMMP incrementally accounted for an additional statistically significant 1% of the variance in Model 3 (Table 8). *F* change in Models 4-6 was not statistically significant.

Inspection of standardised coefficients ( $\beta$ ) in the final model confirmed that Depression was the strongest predictor of STB scores.

The predictors: BSE, Anxiety, Stress, Rumination, and Childhood Needs showed no statistically significant incremental contribution to the outcome of STB, when included with the other predictors in the last three models of the hierarchical regression.

Notably, in the entered configuration of predictor variables, the contribution of BSE on Step 4 became redundant (i.e., statistically not significant), in the light of the earlier introduced (on Step 2) predictor of Self-concept from the ASCS. This was not surprising, as previously shown in Study 2 results, all the items of BSE and ASCS's Self-concept measures merged into one factor of Self-esteem in the EFA procedure, suggesting that both measures can be recognised as reflective of the same construct, i.e., self-esteem. The positive direction of the regression coefficients for BSE on steps 4, 5, and 6 of the hierarchical regression appears contrary to theoretical premises underpinning the construct of self-esteem in respect to suicidality. This unexpected direction might have occurred due to the potential emergence of a multicollinearity effect, when both ASCS's

Self-concept and BSE were combined in the model. Although, this outcome did not appear to exert a marked effect on the overall results from the hierarchical analysis, the possibility of a collinearity effect is discussed further in the next chapter (Chapter 7, sections 7.3.2 and 7.4).

**Table 8**

*Hierarchical regression: Predictors of Suicidal Thoughts and Behaviours (STB)*

Model	Variable	B	SE B	$\beta$ ( $p$ )	$R^2$	$\Delta R^2$
1	Constant	-1.165	.166			
	Depression	.179	.013	.59***	.35	.35***
2	Constant	1.278	.498			
	Depression	.112	.018	.37***		
	Self-concept	-.032	.006	-.31***	.40	.05***
3	Constant	.447	.571			
	Depression	.087	.020	.29***		
	Self-concept	-.024	.007	-.23**		
	OMMP	.007	.002	.19**	.41	.01**
4	Constant	.421	.599			
	Depression	.087	.020	.29***		
	Self-concept	-.025	.011	-.24*		
	OMMP	.006	.002	.19**		
	BSE	.001	.008	.01	.41	.00
5	Constant	.459	.608			
	Depression	.084	.022	.28***		
	Self-concept	-.027	.011	-.26*		
	OMMP	.006	.002	.18**		
	BSE	.003	.008	.03		
	Anxiety	.037	.022	.11		
	Stress	-.027	.020	-.09	.42	.00
6	Constant	.281	.646			
	Depression	.085	.022	.28***		
	Self-concept	-.027	.011	-.26*		
	OMMP	.006	.002	.17*		
	BSE	.003	.008	.03		
	Anxiety	.035	.022	.10		
	Stress	-.030	.021	-.10		
	Rumination	.010	.014	.04		
	Childhood Needs	.005	.010	.02	.42	.00

Note. OMMP = Orbach & Mikulincer Mental Pain scale; BSE = Beck Self-esteem scale.  $N = 359$ .

\*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$

#### 6.4 Study 3 Discussion

To test relationships between constructs of a sense of self-cohesion, self-esteem, psychache, and inner turmoil elements, in the context of suicidality, a series of hierarchical regressions was conducted, regressing the scores of STB on the corresponding predictors: DASS 21 subscale of Depression, ASCS's Self-concept, OMMP, BSE, DASS 21 subscales of Anxiety and Stress, and ASCS's Rumination and Childhood Needs.

While theoretical inferences about the relationship between psychache, inner turmoil, and a sense of self-fulfilment/self-cohesion could be conjectured from the work of Shneidman (1986, 1993), research into the association between self-cohesion and distinct elements of psychological distress has been limited. Banai et al. (2005), for example, examined relationships between attachment, rejection apprehension, self-esteem, motivation, emotions, depressive and anxiety symptoms, cognitive functioning, state hostility and anger, and personality traits in the context of self, assessed by the scores of the Selfobject Needs Inventory (SONI; the measure examining fulfilment of childhood needs, described earlier in Chapter 2, section 2.9). The relationships between the variables examined by Banai et al. were statistically significant and correlated in expected directions; e.g., higher psychological wellbeing and self-esteem ratings coincided with lower levels of unmet needs for *mirroring* and *twinsip* (possibly denoting self-cohesion/fragmentation). The correlational effect sizes in Banai et al.'s study were not as strong as in this current study. This discrepancy could be due to psychometric differences in the measures of self-related needs (SONI) and self-cohesion (ASCS) or in the studies' samples. Banai et al.'s study engaged solely a population of Israeli undergraduate students, a sample possibly more homogenous in respect to a socio-

environmental background and generational characteristics, than a sample derived from a general community, as recruited for this study. Further, while a correlational analysis in this study confirmed strong correlations of self-cohesion scores with the scores on stress and anxiety (matching the findings by Banai et al.), when the measures of self-cohesion, depression, anxiety, stress, and psychache were combined, the anxiety and stress indices (as measured by DASS 21) were not statistically significant, demonstrating no additional/incremental validity towards the prediction of suicidality above the other included measures.

In this study, the statistically significant and strong negative correlations of the ASCS with the OMMP, DASS 21, and STB measures (Table 7), implied that self-cohesion, as assessed by the ASCS scores, demonstrated divergent validity with the scores of negative inner events (psychache, depression, anxiety, stress, and suicidality). This confirms the earlier theorised by Kohut's theory and is consistent with Chamberlain's (2010) demonstration that self-cohesion is related to emotional wellbeing and can be represented on a 'self-completeness to self-disintegration' continuum, with higher scores associated with fewer negative affective states complaints. Therefore, the results of this study have shown that breakdowns in self-cohesion (denoted by low ASCS's Self-concept scores, representing the construct of self-esteem, as part of the self-cohesion configuration as proposed by Kohut and operationalised by Chamberlain) were statistically significantly related to experiences of mental suffering (indicated by elevation in psychache and inner turmoil indices' scores).

Hierarchical regression analyses further confirmed the inverted relationship between self-esteem (as assessed with the ASCS's Self-concept subscale) and the suicidal ideation and acts index scores, providing evidence that, in the presence of the other

suicidality measures (indices of depression and psychache), self-concept scores on ASCS make a small, but nonetheless statistically significant contribution to the prediction of suicidal thoughts and behaviours (as assessed with STB).

It emerged that, when entering the scores of self-cohesion (specifically, Self-concept from the ASCS) with the scores of self-esteem (as assessed with BSE), the contribution of BSE to the outcome of suicidality (as measured by STB) became statistically not significant. Considering that the Self-concept subscale of ASCS and BSE comprise eight identical and five similar items, it is reasonable to infer that these two scales measure the same psychological construct of self-esteem (corroborated by the high correlation between the two measures;  $r = .89$ ; further elaboration will follow in Chapter 7).

Although the ASCS was intended to measure the construct of self-cohesion and its relationship to recent suicidal thoughts and behaviours, it was only partially successful in this regard. That is, the ASCS's Self-concept subscale, which denotes one of the self-cohesion elements, self-esteem, statistically significantly contributed to the outcome of suicidality (measured as STB) but the remaining two subscales of the ASCS, Childhood Needs and Rumination, did not further contribute to the prediction of STB, in this particular congregation of predictor variables. This agrees with Kohut's emphasis on the importance of the role of self-esteem within the structure and psychological functioning of the self, as one of the main components contributing to a sense of self-cohesion, thus the wellbeing/health of the self. This also reinforces Chamberlain's inclusion of the self-esteem index within the operationalisation of the construct of self-cohesion.

Nonetheless, this result leaves open whether or not the overall composition of the ASCS scale captures the construct it was meant to measure. If, however, Rumination and

Childhood Needs subscales satisfactorily complement self-esteem, and altogether reflect the notion of self-cohesion, then by implication it could be concluded that even though Rumination and Childhood Needs comprise additional elements of self-cohesion, they do not hold a predictive power in assessment of suicidality, beyond that of self-esteem, depression, and psychache. This possibility will be examined further in the next study of this thesis (Chapter 7), testing the subscales of ASCS within a context of a different suicidality index.

As proposed by Mann et al. (1999; refer to section 1.1.6), stress comprises the “objective” domain of the stress-diathesis model of suicidality. That Stress and Anxiety subscales (from DASS 21) did not predict suicidal thoughts and behaviour scores in this study suggested that the “objective” domain of stress-diathesis model, when considered in the context of a “subjective” domain, may not increase the prediction of suicide, beyond the prediction based on the scores of depression, self-esteem, and psychache. The “subjective domain” of Mann et al.’s model (mainly the perceptions of depression), thus may have a stronger clinical utility in prediction of and intervention in suicidal proclivities, although, depressive symptoms complaints would still need to be viewed in the context of other psychological events. That is, as this study showed, depressive symptoms on their own do not account for all the variance in the outcome of suicidal ideation and actions (the unique contribution of depression towards the STB index scores, as measured by DASS 21, was 35%). In addition to depression, Mann et al. considered hopelessness and impulsivity, as prominent suicide components (both not tested in this study). However, in Mann et al.’s model, apart from hopelessness, no reference was made to the construct of self-cohesion/self-esteem, although, the current study has demonstrated its modest contribution to the thoughts of suicide and suicidal actions.

Because in this study the total variance in STB, as explained by the scores of depression, psychache, and self-esteem, was 41%, it seems likely that other variables, not investigated in this study, are required to account for STB's variance, although error variance with self-report scales of this kind is also likely large.

In respect to the utility of the ASCS in suicidality risk assessment, its robust negative correlations with lethal intentions and psychological suffering (psychache and depression) scores, suggest that ASCS, apart from its empirical research applicability, can be utilised in clinical settings. Based on self psychology premises, this perhaps would be most useful when attempting to detect the degree of impairment in the structures of the self, especially for those clients who suffer deleterious break-downs in the self which manifest as self-harm, trauma, dissociation, or suicide ideations and attempts. In terms of measuring exclusively recent suicidality, the ASCS did not appear to be as robust as other included here measures of depression and psychache, with only one of its subscales (Self-concept) contributing to the suicidality outcome. Improvements will be proposed in Chapter 10, section 10.3.1.

Given the modest incremental validity within the combined-variables model, it would be beneficial to investigate if scores on the measures of self-cohesion and self-esteem reflect suicide vulnerability, rather than a risk of suicide. In theory, it is plausible that self-esteem and self-cohesion are 'invisible' /background influences, contributing to the suicidality outcome in the context of, or from 'behind the screen' of other, psychological distress presentations. Recognising the specificity of the suicidality measure employed in this study (suicidal thoughts and behaviours within a time frame of 12 months), it was deemed necessary to examine whether or not the results would be replicated in the context of another research index often used in suicidology, a history of

suicide attempts. Suicidality (suicidal ideation and actions) in the past 12 months perhaps indicates a direct or present suicide risk, while a measure of lifetime suicide attempts could shed light on the overall, and enduring, propensity towards or capacity for suicidal acts. This suggestion will be considered further in Chapter 7.

Additionally, Study 3 examined the consistency of STB items. It was revealed that, although the item consistency analyses had a high Cronbach's alpha (.80), the statistics suggested a potential removal of the item enquiring about actual suicide attempts, which would shift the Cronbach's alpha to .82. The whole STB index comprises of 5 items (3 of which refer to suicidal thinking and the remaining 2 to planning and enacting suicide attempts). Furthermore, it was noted that removing this item from the scale would require further removal of another item (*Have you made plans to take your own life?*), retaining only three items, those which pertain to suicidal thinking (and together yield a Cronbach's alpha of .86). Having removed both items, the measure would assess suicidal ideation only, stripped of the behavioural aspects of suicidality. Given that Cronbach's alpha of .80 indicates a desirable level of internal consistency, it was decided to keep all items and allow the measure to retain its original composition, aiming to capture the important to this study responses in respect to the intensity/seriousness of suicidal tendencies. Nonetheless, this questionability of the items suggested that suicide ideation and suicidal action, to a degree, are two distinct notions, likely pertaining to different populations. Similar suggestions have been voiced in earlier research, as will be further discussed in an introductory section to the next chapter, Chapter 7.

### 6.5 Study 3 Conclusion

The investigation of the theoretical assumptions of associations of self-cohesion with other suicidality measures (psychache and inner turmoil indices, such as depression, anxiety, and stress) found their practical reflection, with both correlational and regression analyses demonstrating divergent validity of the constructs examined. Expanding on the contribution of Shneidman, Orbach, Holden, and their teams, in the understanding of psychache and self-destructive inclinations, the findings of this study suggest that the ASCS, mainly due to the presence of the Self-concept/self-esteem subscale, is suitable for inclusion in assessment of suicidal risk. Notably, the association of self-cohesion with other distress-encompassing constructs promises therapeutic opportunities for instigating a holistic positive change in the sense of psychological wellbeing. That is, by boosting the levels of self-cohesion (via soothing and resolving self-cohesion ruptures, and bolstering self-esteem), a desirable improvement via a ‘domino effect’ could be expected, i.e., a reduction in the levels of psychological frailty markers, such as psychache and depression, and consequently, a decrease in suicidal ideation and behaviours.

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<sup>1</sup>The examiner suggested extending analyses to include investigation of potential moderation effects in both this Study and Study 4 (described in Chapter 7). Although interactional effects certainly play a role in suicidality, this suggestion has not been followed here for the following reasons:

1. The dataset contains 137 cases of suicidal ideation and/or behaviours, an insufficient number to achieve statistical power to detect a small effect size at the probability level of .05; the recommended number is a minimum of 550 cases for five predictors in a model – current study’s model includes eight predictors (see advice provided on the *Intellectus Statistics* software website). Moreover, Kenny (2015), based on the recommendations of McClelland and Judd (1993), has emphasized that moderation analyses typically have very low statistical power when one or more of the involved variables are, as here, continuous. Boosting statistical power for this study’s particular constructs by changing the continuous variables into two extreme categories would not be advisable because these variables cannot meaningfully be converted to dichotomous variables. The scores of self-esteem/self-concept, fulfilment of childhood needs, ruminative tendencies, etc. are located on a spectrum from low to high levels.

2. The amount of variance explained by the regression model suggests that other unaccounted for independent variables contribute to suicidality. It would thus be advisable to investigate interaction effects in the context of a more inclusive model because the interactions might be affected by the presence of other contributors which need to be accounted for in a comprehensive model. That is, the levels of effect of moderators are likely to be influenced by the presence of other contributing factors. In incomplete models, there is a possibility that the variable presenting as a moderator may show a moderation effect, because it correlates with a true moderator, i.e., a variable not included in the equation (see Kenny, 2015).
3. The self is flexible (as suggested by Kohut and presented in Chapter 2), and emerges in the context of diverse interpersonal, social, environmental, and psychological factors. Interactions between variables, revealed by use of statistics, may be applicable as a general model, but not always precise at the individual level. Thus, caution is advisable when proposing interactions between factors contributing to suicide, because this may lead to misconceptions or over-generalisations.

## **Chapter 7**

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### **Study 4: Self-cohesion, Self-esteem, and Depression, Anxiety, and Stress in Lifelong Suicidality**

The previous study considered the relationship between psychological distress/frailty markers (psychache, fragmentation of the self, depression, anxiety, and stress) and self-reported suicidality (ideation and behaviours) as experienced during the last 12 months. The results demonstrated a predominate contribution of depression and diminished self-esteem, and to a lesser extent of psychache, to the outcome of suicidal thoughts and behaviours experienced during this time. However, low levels of self-esteem contributed only moderately to recent experiences of suicidality beyond the contribution of depression. This is a surprising finding, given: 1) the theoretical importance assigned to the role of self-esteem in overall psychological wellbeing by Kohut and his followers; 2) the robust negative correlation of both the BSE measure and the Self-concept subscale of ASCS with the outcome of STB (as seen from Chapter 6, Study 3, Table7); and 3) other empirical findings of moderate-to-strong negative associations between self-esteem and suicidality, shown via diverse self-esteem and suicidality indices in various populations (e.g., Chatard, Selimbegović, & Konan, 2009; Creemers, Scholte, Engels, Prinstein, & Wiers, 2012; De Man & Gutiérrez, 2002; Kleiman & Riskind, 2013; Lakey, Hirsch, Nelson, & Nsamenang, 2014b; Lin, 2015; Overholser, Adams, Lehnert, & Brinkman, 1995; Palmer Jr, 2004; Perrot, Vera, & Gorwood, 2016). It has been noted that multi-collinearity in Study 3 may have contributed to this result (this will be followed up in sections 7.3.2 and 7.4, and in the endnote to this chapter).

Notably, the degree to which the STB measure is reflective of one's true suicidal potential is not clear; first, because the measure is concerned with a restricted time frame; and second, it also includes suicidality indices such as a respondent's evaluation of the value of life, thoughts about death as a better option than life, and ideation about suicide. Thus, although the STB enquires about suicide attempts in the last 12 months, it also captures the scores of those who have experienced even passing thoughts of death. This potentially introduces error in the measurement of suicidality because thinking about death or suicide has been documented in non-suicidal populations (Lewitzka et al., 2017). Illustrating this further, in the United States, a comparative estimation of suicide ideation relative to suicide attempts (over a one year period from 2008 to 2009) revealed that 3.7% of adult population reported suicidal ideation, while 1% made suicide plans, and only 0.5% acted on those plans in that year (Crosby, Han, Ortega, Parks, & Gfroerer, 2011). Higher estimates have been provided for an adolescent population (15 - 19 years old) across diverse nationalities, with 22 -38% of young individuals reporting thoughts about suicide at some point in life, and 12 -26% having such thoughts in the previous year, while suicide attempts were considerably lower, in the range of 1.5 - 12.1 % (Nock et al., 2008). The global rates of suicide ideation among adult populations were between 3.1 and 56 %, with the rates of suicide attempts between 0.4 and 5.1% (Nock et al., 2008).

Thus, suicidal ideation may occur in both, suicidal and non-suicidal individuals (or at least non-actively suicidal). Further, it has been shown that suicide ideators and attempters vary on personality traits, with attempters having higher scores on aspects such as novelty seeking and harm avoidance and lower scores on reward dependence, than those who contemplated the idea of suicide but never took action towards self-destruction (Gil, 2005). Differences between suicide non-ideators, ideators and

attempters were also found in the study by R. C. O'Connor, Rasmussen, and Hawton (2012); although suicidal and non-suicidal adolescents (15 - 16 years old) differed on the levels of socially prescribed perfectionism, self-esteem, brooding, and optimism levels, there were no such differences between suicide ideators and attempters. Nonetheless, suicide ideators and attempters had statistically significantly different scores on the factors of life stress and impulsivity, and the volitional factors of a suicide process, i.e., factors that allow transposition of suicidal ideation into action, such as being exposed to suicide in close familial or friends' relations, or believing that peers engaged in suicidal behaviours. It is therefore possible that suicide ideators and attempters, who are often considered under one classification umbrella of 'suicidal' individuals, comprise two different populations. Moreover, earlier psychological research found that suicidal ideation does not necessarily result in an active suicidal intent or acts; combinations of other factors like negative life events and internal perturbations may have stronger effects on suicidal action than suicidal ideation (Fedyszyn et al., 2012; Johns & Holden, 1997). It has also been documented that a history of suicide attempts was the strongest predictor of future suicidal acts, relative to other known suicide risk predictors (see review by Beghi, Rosenbaum, Cerri, & Cornaggia, 2013). For example, in the study by R. C. O'Connor, Smyth, Ferguson, Ryan, and Williams (2013), suicidal ideation did not reach a level of statistical significance, but, on the other hand, frequency of previous suicide attempt and a sense of entrapment emerged as statistically significant predictors of a consecutive suicide attempt. Similar views have been expressed earlier, with for example, Kaplan, Kottler, and Frances (1982), reporting that:

In deciding on the over-all likelihood of a suicide attempt [...], only two items were significant contributors to the regression function — the imminence of suicidal

feelings and the history of previous suicide attempts, with the former weighted about twice as heavily as the latter. (Kaplan et al., 1982, p. 213)

For Kaplan et al., the imminence of suicidal feelings is a state related to suicidal intent rather than ideation, and reflects what Shneidman coined as *perturbation* (Kaplan et al., 1982). Because the findings of Kaplan et al. were based on medical staff ratings/subjective interpretations of 16 psychiatric patients' disclosures, rather than on a direct and objective testing, generalisability of findings in respect to suicidal feelings from this type of studies could prove unreliable. Nonetheless, history of previous suicide attempts could be deemed as an objective fact. Still, in contemporary research, assessing suicidality via suicide ideation is a common practice, with many researchers construing that suicide ideation is a valid indicator of suicidality (e.g., Khazem & Anestis, 2016).

In brief, suicidal ideation and engaging in suicidal acts are not the same behaviours, but it is unclear which of the two indices (suicidal ideation or a prior attempt to end one's own life) better predicts future suicide, and if there is consistency in how suicide-related detrimental psychological factors relate to these two different outcomes. Study 3 has found that scores on the measures of psychache, depression, self-cohesion/self-esteem, anxiety, and stress all correlate strongly with ideation about and suicidal gestures over the last year, as tapped by the STB. However, while acknowledging that the STB measure may have shortcomings, it is also plausible that the predictor measures, sharing a large proportion of variance, have been confounded (e.g., the depression measure may have also measured impoverished self-esteem). This would need to be further verified in future research, utilising diverse measures corresponding to the predictors of interest.

Study 4 examined whether these predictors of interest here relate similarly to a different suicidality measure, the lifetime history of attempted suicide.

## 7.1 Aim of Study 4

Based on the earlier research into self-esteem and its role in suicidal behaviours, and in the light of Kohut's theory positioning self-esteem/self-cohesion at the centre of psychopathology, including suicidality, the aim of Study 4 was to test the contribution of diminished self-cohesion and self-esteem, as combined with other psychological frailty markers, i.e., psychache, depression, anxiety, and stress, to a lifelong suicidal behaviour, namely the history of suicide attempts. Examining those relationships in relation to the lifetime history of suicidal acts could shed information as to the role of these psychological events in attempted suicide (as opposed to recent ideation and acts), thus possibly a long-term vulnerability to suicide.

## 7.2 Method

**7.2.1 Participants and procedure** – described in Chapter 3.

**7.2.2 Measures.**

Study 4 utilised the same predictor measures as Study 3: ASCS (divided into three subscales of Self-concept, Childhood Needs, and Rumination), OMMP, and DASS 21 subscales of Depression, Anxiety, and Stress, in the context of the outcome measure of Lifelong Suicide Attempts (all described in Chapter 3). The use of BSE was discontinued in this study, following the findings from Studies 2 and 3, which demonstrated that the ASCS's Self-concept items all merged into one factor with the items of BSE (in Study 2), denoting that these two measures loaded on the same factor/construct of self-esteem; and in Study 3 showed exceedingly high inter-correlation ( $r = .89$ ;  $CI_{95} [.87, .91]$ ). As already discussed, this high correlation would explain the effects of BSE on the outcome

variable becoming statistically not significant, when preceded by the Self-concept scores in the same regression analysis.

### 7.2.3 Statistical analyses.

A hierarchical regression analysis was conducted in SPSS 21, in an analogous manner to the statistical procedure described earlier for Study 3.

## 7.3 Results

### 7.3.1 Descriptive statistics, frequencies and correlations of the predictor measures with the outcome measure of LSA.

Descriptive statistics and the matrix of correlations between the predictor measures have been presented earlier (Chapter 5, section 5.4.2, Tables 3 and 4, respectively).

Lifelong suicide attempts were reported as follows: 15% of the sample had made an attempt, ranging from 1 to 5 or more attempts per person (see Table 9;  $M = 0.26$ ;  $SD = .74$ ;  $SE .04$ ;  $CI_{95} = [.18; .34]$ ). Correlations of LSA with the scores of the predictor measures are set out, and accompanied by confidence intervals, in Table 10.

**Table 9**

*Frequencies and correlations for the outcome variable of Lifelong Suicide Attempts (LSA)*

Number of attempts	Frequency	Percent
Total attempts	54	15.0
0 attempts	305	85.0
1 attempt	31	8.6
2 attempts	14	3.9
3 attempts	4	1.1
4 attempts	3	.8
5+ attempts	2	.6
Total <i>N</i>	359	100.0

**Table 10**

*Pearson's correlations between predictor variables and the outcome variable, Lifelong Suicide Attempts (LSA)*

<b>Measure</b>	<b>LSA</b>	<b>CI<sub>95</sub></b>
OMMP	.27	[.17, .36]
ASCS	-.30	[-.39, -.20]
Self-concept	-.22	[-.32, -.12]
Childhood Needs	-.28	[-.37, -.18]
Rumination	.25	[.15, .34]
BSE	-.24	[-.33, -.14]
DASS 21	.28	[.18, .37]
Depression	.24	[.14, .33]
Anxiety	.29	[.19, .38]
Stress	.23	[.13, .33]

Note. All *r* values statistically significant;  $p < 0.001$  (one-tailed).  $N = 359$

### **7.3.2. Hierarchical regression of predictor variables with the outcome of LSA.**

The order of entering the predictor variables into the regression equation was consistent with the sequence and manner employed in the previous study, following the strength of correlations between the predictors and the outcome measure, and entering the individual subscales of ASCS and DASS 21 as separate predictors, rather than the total scores for these measures. Using subscale measures allowed a deeper insight into the specific, rather than overall, effects of the constructs, reflected through those measures (self-concept, childhood interpersonal experiences/fulfilment, rumination patterns, depression, anxiety, and stress).

Therefore, consistent with strength of correlations as shown in Table 10, Anxiety (from DASS 21) was entered in Step 1, Childhood Needs (from ASCS) in Step 2, OMMP in Step 3, Rumination (from ASCS) in Step 4, with BSE and Depression (from DASS 21) jointly in Step 5, Stress (from DASS 21) in Step 6, and Self-concept (from ASCS) in Step 7.

As can be seen from the frequencies of the reported lifetime suicidal attempts (Table 9), there was a bias in the data, which resulted in a skewed distribution (thus potentially limited generalisability of the model). Nonetheless, the assumption of independent errors was acceptably met, with Durbin-Watson statistic = 2.05. Further, all residual statistics had means of zero, and the shapes of dispersion of scores in the partial regression plots (standardised residuals in respect to standardised predicted values) suggested no special concern. Also, the maximum Cook's Distance value was satisfactory (.21), with the mean .004, suggesting no undesirable effects from outliers. Table 11 details the results of the hierarchical regression.

It is seen from Table 11 that, when all the scores of predictors of self-cohesion, self-esteem and other psychological frailty markers (psychache, depression, anxiety, stress) (measured with ASCS, DASS 21, OMMP, and BSE) were entered into the hierarchical regression, the final model reached statistical significance ( $p < .05$ ), with the predictors of Anxiety (from DASS 21), Childhood Needs (from ASCS), BSE, and Self-concept (from ASCS) exerting statistically significant effect on the outcome of LSA (as shown by their standardised beta values and statistically significant  $F$  change). The predictors of Depression, Stress (both measured by DASS 21), OMMP, and Rumination (from ASCS), did not reach statistical significance, demonstrating no incremental input into the prediction of LSA, in this set of predictors. Importantly however, the scores of Self-concept (from ASCS) showed a positive direction—a result not meaningful in the light of the investigated theory and prior research findings.

**Table 11***Hierarchical regression: Predictors of Lifelong Suicide Attempts (LSA)*

<b>Model</b>	<b>Variable</b>	<b>B</b>	<b>SE B</b>	<b><math>\beta</math> (p)</b>	<b>R<sup>2</sup></b>	<b><math>\Delta R^2</math></b>
<b>1</b>	Constant	-.298	.105			
	Anxiety	.051	.009	.29***	.08	.08***
<b>2</b>	Constant	.267	.171			
	Anxiety	.039	.009	.22***		
	Childhood Needs	-.023	.005	-.22***	.12	.04***
<b>3</b>	Constant	.151	.187			
	Anxiety	.030	.011	.17**		
	Childhood Needs	-.021	.006	-.20***		
	OMMP	.002	.001	.10	.13	.00
<b>4</b>	Constant	.056	.212			
	Anxiety	.027	.011	.15*		
	Childhood Needs	-.020	.006	-.19**		
	OMMP	.001	.001	.08		
	Rumination	.008	.008	.06	.13	.00
<b>5</b>	Constant	.279	.386			
	Anxiety	.031	.013	.175*		
	Childhood Needs	-.019	.006	-.18**		
	OMMP	.002	.001	.09		
	Rumination	.008	.008	.06		
	BSE	-.002	.003	-.04		
	Depression	-.011	.013	-.07	.13	.00
<b>6</b>	Constant	.306	.387			
	Anxiety	.037	.014	.21**		
	Childhood Needs	-.020	.006	-.19**		
	OMMP	.002	.001	.09		
	Rumination	.010	.009	.08		
	BSE	-.002	.003	-.04		
	Depression	-.007	.014	-.04		
	Stress	-.014	.013	-.09	.14	.00
<b>7</b>	Constant	.046	.404			
	Anxiety	.035	.014	.20*		
	Childhood Needs	-.021	.006	-.20***		
	OMMP	.002	.001	.14		
	Rumination	.011	.009	.08		
	BSE	-.010	.005	-.22*		
	Depression	-.001	.014	-.01		
	Stress	-.011	.013	-.07		
	Self-concept	.015	.007	.27*	.15	.01*

*Note.* OMMP = Orbach & Mikulincer Mental Pain scale; BSE = Beck Self-esteem scale. *N* = 359.

\*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$

Considering the strength of correlation between the ASCS's Self-concept and BSE scores (Chapter 5, section 5.4.2, Table 4), it is plausible that a multicollinearity effect has occurred, even though, as recommended by Marquardt (1970), the variance inflation factor (*VIF*) values were all below the critical value of 10; all predictors had *VIF* values between 1.00 on Step 1, and mostly close to 2.00. The highest *VIF* value was 3.26 for Depression on Step 7, except for BSE and ASCS's Self-concept predictors (starting with BSE's *VIF* = 1.96 on Step 5, and increasing to *VIF* = 5.12 on Step 7, when ASCS's Self-concept was introduced, yielding its *VIF* of 6.99). Thus, in this particular set of variables, the high correlation between ASCS's Self-concept and BSE ( $r = .89$ ; Table 4, section 5.4.2) has resulted in collinearity. Further, the positive regression coefficient between Self-concept (from ASCS) and LSA, where the correlation was, as expected, negative, questions the reliability of this statistically significant regression outcome.

Investigating this matter further, a separate hierarchical regression analysis was conducted, with BSE on Step 1, accompanied only by ASCS's Self-concept on Step 2, to ascertain if ASCS's Self-concept incrementally added information to the prediction of LSA. BSE predicted close to 6% of variance in the LSA (specifically,  $R^2 = 5.8$ ;  $F(1, 357) = 22.03$ ,  $p < .001$ ;  $\beta = -.23$ ,  $p = .046$ ). ASCS's Self-concept showed no statistically significant incremental contribution ( $\beta = -.01$ ,  $p = .917$ ), with the second/final Model in the regression becoming statistically not significant.

Having established that ASCS's Self-concept had no additional predictive power in respect to LSA beyond that of BSE, ASCS's Self-concept was removed from the analysis. This counteracted the effect described above, whereby ASCS's Self-concept coefficients became unstable in the regression procedure. This reduced the analyses to six steps, and demonstrated the statistically significant contribution of Anxiety (with 8% of contribution

towards the outcome of LSA) and Childhood Needs (incrementally contributing further 4%). However, given a total of only 12% explained variance in LSA (shown in the statistically significant model; Step 2; Table 11), it is highly probable that error variance could not account for the 88% of variance not explained. Thus, apart from the predictors depicting anxiety and unmet childhood relational needs, other possible predictors, not included in this regression equation, need to be considered in order to be able to more reliably predict an individual's lifelong proclivity for suicidal behaviour.

Further, the direction of the predictor Depression could have been influenced by its high correlation with the measure of OMMP ( $r = .73$ ), distorting the contribution effects of Depression scores when preceded in the analysis by the OMMP scores. However, introducing the predictor Depression into the analysis in Model 5 did not improve the model's overall performance, and the Depression regression coefficient was not statistically significant. Thus, removal of this predictor from the analysis, to avoid a potential collinearity effect, would bring no change to the overall regression results. As seen from Table 11, the only statistically significant models in the hierarchical regression were the first two models, comprising the Anxiety and Childhood Needs indices.

#### **7.4 Study 4 Discussion**

Building on the findings from Study 3, the regression analyses completed for this study have tested the extent to which measures of the constructs of inner turmoil (depression, anxiety, and stress), psychache, self-esteem, and self-cohesion have predicted a history of suicide attempts. Although the predictor variables were entered into the regression analyses in seven steps, only six steps have been accepted as reliably reflecting the effects of the predictors on the outcome of LSA. This decision was due to

the ambiguous results at Step 7, i.e., a positive standardised beta coefficient for the ASCS's Self-concept subscale, likely resulting from collinearity among the predictors (mostly between BSE and ASCS's Self-concept). The shift from the negative correlation between the ASCS's Self-concept and LSA to a positive regression coefficient involving these variables, indicated "instability of its information along the small-eigenvectors directions" (Næs & Mevik, 2001, p. 425). This change in direction implied that small eigenvalues had an effect on the inverse covariance matrix, affecting stability in eigenvectors (see Endnote<sup>2</sup> at the end of this chapter).

Summarising Study 4 results, it was found that in the selected set of predictors, the measures which showed statistical power to predict the scores of LSA were DASS 21's Anxiety (assessing psycho-physiological sensations/symptoms of anxiety) and ASCS's Childhood Needs (denoting impoverished childhood relational experiences), with the former contributing 8%, and latter incrementally contributing 4% towards the variance in LSA. These outcomes demonstrate only small, but nonetheless statistically significant, predictive potential. The results confirmed Chamberlain's (2010) conjecture that the Childhood Needs subscale is an important subscale of self-cohesion, useful in the assessment of fragmentation in the context of suicidal tendencies, thus inclusion of this aspect in the ASCS. When considering the six-step regression procedure, the measures of self-esteem (BSE and ASCS's Self-concept) did not reach statistical significance in their contribution to lifelong suicidal attempts, nor did the measures of psychache, depression, stress, and a subscale of the self-cohesion measure, Rumination.

#### **7.4.1 The role of anxiety and unmet childhood needs in suicidality.**

It should be noted that both unfulfilled childhood needs and anxiety (portending fragmentation of the self), and their roles in a suicide process, have previously been

addressed by Kohut (1984). Kohut concluded that the former contributed to developmental psychopathology and that the latter, termed by Kohut disintegration anxiety (Kohut, 1984; see Chapter 2, section 2.6.3), potentially influenced suicidal wish. Negative impact on early childhood needs of the self acts on narcissistic vulnerability and results in “the first straight-forward breakdown of the self” (Kohut, 1972, p. 369). This can result either in anxious demands for approval in order to boost self-esteem, or debilitating anhedonia, or hypochondria (Kohut, 1971). Nonetheless, anxiety has a paradoxical function, firstly as a fragmentation-buffering factor, by providing a feeling of being energised and alive, yet, secondly, in a vicious cycle, it feeds and perpetuates a sense of falling apart and dread (Kohut, 1972; further elaborated in Chapter 8, section 8.2).

Anxiety, in respect to suicide, has been earlier studied across different branches of psychology. A comprehensive review of studies published between 1988 and 2011, mainly with samples drawn from children and adolescent populations and focussed on any type of anxiety presentations, including non-diagnosable symptoms, was conducted by Hill, Castellanos, and Pettit (2011). They concluded that “there is consistent evidence for a significant association between anxiety and suicide-related behaviors [i.e., suicide ideation and attempts]” (p.1134). Although Hill et al. asserted that anxiety constitutes a risk of suicide, the argument developed in this thesis is that anxiety comprises a lifelong vulnerability to suicide.

Only a small number of researchers have considered anxiety as a long-term suicide vulnerability factor. Conner, Duberstein, Conwell, Seidlitz, and Caine (2001), having reviewed 46 publications involving examination of “completed” suicides, with psychiatric and non-clinical cohorts, identified five psychological vulnerability factors as statistically

significantly related to death by suicide: 1) self-consciousness/social disengagement (endorsed by 75% of studies); 2) impulsivity/aggression (70%); 3) hopelessness (69%); 4) depression (59%); and 5) anxiety (59%). The authors, however, expressed caution in their conclusions, noting that “research aimed at identifying the areas of psychological vulnerability to completed suicide requires physiological and other sources of psychological data that are non-traditional, at least in epidemiological research” (Conner et al., 2001, p. 373).

A more recent survey of 43,935 non-institutionalized adults, conducted by Thibodeau, Welch, Sareen, and Asmundson (2013) found that each of the types of lifetime anxiety disorder (agoraphobia without panic disorder, generalized anxiety disorder, panic disorder with or without agoraphobia, posttraumatic stress disorder, social anxiety disorder, and specific phobia, as specified in DSM III) was related to suicidality, both in respect to ideation and lifetime suicide attempts. Similar results were obtained by Joe et al. (2006). Thibodeau et al. concluded that although suicidology literature suggests that “suicidal behavior in individuals with anxiety disorders is attributable to co-occurring risk factors, such as depression, [...] these conclusions are founded primarily in statistical adjustments that may obscure independent associations” (p. 947). The variables matched against each of the anxiety disorders comprised dysthymia, major depressive disorder, alcohol abuse and/or dependence, substance abuse/dependence, bipolar disorders I and II, all other anxiety disorders, as well as sociodemographic factors, with odds ratios of anxiety consistently reaching statistical significance in all the comparisons.

A similar perspective was expressed by Diefenbach et al. (2009), who, having examined data from 2,778 outpatients, found that, independently of psychiatric

disorders, “self-reported anxiety symptoms are associated with suicidality and this relationship is not accounted for by confounding with mood symptoms or diagnoses” (p.96).

Nonetheless, as has also proved to be the case for the studies reported in this thesis, conclusions about the primacy of experience could not be unreservedly advanced because “the cross-sectional nature of the data used in this study precludes causal inferences (e.g., if anxiety disorders precede suicide attempts, if mood disorders precede anxiety disorders)” (Thibodeau et al., 2013, p. 952). Thus, the proposal here that anxiety underscores suicide vulnerability is plausible, although only a preliminary theory, requiring other methods of enquiry, possibly involving longitudinal design (as suggested by Diefenbach et al., 2009; and Thibodeau et al., 2013).

Often, the notion of suicide vulnerability is not directly stated, but can be inferred from specific formulations offered by researchers. For example, in the study by Poeldinger et al. (1973) with depressed patients, it was concluded that correlation between any type of anxiety and depression increases risk of suicide, and further, that anxiety, when combined with social volatility, “finds its expression in the cry for help that a suicidal tendency represents” (p.147). From this, it could be construed that pre-existing anxiety, when combined with depression, transmutes into or manifests as suicidal gestures. Thus, considering the findings of Studies 3 and 4 along with the insights of Poeldinger et al., depression can be seen as a suicide risk factor, acting on an anxious disposition in the context of unfulfilled interpersonal needs.

Perhaps the strongest argument supporting the proposal that anxiety constitutes a suicide vulnerability factor rather than risk factor were the findings by Wanner et al. (2012). These authors found that the direct/unmediated odds ratio of attempting suicide

in the presence of anxiety was 2.3 ( $p < 0.001$ ). Mediation analyses revealed that “anxiousness fully explained the effect of [childhood] adversity on SA [history of suicide attempts] in the presence of externalizing disorders [attention deficit/hyperactivity, oppositional–defiant, and conduct disorders], whereas in the absence of these disorders, this effect was significantly attenuated” (Wanner et al., 2012, p. 2373). This suggested a strong likelihood that anxiety is an underlying factor, potentially leading to lethal actions, but only when acted on by other influential factors.

Unmet childhood needs and onset of anxiety also appear to be intertwined in suicidality in the research by Banai et al. (2005), who incorporated the premises of attachment theory along with the postulates of Kohutian self psychology (see the resultant SONI measure, described in Chapter 2, section 2.9). Banai et al. demonstrated a relationships between anxiety and unmet mirroring needs ( $r = .41, p < .01.$ ) and twinship needs ( $r = .22, p < .05$ ), and described these relationships as reflective of “hunger for selfobjects” (p. 238). These correlations supported the correlation between DASS 21 Anxiety and ASCS’s Childhood Needs ( $r = -.31$ ) recorded in this thesis (Chapter 5, Table 4). Banai et al. suggested that certain malfunctions in close early relationships may lead to development of a maladaptive attachment style, for example, *attachment anxiety*—the malady which “includes negative views of the self, a strong desire for closeness in relationships, and a tendency to worry about abandonment” (Banai et al., 2005, p. 235).

Further, an observation by Weisfogel (1969) supports the inference about the nature of suicidal vulnerability (presented earlier in this section); Weisfogel stated that suicidal behaviours emerge from “a vulnerability based on early childhood psychological and physical separations” (p. 284). Psychology literature provides ample support for this proposal. For example, S. Li et al. (2017) examined attachment patterns as categorised in

Griffin and Bartholomew's four-category attachment framework (comprising secure, fearful, preoccupied, and dismissing styles), as reported by a sample of 200 adult psychiatric inpatients with suicidal ideation and/or attempts. Li et al. documented a fearful attachment style as the only statistically significant attachment which positively correlated with a post-hospitalisation suicide attempt, controlling for a lifetime number of suicide attempts.

Thus, prior research has largely confirmed the interpretation of results from Study 4. These outcomes, together with the findings from the preceding three studies are further discussed in Chapters 8 and 10.

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<sup>2</sup>It is possible that a *ridge regression* procedure, developed by A. E. Hoerl and R. W. Kennard (cited by Marquardt, 1970), could have alleviated the collinearity problem. This procedure compensates for a lack of orthogonality in the data by shifting the values of small eigenvalues and decreasing *VIF* values. However, in doing so, the procedure introduces bias to regression coefficients (Marquardt, 1970). A ridge regression analysis is mainly recommended for regression predictors with high *VIF* values (Marquardt & Snee, 1975). However, given that the *VIF* values in Study 4 predictors were substantially below 10, any decrease in the *VIF* values was not required and, on balance, the decision was taken not to transform the data. Instead, the undesirable collinearity was mitigated by the 'removal' of ASCS's Self-concept. That this decision was preferable was confirmed by the result of the additional regression analysis of the scores of BSE and ASCS's Self-concept in relation to LSA, described above. In a similar pattern, in Study 3, the self-esteem measure BSE, being entered after the ASCS's Self-concept, demonstrated redundancy in the presence of the ASCS's Self-concept scores (thus its unstable coefficient direction and elevated *VIF*, relative to other predictors). These two measures, in these two investigations (Studies 3 and 4) could have been used interchangeably, rather than together.

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## Chapter 8

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### Merging of the Theory with Findings: Self, Psychache, and Suicide

*I was so utterly indifferent to everything  
that I was anxious to wait for the moment  
when I would not be so indifferent  
and then kill myself. Why -- I don't know.*

Fyodor Dostoyevsky - *The Dream of a Ridiculous Man* (1877)

#### 8.1 History of Suicide Attempts: Suicide Risk vs Suicide Vulnerability Factors

Vulnerability to suicidal behaviour has been commonly described in terms of a combination of risk factors (World Health Organisation, 2014). Furthermore, suicide risk factors are often referred to as suicide predictors (e.g., Chin & Holden, 2013; Jokinen & Nordström, 2008; Leonard, 1977; Troister, Links, & Cutcliffe, 2008). It is, however, a semantic prerogative of a 'suicide predictor' that the outcome of suicide would necessarily follow; the term, therefore is misleading, because, to date, identified 'predictors' of suicide do not consistently account for each suicide attempt (Cohen, 1986; Flamenbaum & Holden, 2007; also indicated in the introduction to Chapter 7). It is suggested here that, given wide acknowledgement that suicide cannot be reliably predicted, and that suicide risk factors cannot always be ameliorated in therapy (e.g., demographic factors), the attention of suicidology research and therapeutic action should be refocussed on suicide vulnerability factors.

The term “vulnerability” implies susceptibility and its meaning is subtly different from “risk”, which refers to the probability of an unfavourable outcome. However, in health sciences research and practice the two have frequently been used as synonyms; for example, the claim that, “frequently, several risk factors act cumulatively to increase a person’s vulnerability to suicidal behaviour” (World Health Organisation, 2014, p. 8). However, it can be argued that vulnerability is a different concept to that of a risk, because vulnerability provides a ‘fertile soil’ for the risk of an undesired effect to emerge, given that the risk factors occur together with, and act on, the vulnerability factors. A simple example may illustrate this point; if an individual has no predisposition to react with anger to negative events, no number or intensity of negative events will result in angry outbursts of discontent. Instead, the individual would resort to other ways of reacting, perhaps problem-solving, negotiation, or just forsaking the idea or conflict. Thus, no matter how many and how intense suicide risk factors an individual may encounter, in the absence of suicide vulnerability (a predisposition to react with suicidal gestures or thoughts), the risk factors would be of inconsequential importance.

Generally, vulnerability is understood as “a varying state of weakness or strength that can be mobilized when one encounters a threatening event” (Leffers et al., 2004, p. 19).

This thesis argues that psychological vulnerability to suicide is a personal characteristic, which, in face of challenges to the self, renders an individual susceptible to thoughts of self-inflicted death, and unable to self-defend against the intrusion and impact of potential suicide risk factors.

Combining the results from Studies 3 and 4, it has emerged that, although the variables of anxiety and unmet childhood needs contributed to the outcome of lifetime

history of suicide attempts, they showed no contribution to recent suicidal thoughts and behaviour outcome. Accordingly, there is an evident link between anxiety and childhood needs with suicidality, but the nature of this is obscured: why is it linked with past attempts but not with most recent suicidal thoughts or behaviours? This suggests the possibility that anxiety and childhood needs could be the pointers of a lifelong suicidal vulnerability. Statistical regression analyses, while useful in detecting predictive power of variables on the population levels, cannot provide insight into the specifics of the workings of the variables in terms of causality, or be applied to individual cases. Nonetheless, based on the theoretical prepositions of both Kohut and Shneidman, it is plausible that those individuals who experience anxiety and other consequences of thwarted childhood needs would be more susceptible to the negative effects of psychache, depression, and manifestations of self-cohesion breakdowns (diminished self-esteem); or unable to counteract the impact of those negative states of affect. Thus, it is suggested that lifelong suicidality contributors, as revealed in Study 4, are approximates of suicide vulnerability; and a tentative theory of a suicidal process is constructed and outlined in the next section, 8.2.

## **8.2 Emerging Perspective on Suicide Emotional Vulnerability**

Did Fyodor Dostoyevsky (1821 – 1881), a Russian writer, essayist, journalist and philosopher, illuminate the process of self-disintegration that precedes suicide in his short story *The Dream of a Ridiculous Man*? The quotation at the start of this chapter illustrates an emotional numbness, the unnerving indifference which provokes a sense of anxiety in anticipation of resolution of this immobilising emotional void. It is noted here how strikingly Dostoyevsky's perception of this inner pre-suicidal state resonates with the

findings and underlying theories of the research reported here, implicating emotionless state and anxiety—in Kohutian terms, the inner deadness and disintegration anxiety—as a backdrop to a suicidal inclination. Further, as the extract shows, the suicidal process necessarily requires interruption of this state of emotional numbness (the interruption potentially due to the suicidality-contributing factors, as indicated in Study 3: psychache, depression, and diminished self-esteem/self-cohesion). This interruption somewhat paradoxically triggers a renewed sense of aliveness, enabling one to engage in self-defensive or self-reconstituting actions (i.e., suicidal ideation or action). In support of this interpretation, accounts from clinical research report that often, after a period of passive dejection, suicidal individuals act as if they had regained their energy, hope, and positive outlook; however, instead resuming life, they end their life by suicide (Firestone, 2009). Goldblatt and Maltzberger (2010) attributed these unexpected suicides to a regained sense of self-direction and self-cohesion; i.e., in the moment of arriving at the ultimate decision to cease one's own suffering, a sense of self is reclaimed, and once again the reassuring and soothing sense of self-cohesion can be felt; that is, one is at peace with him/herself, believing they have found an ultimate solution.

Merging the theory of Shneidman and Kohut (delineated in Chapter 2) with the quantitative results of Studies 3 and 4, a novel and provisional theory of a suicide trajectory can be advanced. The theory is as follows: as a result of childhood traumatic frustrations of a developing sense of self, the self emerges as unstable or weakened in its own sense of self-worth and security. This insecure, anxious self is likely to be sensitive to further transgressions against it, especially against its needs to be understood, connected to others, and valued. Real or perceived threats to the innate self-invested psychological needs of recognition, acceptance, and respect introduce discord to the sense of self. The

self begins to crumble; emotions either spiral out of control and create havoc, prompting one to take a self-restorative action (such as retaliation), or, in a subdued self-defence fashion, the emotions, along their corresponding needs, are suppressed into indifference (Kohut referred to this suppression as a horizontal split; Chapter 2, section 2.6.3).

Fragmentation of the self ensues, accompanied by a dreadful fear of one's own emotionless existence, termed by Kohut disintegration anxiety (Chapter 2, section 2.6.3).

The sufferer may feel compelled to keep the anxiety at bay by dissociating from the emotional experience (Orbach, 1994; 2006; Chapter 1, section 1.2.8). However, over time, dissociation cannot sustain psychological comfort or existential satisfaction because, while it guards against the negative affect, it blocks both the desired and undesired psychological events, thus diminishing one's own experience of self. The cracks in the dissociative barrier eventually appear and the capacity to experience emotions on the conscious level returns. If no self-restorative intervention is possible, and the indifference/emotional numbing gives way to psychache and/or depression, the sufferer's capacity to suffer becomes exhausted; one seeks to escape the dreadful pain even if it means self-destruction (confirmed in Study 3, with the finding of the association between a cluster comprising depression, psychache, and diminished self-esteem with the outcome of suicidal ideation and behaviours). Further, a sense of defeat may invade the psyche, flooding the sufferer with a gamut of earlier suppressed negative self-targeted emotions, e.g., shame, self-pity, self-hate, or self-blame. Once one cannot live with his/her own diminished sense of self, one is ready to execute a fatal blow to his/her own existence (as demonstrated through the finding of the association of decreased self-esteem and suicidal ideation and action; Study 3). Thus, suicide is a route out of emotional suffering; as Shneidman articulated, it is "not so much as a movement toward

death as it is a movement away from something and that something is always the same: intolerable emotion, unendurable pain or unacceptable anguish” (Shneidman, 1984, p. 322).

Summarising the hypothesised suicide trajectory, intolerable psychache, paired with depressive features (e.g., negative self-appraisal) and fragmentation of the self, befits a role of a suicide-enabling factor, breaking down the protective wall of self-imposed emotional indifference. In the background, however, a persistent disintegration anxiety exists, underscored by often unconscious or unrecognised motives, unmet psychological needs (shown by the associations of unmet childhood needs and anxiety with the outcome of prior suicide attempts; Study 4). Essentially, presuming that a history of suicide attempts is indicative of suicide-vulnerability, these two factors—the disconcerting disintegration anxiety and unfulfilled psychological needs (the roots of unstable self-cohesion)—are jointly likely to form elements of a lifelong vulnerability, or propensity, to suicide.

Although this speculation has opened a new possibility of looking at suicidal vulnerability, it derives from the results of only the studies reported here. Further, even though this suggestion is consistent with the theories of Shneidman and Kohut, it remains a novel conceptualisation which requires further verification. Notably, the contribution of anxiety and diminished self-cohesion to suicidality found here has been small and it remains likely that other factors, not considered in this thesis, would contribute to suicidality (both in respect to suicide risk and vulnerability).

Importantly, it is still unclear why only a minority of emotionally disturbed individuals choose self-inflicted death. Certainly, there would be a number of individuals predisposed to anxiety whose childhoods did not provide optimal developmental

opportunities. Yet most such persons do not intend to die by suicide or engage in suicidal behaviours. Some perhaps become therapy clients, some suffer in silence, or some may have found protection by the means of healing relations with others.

Thus, vulnerability to suicide does not signify imminent suicide; the critical challenge is to identify what factors do determine who, from amongst those vulnerable, attempts to end their own life. Kohut did not articulate a detailed position on the matter of vulnerability and risk of suicide. Instead, he proposed that an inhibited development of the self, due to the unmet childhood narcissistic needs, generates a propensity for anxiety and the emotions of embarrassment, shame, inferiority, or humiliation, which in turn increase likelihood of disintegration of the self (Kohut, 1966; as seen from Chapter 2, sections 2.6.3 and 2.8). Kohut attributed suicide to a faulty development of the sense of self; the self who under the duress of fragmentation and shame undergoes a psychological death. Given this, the physical act of self-killing then becomes a logical consequence, completing the process of gradual dying (refer to Chapter 2, section 2.8).

Shneidman proposed that suicide occurs when the peak of perturbation and press merges with psychache at its highest level, the level of intolerability (see cubic model, Chapter 2, section 2.2). But the level of psychache tolerability is not fixed, and would depend on external supports, circumstances, and individual inner copying capacities. How would a sufferer or a therapist know when the psychache level approached the zone of danger? This would seem impossible to detect, unless we stood back and observed how the emotional drama unfolded, inexcusably jeopardising the sufferer's psychological state. It clearly shows there is still much to be learned about the construct of psychache.

It is plausible that the variations of **how** psychache is experienced by different individuals could be a critical factor influencing the decision to commit suicide.

Shneidman proposed it was the intensity of psychache that was most decisive (Chapter 2, Figure 5), nonetheless, specific factors that underlie this death-wish-evoking psychache, have not yet been conclusively determined in research. Therefore, it needs to be examined what kind of emotional events might constitute an individual experience of most severe psychache, in the presence of suicidal tendencies.

### 8.3 Emotional Experiences Related to Suicide and Psychache

As found in numerous relevant literature searches, examinations of emotions have been most often conducted in research as pertaining to suicide, and occasionally in the context of both, suicide and psychache. Considering Shneidman's conception of psychache as a suicidal malady, the emotions pertinent to suicide would also be highly pertinent to the experience of psychache. Results of the literature review clearly demonstrated a considerably wide range of uniquely experienced emotions in suicidality, with no consensus on one and universal emotion which could become a target for suicide intervention. An outline of main findings on suicide-related emotions is presented as follows.

A frequently quoted review of *psychological autopsies* of suicidal individuals was published by Hendin, Maltzberger, Haas, Szanto, and Rabinowicz (2004), and revealed a lack of consistency in the constellation of emotions experienced by those who died by suicide. The authors found that the most recurrent emotion related to completed suicide was desperation, followed by rage, then anxiety, abandonment, hopelessness, self-hatred, loneliness, guilt, and humiliation. However, each suicide case demonstrated different levels and combinations of these feelings (Hendin et al., 2004). Notably, Hendin et al. identified desperation as a variable necessarily demarcating suicidal from non-

suicidal patients, and defined the emotion as “the sense of intense anguish and urgency for relief” (Hendin et al., 2004, p. 390). Nonetheless, despite this intensity/urgency of desperation, they construed that desperation is largely independent of psychache.

Frequently reported suicide-related emotions, and endorsed by Shneidman (Chapter 2, section 2.2), are hopelessness and helplessness. Having reviewed prior suicide studies, Arffa concluded that only about one-third of suicide attempters were diagnosed with depression, and further proposed that “hopelessness, with or without overt depression, may be the major stimulant for suicide” (Arffa, 1983, p. 110). Litman and Farberow (1961) suggested that helplessness and hopelessness, the feelings of exhaustion and failure, and urgency to exit an unbearable state elevate the potential for suicide. They implied that frustration, anger/rage, while experienced in a clear cognitive state, were relatively less detrimental to suicide than the helpless/hopeless states. Hendin also endorsed this perspective, and (probably incidentally tapping into Kohut’s suggestions about psychological death preceding suicide), added that an underlying emotional tone for young hospitalised people attempting suicide contains:

[...] their feeling worthless, no good, afraid, deserving of punishment, and filled with self-hatred for their failures, fears, and incapacities. [...]. These are patients who are often apathetic rather than depressed. [...] This apathy has its psychodynamic equivalent in the self image that many apathetic suicidal patients have of themselves as already dead; i.e., they see themselves as dead emotionally or as walking corpses and see their suicide as giving reality to a state of affairs that already exists. (Hendin, 1961, p. 187)

This self-hate, as emphasised by Hendin, has also been implicated in suicide by a number of other researchers, for example, Beck et al. (1973); De Rosis (1961); Harkess-

Murphy, MacDonald, and Ramsay (2013); Joiner Jr, Gencoz, Gencoz, Metalsky, and Rudd (2001); and Stein (2002). Further, having studied authentic and simulated suicide notes, Shneidman and Farberow (1956) found that “genuine notes were characterized by deeper and more intense feelings of hatred, vengeance, demand, and self-blame” (p.113).

Sadness, an emotion most commonly associated with depression, was found to have a diverse effect on suicide risk, depending on additional psychological traits and states. Specifically, Apter et al. (1991) reported that in a population of psychiatric patients, sadness, when accompanied by inclination for anger and violence, showed no statistical link with the risk of suicide. However, sadness in the non-violent inpatients, in their study, was positively correlated with the risk of suicide, measured with a scale incorporating both current risk predictors and past suicide attempts.

Shame as the emotion driving an individual into a suicidal malaise has been isolated by Kohut and further examined by Wellek (1993). Shame is the most private, often undisclosed emotion, potentially heavily weighing on the desire for death, as Wellek explained:

[...] shame seek secrecy. One may cry out in guilt, but hide one’s face in shame.

The wish is neither to see nor to be seen, as one wants to “fall through the floor” to avoid public reaction. People ashamed do not want to be. “I wanted to die”, “I could have killed myself”, “I wish I were dead” are common expressions reflecting the root death in mortification, a synonym of shame. (Wellek, 1993, p. 219)

Another emotion, or perhaps a state of mind, was isolated by Draper and Margolis (1976), who pointed out that all of the suicidal patients examined by them, experienced “an acute “terrible and terrifying aloneness” starkly different from chronic loneliness” (p.380). This conclusion coincided with the position of Henry A. Murray, who emphasised

the role of the feelings of loneliness (*pitiful loneliness*, including grief, a sense of deprivation, and distress), as highly pertinent to suicidality, along with the other negative emotional states: blaming others, anger, hate, aggression, remorse, guilt, depression, need for self-punishment, escapism or desertion, 'affectlessness', being dead to the world, disgust, withdrawal, and sarcasm (Shneidman, 1978).

A recent systematic review of 44 qualitative studies from 16 countries examined literature relating to suicidal behaviours in youth (Lachal, Orri, Sibeoni, Moro, & Revah-Levy, 2015). The study revealed the most commonly reported suicide-related negative emotions are: sadness/depression, despair, sorrow, detachment, and anger/irritability. Furthermore, the feeling of failure was considered as central to suicidality, underscored by diminished self-esteem, a sense of uselessness, incompetence, worthlessness, and self-hate.

The list of findings from the multitude of investigations of emotional features in suicidal populations could form a book of considerable volume, and the sample of the reports aforementioned is sufficient to present the diversity of emotions potentially contributing to the wish for self-destruction. As a matter of interest though, Appendix B collates the findings of the most often quoted studies in respect to the associations of psychache with a range of psychological variables, both of emotional and cognitive nature. Those findings, although relating to the theme of this thesis, are not discussed further, because their content goes beyond the scope of the studies reported here.

Next however, in Chapter 9, a range of negative emotions is examined using statistical methods, to determine if, in this study's sample, there is any particular emotion consistently associated with both severe psychache and suicidal inclinations. This information, when verified against prior research findings and confirmed in subsequent

research, could potentially prove informative and beneficial in treatment and prevention of suicidal acts and tendencies.

## Chapter 9

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### Study 5: Psychache-related Emotions

*Anyone can be crazy. [...]*

*But suicide is a whole different thing.*

*I mean, how much do you have to hate yourself to want to just wipe yourself out?*

— Michael Thomas Ford, from the novel *Suicide Notes*

Shneidman's theory of suicide, necessarily underscored by the negative affective state, psychache, has become a backbone of contemporary suicidology (Holden et al., 2001; Jobes & Nelson, 2006; Leenaars, 1996). His description of psychache, however, is very broad and covers an extensive range of negative emotions, and includes psychiatric maladies (details presented earlier in Chapter 2, section 2.2). Shneidman's inferences were mostly based on his analyses of suicidal notes of those who died by suicide. It is therefore important to clarify what is meant by psychache as elucidated directly by those who experience this deleterious condition.

An option for obtaining a comprehensive and informed view of personal experience of psychache could entail merging quantitative data with qualitative/narrative accounts of suicidal individuals, for example, in a mixed-method technique, adding depth to findings (Kral, Links, & Bergmans, 2012). This notion is considered further in Chapter 10, section 10.5). In Study 5, which follows in this chapter, individual experiences of psychache have been explored by a quantitative method via one of the items comprising Shneidman's *Psychological Pain Assessment Scale* (PPAS; introduced earlier in Chapters 2 and 3, sections 2.4.1 and 3.3.1).

## 9.1 Aim of Study 5

The aim of Study 5 was to gain deeper insight into the individual experience of the profound psychological suffering that comprises an essential component of suicide; psychache. A range of negative emotions was explored to determine if one or more specific emotion was associated with lifelong suicidal vulnerability or suicide risk, as defined by suicide history, and recent and current suicidal ideation and acts.

Moreover, because diverse methods for assessing suicidality potentially capture different aspects of suicidality, relationships between three different suicidality indices was explored. This established a degree of convergence among these measures.

## 9.2 Method

**9.2.1 Participants and procedure** – described in Chapter 3.

**9.2.2 Measures.**

From among the battery of tests described in Chapter 3, Study 5 utilised an item to explore emotions that prevail in psychache, derived from the *Psychological Pain Assessment Scale* (PPAS; Shneidman, 1999; see Chapter 3, section 3.3.1). Each participant checked three from 22 emotions listed in the PPAS, which they perceived to be most relevant to their worst psychache. Participants had a choice to indicate the emotions from the provided list or to name emotions not listed on the PPAS; however, no participant used the latter option.

Suicidality was assessed with three distinct measures: Suicidal Thoughts and Behaviour (STB); Lifelong Suicide Attempts (LSA); and Current Suicidality (CS; all described in Chapter 3, section 3.3.5). For the purpose of determining associations between

reported emotions and suicidality indices, the suicidality measures were converted into categorical variables, with the following categories:

- STB: 0 - no ideation and acts; 1 - ideation; and 2 - ideation and acts (in this investigation no participant indicated engaging in suicidal acts without accompanying ideation);
- LSA: 0 - no attempts; and 1 - prior attempts;
- CS: 0 - non-existent intent; 1 - it is a remote possibility, but no intent; 2 - vaguely contemplating; and 3 - seriously contemplating.

### **9.2.3 Statistical analyses.**

First, to test a relationship between the three suicidality measures, scores on the suicidality measures STB, LSA, and CS were subjected to correlational analysis in SPSS 21.

Second, the psychache-related emotions, endorsed by the participants, were organised into categorical data (coded '0' for the not-indicated emotions and '1' for the indicated emotions). Using SPSS 21 software, chi-square and loglinear contingency tables were created separately for each of the 22 emotions. Each emotion was then considered in three separate analyses, one for each of the suicidality indices, which were also arranged categorically, as described above, section 9.2.2. These analyses therefore tested associations between specific emotions and suicidality outcomes.

## **9.3 Results**

### **9.3.1 Frequencies of reported emotions, categories of suicidality indices, and descriptive statistics for suicidality measures.**

Frequencies of reported emotions are presented in Table 12. Initial inspection clearly revealed that the emotions of anxiety and sadness were the most frequently

associated with psychache. Chi-squared analyses showed that anxiety was not significantly associated with any of the three suicidality measures.

**Table 12**

*Frequencies and percentages of the psychache-related emotions and suicidality indices*

<b>Emotions</b>	<b><i>n</i></b>	<b>%</b>
Anxiety	105	29.2
Sadness <sup>b</sup>	100	27.9
Worthlessness <sup>a</sup>	75	20.9
Loneliness	74	20.6
Emptiness	55	15.3
Self-hate <sup>a</sup>	55	15.3
Anger <sup>b</sup>	53	14.8
Grief	49	13.6
Hopelessness <sup>a</sup>	44	12.3
Loss	43	12.0
Helplessness	42	11.7
Despair	41	11.4
Betrayal <sup>b</sup>	41	11.4
Guilt	40	11.1
Failure <sup>a</sup>	39	10.9
Fear	39	10.9
Powerlessness	38	10.6
Rejection	36	10.0
Abandonment	31	8.6
Confusion	29	8.1
Shame	26	7.2
Death lure <sup>a</sup>	22	6.1
Total	1077	100.0

*Note.* *N* = 359.

<sup>a</sup> Statistically significant in chi-square analyses (associated positively with suicidality indices).

<sup>b</sup> Statistically significant in chi-square analyses (associated negatively with suicidality indices).

*p* values for the statistically significant results are presented in Table 15.

Frequencies and descriptive statistics for the two suicidality measures, STB and LSA, have been presented previously in Studies 3 and 4 but are included in Table 13 together with the third measure, CS.

**Table 13**

*Frequencies and descriptive statistics for suicidality measures*

<b>Suicidality indices</b>	<b>n</b>	<b>%</b>	<b><i>M</i></b>	<b><i>SD</i></b>
STB (last 12 months)			.97	1.4
No ideation and acts	222	61.8		
Ideation	128	35.7		
Ideation and acts	9	2.5		
LSA (lifelong attempts)			0.26	.74
Prior attempts	54	15.0		
No attempts	305	85.0		
CS (at the time of survey)			.25	.55
Non-existent	286	79.7		
Remote possibility, but no intent	59	16.4		
Vaguely contemplating	11	3.1		
Seriously contemplating	3	0.8		

*Note.* STB = Suicidal Thoughts and Behaviours over the last 12 months; LSA = Lifelong Suicide Attempts; CS = Current Suicidality. *N* = 359.

### 9.3.2 Relationships between the three suicidality measures.

Pearson's correlations were viewed to examine the relationships between the suicidality measures STB, LSA, and CS (Table 14). Although current suicidal intent was strongly positively correlated with suicidal ideation and actions over the last 12 months, lifelong suicide attempts positively correlated only moderately with the other two suicidality indices. This suggested that the measure of a lifelong history of suicide attempts was to some extent distinguishable from measures of more recent attempts during the past 12 months and of current suicide ideation and/or action. Thus, LSA did not appear to explain much variation in recent and current suicidality.

**Table 14**

*Pearson's correlations between suicidality measures, with confidence intervals*

	STB	LSA
<b>LSA</b>	.35	-
<b>CI<sub>95</sub></b>	[.26, .44]	-
<b>CS</b>	.56	.38
<b>CI<sub>95</sub></b>	[.48, .63]	[.29, .46]

*Note.* STB = Suicidal Thoughts and Behaviours; LSA = Lifelong Suicide Attempts; CS = Current Suicidality.  $N = 359$ .  $p < .001$  (two-tailed)

### 9.3.3 Chi-square analyses of independence.

Each emotion was entered into contingency tables with each of the three suicidality measures individually, and in separate analyses for each suicidality index (e.g., the variable anger was entered in separate analyses with one suicidality marker at a time). Chi-square assumption of independence of data were met in each instance, with respondents contributing data consistently (i.e. as instructed, each respondent nominated three emotions as relevant to psychache and reported levels of suicidality pertinent to each suicidality measure). Criteria for adequate statistical power were met, with at least 80% of the expected frequencies greater than 5, and no cases of expected frequencies below 1.

As can be seen from Table 15, from the 22 negative emotions submitted individually to chi-square dependency tests with the three suicidality indices separately, chi-square analyses found statistically significant associations for two emotions, self-hate and worthlessness, with all three suicidality measures. Sadness, anger and betrayal were negatively significantly associated with STB. Moreover, sadness was also negatively associated with current suicidal intentions (CS). This finding of fewer emotions associated

with suicide indices was unexpected; it is discussed further in section 9.4, below.

Relevant categories of the suicidality measures significantly statistically associated with specific emotions, are presented in Table 16.

**Table 15**

*Chi-square dependency tests statistics and effect sizes<sup>a</sup> for the psychache-related emotions significantly associated with suicidality*

<b>Emotion</b>	<b>Current Suicidality</b> $\chi^2$ (df = 3)	<b>Suicidal Thoughts and Behaviour</b> $\chi^2$ (df = 2)	<b>Lifelong Suicide Attempts</b> $\chi^2$ (df = 1)
Death lure			35.58, $p < .001$ (.31)
Self-hate	28.85, $p < .001$ (.28)	34.96, $p < .001$ (.31)	15.90, $p < .001$ (.21)
Worthlessness	12.59, $p = .009$ (.19)	7.92, $p = .016$ (.15)	12.46, $p = .001$ (.19)
Hopelessness	10.10, $p = .029$ (.17)	7.85, $p = .027$ (.15)	
Failure	9.82, $p = .044$ (.16)		
Sadness <sup>b</sup>	11.32, $p = .010$ (.18)	21.90, $p < .001$ (.25)	
Betrayal <sup>b</sup>		11.29, $p = .006$ (.18)	
Anger <sup>b</sup>		8.06, $p = .018$ (.15)	

Note.  $N = 359$ .

<sup>a</sup> Effect size shown in parenthesis is Cramer's V for Current Suicidality and STB, and phi for Lifelong Suicide Attempts.

<sup>b</sup> The association was in the negative direction: fewer respondents than expected reported the emotion within the suicidality outcomes.  $N = 359$ .

The strongest effect was observed for 'death lure' (see z-scores, Table 16) relative to all other statistically significant emotions, although only in relation to the measure of lifelong suicide attempts. This outcome has been interpreted to mean that attraction to death was more likely to be reported by those who had actually taken suicidal action in the past; an interesting finding that is worthy of further investigation. This matter is discussed further in Chapter 10, section 10.2.2.

Hopelessness, in line with multiple prior research findings (Chapter 8, section 8.3), was associated positively with current suicidal intent and recent suicidality, but was unrelated to past attempts. The association of a sense of failure with suicidality was

statistically significant for current suicidal intent only (category: vaguely contemplating; Table 16).

**Table 16**

*Associations between the suicidality indices and the statistically significant emotions underscoring psychache*

<b>Emotion</b>	<b>Current Suicidality</b>	<b>STB over 12 months</b>	<b>Lifelong Suicide Attempts</b>
	(z-score; category)	(z-score; category)	(z-score; category)
Death lure			5.3; past attempts
Self-hate	4.3; remote possibility, no intent	3.2; ideation 3.1; ideation and acts	3.4; past attempts
Hopelessness	2.7; seriously contemplating	2.1; ideation	
Failure	2.6; vaguely contemplating		
Worthlessness	2.4; vaguely contemplating	2.0; ideation	2.9; past attempts
Sadness	-2.1; remote possibility, no intent	-3.1; ideation	
Betrayal		-2.5; ideation	
Anger		-2.0; ideation	

*Note.* STB = Suicidal Thoughts and Behaviour. *N* = 359.

Table 16 details the results, demonstrating the level of *medical seriousness*, a term occasionally used in suicidology research to signify the extent of lethality of suicidal wish or intent (the concept aforementioned in Chapter 2, section 2.2). The following inferences were drawn:

- respondents who reported the emotion of self-hate engaged in both ideation and suicidal action, currently, recently, and in the past;
- respondents who reported that they were currently seriously contemplating suicide were most often those who indicated hopelessness;

- worthlessness, while seemingly less lethal across the current and recent suicide ideation, was clearly associated with prior suicide attempts;
- the feeling of failure was associated with vague contemplation, possibly denoting indecisiveness or ambiguity about suicide (see Shneidman, 1986; Chapter 1, section 1.1.1; and Stengel, 1962; Chapter 1, section 1.2.2).

### 9.3.4 Loglinear associations: Three-way effects.

In order to determine if the associations between specific emotions and suicidal indices were different between males and females, three-way interactions were explored for each statistically significant emotion. Only one three-way interaction was statistically significant; that for self-hate in association with more reports by males than females in relation to history of suicide attempts. The likelihood ratio for the interaction: Sex x Self-hate x Lifelong Attempts in the loglinear analysis model was  $\chi^2(0) = 0, p = 1$ . The statistical significance of this highest-order interaction was confirmed with  $\chi^2(1) = 6.60, p = .01$ ; z-score of  $-2.43, p = .015$ . For both females and males the association between self-hate and lifelong attempts was statistically significant, but with the effect stronger for males. The interaction likelihood statistic was  $\chi^2(1) = 4.30, p = .039$  for females, and  $\chi^2(1) = 15.50, p < .001$  for males. The robustness of the relationship was  $\Phi = .14, p = .029$  for females and  $\Phi = .48, p < .001$  for males. Self-hate was also associated with higher rates in Current Suicidality and Suicidal Thoughts and Behaviours over the past 12 months (Table 15), but no sex effects were detected in those contingencies.

## 9.4 Study 5 Discussion

The aim of Study 5 was to identify, from a range of negative emotions, the specific affective states most strongly related to suicidal inclinations. This was determined via a

series of non-parametric tests, applied to the reported emotions (as per Shneidman's psychache measure item), in the context of three distinct suicidality markers: current suicidal intent; suicidal ideation and behaviour over the last year; and history of suicide attempts. The inclusion of these different suicidality markers aimed to overcome confusion about the robustness of suicidal ideation measures, as previously discussed in the introductory part of Chapter 7. As an implication of prior research described in Chapter 7, it is noted that generalising suicidality-related findings based on suicide ideation alone could be incorrect and therefore potentially harmful to improved understanding of the suicide process. Thus, in this study, to complement the traditionally used measure of suicidal ideation and behaviour (i.e. the subscale derived from the *Psychiatric Symptom Frequency Scale*), measures of current suicide intent and past suicide attempts were also considered. The correlational analyses of the scores on the three suicidality measures (STB, LSA, and CS) demonstrated a strong positive relationship between STB and CS. This was an expected finding, given that STB assesses suicidal ideation and behaviour during the last 12 months, and CS targeted the extent of the current suicidal intent. Semantically, these measures are closely related, which would explain their strong convergence, although discernibly, with some level of distinctiveness. A higher degree of independence was found between the suicidality measures in respect to the relationship between the scores on LSA and the remaining two suicidality measures. From the moderate positive correlations ( $r = .35$  for STB and  $r = .38$  for CS, with LSA), it is reasonable to infer that LSA should not be used as a substitute measure for the other two measures. It can thus be inferred that underlying commonalities linking the three measures exist but that, nonetheless, a history of suicide attempts and suicidal ideation and behaviour, in both recent and current time frameworks, are not the same. It

is suggested here that all three types of measures should be used when assessing suicidality, with LSA used to ascertain a lifetime behavioural trend to suicide, whereas STB and CS could be used to aid detection of recent and most immediate suicide risk.

The psychache-related emotions most frequently endorsed in this sample were anxiety, sadness, worthlessness, and loneliness (all above 20% of responses), but anxiety and loneliness did not reach statistical significance in their association with the indices of suicidality used in Study 5. An earlier study by Pompili et al. (2008) revealed a different constellation of the most frequently reported emotions. Analysing first, second, and third choice of emotions separately, Pompili et al. reported that the first choice was given to abandonment (28% of respondents), followed by anger and despair (both 18%); second choice most frequent selection was despair (19%) followed by grief and fear (both 15%); and third chosen emotion was worthlessness (11%), followed by guilt, loss, and lure of death (each 10%). Thus, the only emotion most commonly reported in both studies was worthlessness. The discrepancies between the types of emotions reported are not clear, though it needs to be noted that Pompili et al.'s sample comprised 88 patients, hospitalised and diagnosed with diverse psychiatric disorders (major depressive disorder, bipolar disorder, schizophrenia, personality and anxiety disorders); a very different population to that of the non-clinical community sample engaged in Study 5. It is plausible, and clinically important to note, that these two different populations could experience psychache in different ways. The following sub-sections compare the main findings about psychache and suicide-related emotions from Study 5 to results from similar prior research.

#### 9.4.1 Self-hate and worthlessness.

The two emotions which stood out in the chi-square analyses of this study were self-hate and worthlessness. Both were statistically significantly associated with suicidality across all three suicidality measures. Notably, Study 5 indicated self-hate as yielding the strongest effect towards suicidal tendencies, relative to the other statistically significant emotions (Cramer's  $V = .31$ ; and on par with death lure for LSA; Table 15). This makes intuitive sense; having a fundamentally self-invested/narcissistic nature (as per Kohut's theory; Chapter 2, section 2.6.2), the effect of self-loathing on cohesion would exceed the effect of other emotions. Kohut asserted that the motivation behind self-harming was often driven by a desire to remove a despised part of self (Kohut, 1972; Chapter 2, section 2.8), indirectly implying the presence of negativity towards one's own self as a potential suicidal stimulus. A self-addressed aversion would therefore potentially disturb the core of the self, that aspect which inherently needs to be accepted, loved, nurtured, and admired (both by the self and others); it would distort the outlook on both the self and external situation, and make it unendurable to continue living/being with the despised, love-less, and unfulfilled sense of self. Self-hate, termed as inimicality, was also one of the four main elements in Shneidman's early model of suicide (described in Chapter 2, section 2.2). Additionally, Shneidman claimed that, to an extent, self-hate is an ubiquitous emotional state within all individuals, although it only becomes problematic when exacerbated (Shneidman, 1978).

Also, the finding of a robust association of self-hate with the three suicidality markers was not surprising when considering prior research, which has utilised diverse suicidality indices and found similar results; (relevant authors have been listed in section 8.3). For example, in the study by Beck et al. (1973), the emotion of self-hate was

strongly correlated with attempted suicides. However, Beck et al. found that, in order of strength, self-hate followed the sense of hopelessness, non-fulfilment and failure, anhedonia, and guilt. Similarly, in a retrospective study of those who had died as a result of suicidal action, self-hate was amongst the most pronounced emotions (hopelessness, desperation, rage, anxiety, and abandonment), but did not have the strongest effect on suicidality (Hendin et al., 2004). Associations of self-hate with suicidality have also been recorded in more recent studies (Allen, 2012; Jobes, Kahn-Greene, Greene, & Goeke-Morey, 2009), and in some research were shown to be particularly strong in the context of schizophrenia, relative to depression (Joiner Jr et al., 2001).

Baumeister (1990) convincingly discussed the role of self-hate, as a motive driving the wish to escape from a despised self. Nonetheless, subsequently, Bushman and Baumeister (1998) argued that ascribing self-hate to self-defensive or self-harming actions may be misleading; they suggested that demarcation between the affective states of self-hate and self-love may need further investigation, because they noted that diminished self-love— more so than self-hate— contributes to suicidality. It appears that this proposal has found limited consideration in subsequent research; and although understanding of suicidality mechanisms has continued to grow, and new tools for assessment of suicidality have been devised, no explicit account of self-love has yet appeared in relation to suicidality assessment. For example, the *Suicide Status Form-II* (SSF), a psychometric tool popular among clinicians for monitoring suicidality, includes enquiry about hopelessness and self-hate, along with the indices of psychache, stress, and agitation (Jobes et al., 2004). Thus, the SSF's content reflects Baumeister's earlier position on self-hate as a major component of the suicidal process, and Shneidman's cubic model of suicide (Chapter 2, section 2.2). It appears that that the notion of

impoverished self-love (as opposed to unequivocal self-hate) has not been comprehensively explored in research. Nonetheless, it is a very intriguing notion and is considered further in the final discussion chapter of this thesis (Chapter 10, section 10.3.2).

A recent study by Jollant, Lemogne, and Fossati (2017) found no association between suicide attempters and non-attempters in a psychiatric sample in respect to self-referential evaluations. Nonetheless, in their sample, Jollant et al. recorded a significant positive association between the levels of psychache and negativity of self-referential statements. They concluded that these results were inconclusive and that further investigation was necessary. It is noted here that the difference between Jollant et al.'s results and those reported here for Study 5 may be attributed to the specifics of the assessment task. Jollant et al.'s respondents were asked to select adjectives from within cognitive evaluations of themselves (such as "greedy" or "generous"). Study 5, however, focused on the emotions directly associated with psychache, rather than descriptors for personality traits. These two studies therefore involved different aspects of inner experience.

The loglinear analysis in this study returned the finding that self-hate was more strongly associated with prior suicide attempts for males than for females. It is possible that this finding is culturally determined and applicable only to samples drawn from the Australian population as engaged in this study, where socio-economic competition is high, and frequently, expectations of occupational achievement of females are not treated on par with those for males (Kennedy, Rae, Sheridan, & Valadkhani, 2017). This socio-economic discrepancy could perhaps lie in an older, traditional social role attribution, designating men as breadwinners and women as primarily carers, performing child-

rearing and domestic duties. Even though family roles are changing in Australia (Grbich, 1992), generally, there still seems to be considerably more pressure on males than females to provide financial security to their families, (see Craig, Powell, & Brown, 2016 for a recent review). It is therefore possible that males, pressured by stereotyped societal expectations, experience self-hate in a more intense manner and, with perceived socio-economic repercussions, find it harder than females to accept or counteract their self-directed negativity. It could also be possible that ways of utilising social networks differ between males and females, with males communicating their distress less openly, thereby limiting their opportunities for social support in times of emotional crises. The reason behind this finding is unknown; nonetheless, it is clinically informative, alerting therapists to the potential effects of self-hate, especially frequently associated with suicide for males. A thorough examination of the emotional intensity of self-hate would thus be highly recommended.

Worthlessness in Study 5 showed a weaker association with current and recent suicidality than with the index of past suicide attempts. Worthlessness, along with a depressed mood, has been earlier linked to suicidality, assessed with an index of lifetime suicide attempts (Jeon et al., 2014). In Jeon et al.'s study, worthlessness had a stronger effect than depressive symptoms, and was more robustly associated with suicide for those who had experienced trauma. Also, in a study by Wakefield and Schmitz (2016), which employed the outcome measures of suicide ideation and attempts, from among other depressive symptoms, worthlessness appeared as a single statistically significant factor associated with repeated suicide attempts, with the effect strengthening with number of previous suicide attempts. Further, Wood, Williams, and Lewis (2010) found that worthlessness formed a significantly stronger association with suicidal ideation than

did either hopelessness or depression. In Study 5 results, however, the hopelessness effect slightly exceeded the effect of worthlessness (see z-scores, Table 16). This difference could be either due to a different measure employed to assess the emotions (Wood et al. used Beck Depression Inventory-II) or sample characteristics (traumatic brain injury patients vs. matched controls in a case-control study). Moreover, a very interesting and tentatively sound point has been made by Sofair (2011) about a suicidal crisis. In her private medical practice Sofair found that humiliation, a sense of public embarrassment, which summons excessive and overwhelming emotional anguish, is often screened by worthlessness and other negative affects. Based on the results of Study 5, prior research, and Sofair's assertion, the current author has inferred that worthlessness is one of a number of strong clinical indicators of a break-down in the sense of self, which can have potentially lethal consequences.

#### **9.4.2 Hopelessness and a sense of failure.**

In support of Shneidman's observation that hopelessness-helplessness is a common emotion in the suicidal process (Shneidman, 1987b; suicide commonalities; Chapter 2, section 2.2; Chapter 8, section 8.3), other suicidology studies have presented empirical evidence that strongly implicates hopelessness in suicidal ideation and/or action (e.g., Beck et al., 1975; Case, 1986; Holden, Mendonca, & Serin, 1989; Joiner Jr & Rudd, 1996; Rosellini & Bagge, 2014; Scocco & Toffol, 2012). In addition, hopelessness, often accompanied by a sense of loss, was documented as a suicide-contributing factor in reports by Cassells, Paterson, Dowding, and Morrison (2005); Dieserud, Røysamb, Ekeberg, and Kraft (2001); and Scocco and Toffol (2012). Mendonca and Holden (1996) found that hopelessness positively related to suicidal preoccupation, mostly for those

diagnosed with depression, but not for suicidal patients with other psychiatric disorders (anxiety, personality, and substance abuse disorders).

Although Shneidman proposed hopelessness as an emotional state and one of the common features in suicidality (Shneidman, 1986), often hopelessness has been defined as a cognitive psychological event, an element of a cognitive triad occurring in depressive disorders. The classification of the construct of hopelessness will not be discussed in this thesis; it has been included in the PPAS as one of the emotions, and is considered as such in this dissertation. Further, what is perceived as of immediate importance here is the finding that “hopelessness is the key variable linking depression to suicidal behavior”, with hopelessness showing a stronger correlation with suicide intent/ideation than with depression (Beck et al., 1975, p. 1146). This implies that, hopelessness, being a common feature of depressive disorders (as specified in the clinical diagnostic guidelines, DSM-5), may contribute to suicidal behaviours for those who suffer depression, but importantly, it may also contribute to suicidal ideation in the absence of depression. In Study 5, hopelessness was associated with suicidal ideation and contemplation, but not action, and, as mentioned above in this Discussion section, it has been accepted in suicidology research that suicide ideation does not always accurately predict suicide. It is therefore reasonable to assert that hopelessness is not always pertinent to gestures of self-destruction. Nonetheless, given the results of extensive prior research and this study’s results (showing hopelessness as associated with current serious contemplation), hopelessness needs to be considered as an important signal for a potential threat to a sustained meaning of life, security, and a sense of existential satisfaction. Possibly, combined with other emotions such as worthlessness or self-hate, or accompanied by other depressive symptoms, hopelessness could influence the decision to opt for death.

This inference potentially implies that hopelessness could be classified as suicide risk rather than as a vulnerability factor.

Similarly, a sense of failure found to be associated only with current vague suicidal contemplation. A feeling of failure is common to many experiences (it could be presumed that most people, at some time and to various degrees, experience feelings of underachievement), yet it is only relatively rarely followed by suicide. It is suggested here that failure may constitute a risk of suicide, but only in a suicide-fertile environment, characterised by anxiety and an enfeebled sense of self, and in combination with other risk factors, such as depression, psychache, and diminishment in self-esteem.

As indicated in the previous chapter (section 8.3), the feeling of failure was seen as central to suicide in a qualitative meta-synthesis of research by Lachal et al. (2015). However, in Study 5, the centrality of a sense of failure was not supported, with this emotion statistically significant for current suicide intent only. A feeling of failure was endorsed by respondents as relatively less intense (contemplating suicide vaguely), without being linked to a determination for immediate action. It is reasonable to assert that, with differences in personality traits, the role of the feeling of failure is most likely dependent on an individual's psychological makeup (the composition of the self, a sense of self-respect, and capacity to accept or overcome a sense of failure, either perceived or factual).

#### **9.4.3 Sadness, betrayal, and anger.**

Although in this study the emotion of sadness was associated with both current and recent ideation, the emotions of betrayal and anger had only one link; an association with suicidal ideation during the last 12 months. Moreover, the direction of each association between each of the three emotions and ideation was negative, implying that fewer than

expected individuals endorsed these emotions in respect to suicidality. There could be at least two explanations for this seemingly paradoxical finding; firstly, the layout/listing position of the emotions in the survey (modelled on the order presented in PPAS), may have influenced their apparent appeal, relative to the other listed emotions. Secondly, there may have been interactions between these emotions that confounded outcomes, as occurred in the aforementioned study by Apter et al. (1991; see Chapter 8, section 8.3). In Apter's study, when anger interacted with sadness, the interactional effect on the outcome variable of suicidality had no statistical significance. A similar interactional effect could be confounding the results here but additional investigations would be required to test this possibility.

Further, if we assume that the negative direction between sadness, anger, betrayal and suicidality is indicative of true associations, perhaps this finding illustrates a paradoxical nature of the effect those emotions exert on an individual's wish to live or die. Perhaps, and contrary to common views, suicide is not as likely when we are sad (we could feel far too overwhelmed or resigned to act); when we feel betrayed (we could anticipate apology, recompense, or consolation); or when we are angry (anger could provide a desire for revenge, or fuel energy and stimulate corrective action). Further, supporting the earlier research of Vitiello and Stoff (1997), a team of Conner, Duberstein, Conwell, and Caine (2003) reported that anger could prompt one into a suicidal whirl, but only given that a tendency for a *reactive aggression* personality style was present (the state characterised by impulsivity, reactivity, hostility, and affectivity). Those whose anger was accompanied by a *proactive* personality style (with the features of a controlled demeanour, proactivity, instrumentality, and predatory inclinations) would be less emotionally invested; and in order to satisfy their needs, they would resort to diverse

methods of intimidation or manipulation of others, rather than self-destruction (Conner et al., 2003). Thus, it remains possible that the sample in this study had a significantly higher number of participants with proactive rather than reactive personality styles, and therefore that results indicated a negative direction in respect to the anger and suicidality association. Another demonstration that anger is not always relevant to suicide attempts, has come from a review of studies with psychiatric populations, suggesting that anger may protect from suicide but evoke other non-lethal self-harming behaviours (A. K. Macleod, Williams, & Linehan, 1992).

The sense of betrayal in the context of both current suicidality and lifetime suicidal action has not returned statistically significant results in this study, a result similar to that of a recent study with military personnel conducted by Bryan, Bryan, Morrow, Etienne, and Sannerud (2014). Their investigation additionally revealed that scores on the Betrayal sub-scale of the *Moral Injury Event Scale* (Nash et al., 2013) were higher for the absence rather than presence of suicidal ideation. Comparison of this particular finding with other research findings is restricted, because only a small number of publications have referred to this notion, and most of those have investigated betrayal as an objective event that has happened, rather than as a psychological experience of feeling betrayed. Those publications considering betrayal from the emotive perspective have often analysed data of military personnel and within the framework of interpersonal-psychological theory of suicide (described earlier in section 1.2.8; details in Van Orden et al. (2010); and Van Orden, Witte, Gordon, Bender, and Joiner Jr (2008)). Attempting to collate the findings of those investigations with the results from Study 5, while using different suicidality and betrayal indices, would render the conclusions flawed, or at the very least, inconclusive. It is concluded here that betrayal may contribute to suicidal

ideation but it does not necessarily lead to suicidal action. Again, the act of suicide could possibly occur when a sense of betrayal is accompanied by other factors which morbidly influence the sense of self.

Notably, and in support of this study's conclusions about the association of specific emotions to suicidality, it has been acknowledged that individuals' responses to emotional upheaval vary, with complexity being added when diverse emotions concurrently challenge a sense of self-composure. In her report based on the *grounded theory* analyses of emotional pain, Bolger has described the potential emotional confusion when one is confronted with conflicting negative emotions:

The action tendencies associated with anger (to attack), fear (to withdraw or freeze), shame (to hide), and sadness (passive inward focusing, empathic self acceptance) compete with one another. To complicate matters further, helplessness and hopelessness compete with the action-oriented feelings of fear and anger, challenging the individual's sense of hope and self efficacy, by signalling that no action will restore, regain, or repair what is lost and broken. (Bolger, 1999, p. 358)

Thus various combinations of emotions have the potential to either fuel or cancel each other. Further, if Bolger's conclusion is correct, and sadness has the potential to inspire an empathic self-acceptance, theoretically, fragmentation of the self would not be likely to follow, and in turn could protect one from self-destructive actions. Thus, it is possible that this study's results, of negative association between sadness, anger, betrayal and suicidal ideas and action, are valid.

#### 9.4.4 Lure of death.

A sense of the 'lure of death' emerged in Study 5 as a strong associate of lifelong suicide attempts, but was found to be unrelated to current and recent suicidality. Conducting literature searches for this study, it was noted that "death lure" is the emotion least examined in prior research. Searches of the Scopus and PsycInfo databases returned no publications with the combined terms "death lure" and "suicide" as their key features. Other searches, related to suicide in general, revealed one relevant report of an association between lure of death and suicidal tendencies. This was authored by Cotton and Range (1996), who analysed adolescent perspectives on life and death in the context of their suicidality (both ideation and action). Contrary to results reported here for Study 5, they found a negative relationship between "attraction to death" and suicidality, and a positive association with "repulsion by life". In addition to this finding, Cotton and Range concluded that hopelessness and "repulsion by life" among adolescents, both being the strongest suicidality predictors in their study, could be counteracted with an empathic and less rejecting attitudes of the families or close relations, which in turn would bring a decrease in young people's suicidal intent.

The reliability of the result from Study 5 in respect to the association between past attempts and lure of death is therefore questionable. Notwithstanding, the statistically significant result in study 5, which was the strongest effect size relative to other results (Table 16), deserves attention and is further followed up in Chapter 10, section 10.2.2. This result could imply that, for some individuals, with similar psychological attributes to those recorded for this study's sample, death lure would be relevant to a lifelong propensity to suicidal attempts. However, whether this finding has wider generality will still require future testing.

#### 9.4.5 Anxiety, shame, and despair.

Anxiety, even though the most frequently endorsed emotion in this study's sample, did not reach statistical significance in the associations with suicidality. However, it was Kohut's proposition that anxiety is a common and natural human condition that comprises a universal pattern of a "psychic reaction" to threats to the self (Kohut, 1978, p. 410), which leads to a number of psychopathologies, including suicidal contemplation (the assertion confirmed in Study 4; theory described in Chapter 2, section 2.6.3). The lack of statistical significance for anxiety in Study 5 could reinforce the earlier proposition that anxiety needs to be viewed as one of the elements which collectively form vulnerability to suicide (as set out in Chapter 7, section 7.4.1), rather than a direct suicide risk factor. The discrepancy between anxiety being a statistically significant contributor to past suicidal attempts (Study 4), while not being statistically significantly associated with suicidality in Study 5 could be attributed to a methodological difference. In other words, the anxiety as objectively measured by DASS 21 (S. H. Lovibond & P. F. Lovibond, 1995; in Study 4) and the anxiety which respondents subjectively associated with psychache (PPAS; in Study 5) could be two distinct constructs. DASS 21 items refer to dryness of mouth, breathing difficulties, trembling, anticipating panic, heart rate increase, and feeling scared for no reason. Most of these sensations are physiological manifestations, indicative of what is clinically understood as anxiety. In the PPAS, the emotion of anxiety could be understood by respondents in lay terms, as a sense of general fearfulness or insecurity. If this was the case, then the clinical markers for anxiety, captured by DASS 21, could underpin suicidal vulnerability, while the subjective sense of anxiety, as perceived by sufferers of psychache, would not be associated with suicidal intentions or action. Again, this suggestion requires future verification.

Although it has also been suggested by Kohut that negative affects such as shame and despair lie at the root of fragmentation of the self (see Chapter 2, section 2.6.3), these two emotions did not return statistically significant results for the association of psychache-related emotions with suicidal tendencies. If Kohut's proposition is correct, this would reinforce the earlier finding (Study 2; Chapter 4) that psychache and fragmentation are not equivalent constructs and, although related, they evoke different kinds of negative inner experiences. In earlier studies, both empirical and qualitative, shame has been cited as an associate of suicidality or contributor to severity of suicidal ideation (e.g., Bryan, Morrow, Etienne, & Ray-Sannerud, 2013; Foster, 2003; Lester, 1997a; Maris, 1997). Interestingly, Lester (1998) found positive association between shame and current suicidal ideation for males ( $r = .35$ ; two-tailed  $p < .05$ ), but not for females ( $r = .10$ ), in a sample of undergraduate students. Lester offered no explanation of this finding. The lack of statistical significance of shame in Study 5 thus remains unresolved.

The role of despair in suicide was probably first discussed in the early philosophical dissertations of Kant who, however, provided no scientific evidence for this assertion. Despair, in empirical studies, is often equated with hopelessness or helplessness; or is proposed to relate to suicide via the association with hopelessness (Bürgy, 2008). Again, the results are not comparable; all that can be inferred is that, in this study's sample, the emotion of despair was not associated with any of the utilised markers for suicidality.

### 9.5 Summary of Clinical Implications from Study 5

A number of clinical directions can be inferred from the collation of prior research with this study's results (as delineated in Section 9.4). These, importantly, are theorised as a proposal for future testing.

First, it would be imperative to combine diverse suicidality markers, to include both past, recent, and current suicidality presentations, optimising the likelihood of detecting a current suicide risk.

Second, priority should be given to addressing the suicide vulnerability factors of self-hate, worthlessness, and a sense of attraction to death. An open discussion could be instigated about the individual's unique aetiologies and the impact of self-referential feelings and attraction to death. This, especially in males (given a stronger effect of self-hate in lifelong suicide attempts for males compared to females), could help to reveal possibly hidden cognitive 'blocks' or barriers that prevent access to or expression of self-referential feelings, or deter the person at risk from seeking help. The role of a clinician would thus be that of a facilitator of the client's own insight and self-compassion. This in turn could lead to growth and expression of an unreserved or unconstrained healthy self-love and self-respect, and to establishment of a commitment to self-care. Self-love, perhaps as an antidote to self-hate, could be fostered by exploring its benefits, and by demarcating it from a pathological narcissistic need to hide a sense of inferiority or evoke a sense of superiority over other people. Clients could be guided to discover that self-love does not require comparisons with others, but allows authentic appreciation of one's own being and experiencing the fullness of life. Further, by shifting the perception of the value of life and finding new life meanings, essentially inspired by empathic connections, likely, a sense of death-lure would gradually soften.

Additionally, suicide risk factors could be addressed. For example, hopelessness could be shifted by highlighting indications for hope, and presenting possible options and chances of improvement, recovery or success or, where possible, change in circumstances. Further, a sense of failure could be re-dressed, via adaptation and assimilation of current beliefs; for example by developing an understanding that 'failure' is a gain, because it presents opportunities to learn and widen one's perspectives.

Finally, a further investigation of the effects of combining emotions may prove fruitful. However, this would need to be conducted and interpreted with caution. That is, sadness, anger, and a sense of betrayal could be mobilised to motivate a person towards a restorative action, given that first a sense of self is stabilised via strengthening of self-awareness and self-esteem.

## **9.6 Study 5 Conclusion**

Results of Study 5 isolated the types of emotions pertinent to psychache and suicidal wish and action, and at the same time, have appeared to support the Kohutian perspective on the self-invested nature of self, as shaped by the extent of fulfilment of psychosocial needs of affiliation, acceptance, and respect. It is plausible that the emotions of self-hate and worthlessness (the self-referential feelings that underscore the sense of self-value and self-respect) would affect the sense of self in a more severe manner than the non-self-referential feelings of sadness, anger, or betrayal. Sadness, anger, and sense of betrayal are possibly affects which are relatively detached from the core of the self (do not define who the person is, but qualify the prevailing mood). The emotions of self-hate and worthlessness, on the other hand, are affects that stand in opposition to the natural narcissistic self-investment, the quality which allows one to feel

complete/cohesive and valued. One can be sad, angry, or disappointed and still retain a vital understanding, connection with, and appreciation of one's own sense of self and self-worth.

Agreeing with Bolger's viewpoint, and in support of Kohutian theory, it is presumed that, on the individual level, the relationship of these non-self-referential emotions (sadness, anger, betrayal) with suicide would likely depend on the overall state of one's own sense of self and self-cohesion; and thus on the capacity to process and counteract those negative, self-defeating clusters of affective states. Self-hate and worthlessness, on the other hand, would jeopardise one's very sense of self-cohesion and self-respect.

The discussion of the findings from Study 5, as linked to the notion of suicidal vulnerability, will be continued in Chapter 10, in the light of the earlier presented studies and theories pertinent to this thesis.

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## SECTION C: CUMULATIVE FINDINGS AND THEIR IMPLICATIONS— —THE ROLE OF SELF-EMPATHY

### Chapter 10

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#### Conclusions:

#### Suicide Vulnerability: Empirical Findings in the Light of Theoretical

#### Premises

*Without self-knowledge,*

*without understanding the working and functions of his machine,*

*man cannot be free, he cannot govern himself and he will always remain a slave,*

*and the plaything of the forces acting upon him.*

- George Ivanovich Gurdjieff; *In Search of the Miraculous* (Ouspensky, 1977, p. 111)

### 10.1 Summary: Thesis' Aim, Research Questions, and Key Findings

#### 10.1.1 Thesis' aim and research questions revisited.

The importance of the self and its role in suicidality has been guided by propositions from leading suicidology experts that regard suicide as a distinctively individual event, which can only be understood phenomenologically, that is, when studied as “a phenomenon centered in the individual” (Pompili, 2010, p. 242; see also Chapter 1, section 1.3). The risk factors for suicide-related behaviours have been proposed to be largely universal across cultures or, at least, across developed countries (Phillips et al., 2002; Plener, Libal, Keller, Fegert, & Muehlenkamp, 2009; Vijayakumar & Rajkumar,

1999). This view, however, has been opposed by Bhugra and Mastrogianni (2004), who noted the presence of cultural differences in both the suicide risk and suicide protective factors in different ethnic groups within the same societies. A similar view is expressed by Bertolote et al. (2005) who suggested that personal understandings of suicidality and suicide processes are culture-bound, with suicide-related behaviours contingent on cultural settings. For example, that certain human societies, such as the Pirahã people (Chapter 1, section 1.1.4), rarely or ever report cases of suicide in their culture.

Apart from differences in suicide risk factors, different countries have different suicide rates and patterns, with the highest suicide rates documented for countries in the Asian region (Chapter 1, section 1.1.5). In China, for example, high suicide rates are especially evident for young females in rural areas (Phillips, Liu, & Zhang, 1999), and are also marked by a comparatively high incidence of youth suicide attempts, which may reflect increasingly strong societal expectations for achievement (Barber, 2001) and where there are opportunities for young people, in particular, to make upward comparisons with others who are perceived as being more successful. The reasons behind these statistics are not clear (Phillips et al., 2002), although it is likely that cultural characteristics, at least partially, influence the observed suicide trends (Phillips et al., 1999).

Culturally-based vulnerability to suicidality has been discussed by M. J. Chandler, Lalonde, Sokol, and Hallett (2003). In resonance with the Kohutian view, Chandler et al. proposed that “suicide, [...], can only make interpretive sense if we first situate such self-destructive acts in their proper developmental context” (M. J. Chandler et al., 2003, p. 3). Further, Chandler et al. suggested that suicide-vulnerable individuals experience temporal discontinuity in the sense of self. For Chandler et al., self-coherence is fundamental to

mental health, and is dependent on preservation of cultural identity across time and generations. Moreover, the need for inclusion of cultural factors into an explanation for suicide, in addition to neurobiological and psychological factors, has been also indicated, for example, by Joiner Jr, Brown, and Wingate (2005), and Mishara (2006; Chapter 1, section 1.3).

Certainly, culture and development of the self are not independent of each other; cultural values underpin the formation of the self, because the self emerges from the quality of interpersonal relations in a specific social environment (Kohut, Chapter 2, section 2.6.2). The validity of the findings in respect to the Pirahã people's invulnerability to suicide is unknown and further empirical research would be required to draw any definitive conclusions. Nonetheless, such examples constitute a valid theoretical starting point for investigation of the relationship between self and suicidality. From Everett and Keller's reports (Chapter 1, section 1.1.4), it appears that the ways in which children are raised in the developed and developing countries may contrast with ways of upbringing employed with Pirahã's children. In the Pirahã's child-rearing tradition, the central mother-child relationship is extended to many other caregivers, with all involved community members providing the child with a sense of fulfilling and genuine acceptance, respect, and a significant amount of freedom for the child to explore his/her own potential. This type of upbringing is different to conventions in some other cultures where expectations for children may be either over-protective or excessively demanding, with, at times, controlling or demeaning attitudes of adults towards younger generations. In some instances, children may be neglected, disrespected, or abused. If future research confirms the Pirahã's reported child-rearing practices and that suicidal tendencies are absent among these people, it would be reasonable to suppose that the differences in

child rearing between different cultures and Pirahã's people may hold the key to a better understanding of what determines suicidal vulnerability.

These considerations were, however, beyond the scope of this thesis; **the aim of this thesis was to explore suicidal proclivities in the light of a sense of selfhood**, i.e., with the focus on the individual's inner psychological composition. The focus here has been a phenomenological study, utilising empirical methodologies (which are known to have broader generalisability than case or qualitative studies), to examine the inner sense of selfhood and accompanying detrimental affective states (methodology details have been included in Chapter 3).

Considering the emphasis that "research must be embedded in theory. [...], [yet], regrettably, much of the research on suicide is atheoretical" (Leenaars, 2004, p. 21), two complementary perspectives, necessarily related to the sense of self, were adopted: self psychology premises of the fragmented self, endorsed by Kohut; and the notion of a negative affect, i.e., psychache, advocated by Shneidman (both described in Chapter 2).

Research questions reflecting the thesis' aim were presented in the Preface to this thesis and pertained to the following matters: **1) psychological factors that underlie suicide vulnerability**; and **2) research and clinical implications of these emerged suicide vulnerability factors**.

The thesis' findings are summarised first in the section below. The research questions are addressed next, by integrating the relevant thesis' findings with theoretical propositions of Shneidman and Kohut, and empirical evidence provided by other influential research.

### 10.1.2 Thesis' key findings and contribution to suicidology research.

The following points summarise the main findings from the five studies in this thesis, with a brief reiteration of their contribution to current suicidology knowledge:

- 1) The measure of self-cohesion, the *Adelaide Self-cohesion Scale* (ASCS; Chamberlain, 2010), operationalised in line with the premises of Kohut's self psychology, demonstrated stable structural properties; its three-factorial structure (self-concept/self-esteem, fulfilment of childhood needs, and lifetime patterns of coping behaviours) was confirmed in Study 1 with a convenience sample of university students, university staff, and members of the broader community. This result supported the ASCS's validity to assess a sense of self-cohesion across different populations. A correlation between ASCS and suicidality scores was also confirmed in Studies 3 and 4, both in respect to recent ideation/behaviours and a history of suicide attempts. The utility of this measure has been discussed in Chapter 6, section 6.4, and improvements will be proposed in the next section (10.3.1).
- 2) Study 2 demonstrated that two psychache measures most commonly used in research, OMMP and PS, are approximately equivalent for the assessment of psychache (Study 2). This finding is of interest to both future research and in clinical settings, allowing interchangeable use of these measures and joint consideration of results from diverse earlier and current studies involving these two measures (Chapter 5, section 5.5).
- 3) The constructs of self-cohesion, self-esteem, psychache, depression, anxiety, and stress (as measured via ASCS, BSE, OMMP/PS, and DASS 21 respectively) have shown to be distinct but nonetheless highly inter-related (Study 2, Chapter 5). Thus, the question of the theoretical potential equivalence of the constructs of

fragmentation and psychache (raised in Chapter 2, section 2.8) has been resolved; two factors are separate constructs, although associated with each other. Further, the emergence in Study 2 of a general factor of psychological frailty suggests that further research into the nature of psychological distress is warranted (Chapter 5, section 5.6).

- 4) In a set of suicidality predictors, comprising measures of self-cohesion, self-esteem, psychache, depression, anxiety, and stress, the strongest contributor to recent suicidal ideation and action was depression, followed by diminished self-esteem (a central composite of self-cohesion) and psychache (Study 3). Depression and psychache have earlier been implicated in risk of suicide but the role of self-esteem has been unclear, especially when considering suicidality models, as the one proposed by Mann et al., which do not include self-esteem in the suicide process equation (Chapter 1, section 1.1.6, Figure 2).
- 5) In the same set of suicidality predictors, the strongest contributor to a history of suicide attempts was anxiety, followed by unmet childhood relational needs (a composite of self-cohesion; Study 4). This finding corresponds to Kohut's insights about the prevalence of anxiety in psychopathology at large and, specifically, disintegration anxiety in suicidality; and with Shneidman's emphasis on thwarted psychological needs as a backdrop to suicidality. A novel proposal made here, to complement current understandings on suicidality is that these two factors contribute to suicide lifelong vulnerability, more so than to suicide risk (Chapter 8, section 8.2).
- 6) Results from Study 5 have indicated that feelings of self-hate and worthlessness are the emotions that most frequently underscore the experience of intense psychache,

and both are associated with recent and current suicidal ideation, and a history of suicide attempts. Further, 'lure of death' was shown to be associated with prior suicide attempts only, not with ideation. The emotions of sadness, betrayal, and anger were negatively associated with recent and/or current ideation indices; and hopelessness was positively associated with recent and current ideation only. A sense of failure was positively associated with current suicidal contemplation only. A thorough review of previous research related to negative affect in suicidality, conducted as part of Study 5, has shown that only a small number of studies have empirically examined similar sets of negative emotions. The findings from Study 5 thus contribute additional information about the specificity of negative affect in suicidal proclivities. Moreover, they deliver new insights, drawn from empirical examination, to complement a largely qualitative research on the paradoxical role of the emotions of sadness, betrayal, and anger in suicidal wish and behaviour (Chapter 9, section 9.4.3).

The psychometric properties, validity, and applicability of the measures used in this research have been progressively clarified throughout the thesis (Chapters 5 and 6, sections 5.5.1 (predictor measures) and 6.4 (STB)), and thus will not be reiterated here.

## **10.2 Research Question 1 Conclusion: Lifelong Suicide Vulnerability Factors**

Although, a majority of located publications have supported the presence of anxiety and childhood adversities, as well as negative affect towards the self in suicidal tendencies, these factors have mostly been assigned as suicide risk rather than vulnerability factors (examples provided in Chapter 7, section 7.4.1). It is important, however, that a distinction be drawn between suicide vulnerability and suicide risk in

order to advance research and clinical approaches to treating suicidality (see the discussion re differentiating between the two notions in Chapter 8, section 8.1). In this thesis suicide vulnerability factors have been inferred from the context of a history of suicide attempts (details in Chapter 9, section 9.4), an approach also adopted by other researchers, for example, Modai, Kuperman, Goldberg, Goldish, and Mendel (2004). Nonetheless, this conjecture is proposed here with caution, because the cause and effects pathways have not been examined in this thesis; also, it has been noted that close to 60% of suicides, at least in psychiatric populations, occur on the first suicide attempt (Modai et al., 2004). While factors relating to past attempts can be obtained from those who have attempted suicide, the factors underscoring the very first, and fatal, attempt are unclear, because these can only be inferred by retrospective examination of second-person reports.

A novel perspective on the suicide process, as emerged from results of Studies 3 and 4 combined, has been presented in Chapter 8, section 8.2, and subsequently supplemented with findings from Study 5 (Chapter 9, section 9.6). To summarize, it has been proposed that anxiety and unmet childhood needs, accompanied by a sense of lure of death, and self-referential negative emotions (self-hate and worthlessness), are implicated as relatively small, nonetheless, valid components of suicide vulnerability, along with other factors that have not been examined in this thesis (as earlier indicated in Chapter 7, section 7.3.2). The sub-section below highlights the main points arising from merging this proposal with the theories of Kohut and Shneidman, and with prior research.

### **10.2.1 Merging the findings on suicide vulnerability factors with Kohut and Shneidman's perspectives, and empirical research on anxiety and childhood needs.**

The measures of self-cohesion and psychache used in this thesis have been constructed in direct line with the theories of Kohut and Shneidman. Nonetheless, it needs to be taken into account that any quantitative measure is subject to either simplification or generalisation of theory, so that the measure will not always optimally capture the full scope of the underlying theory. This was the case here and, as will be seen in the section below, improvements to the measure of self-cohesion relied on in this project will be suggested. Before doing so, however, a detailed reconsideration of these theories may assist verification of the conclusions presented here.

The perspectives of both Kohut and Shneidman that anxiety, childhood needs, and negative emotions play in influencing suicidal ideation and behaviour have been comprehensively outlined in Chapter 2, and these generally match the findings presented here. A case has been made for how the identified contributors to suicidal vulnerability fit into a suicide process model, beginning with thwarted childhood needs as a foundation for the emergence of anxiety in Chapter 8, section 8.2. Anxiety, when acted on by other psychological disturbance, including negative self-referential feelings, evokes a desire and action towards self-inflicted death. Further, although Shneidman did not isolate the role of anxiety as a suicide vulnerability factor, he asserted that anxiety may be the negative emotion that underpins the emergence of psychache (Chapter 2, section 2.1). Study 4 results support this inference, however, this would require further investigation, employing different statistical and qualitative procedures (a suggestion followed up in section 10.5 of this chapter).

Kohut, on the other hand, afforded anxiety considerable attention, implicating disintegration anxiety and anxiety-related diminishment in self-esteem in suicidality (Chapter 2, sections 2.6.3 and 2.8). From the account of Kohut's theory, it is important to emphasise here some of his main contentions about anxiety. Specifically, Kohut held that empathic failures in fulfilling the psychological needs of an emerging sense of self evoke anxiety, accompanied by the loss of a sense of self-worth (as identified in results from Studies 3 and 5), leading to an impending sense of fragmentation of the self (Kohut, 1972). To attempt suicide, necessarily, energy and motivation are needed (Lester, 1997b), and anxiety provides both. However, with anxiety's paradoxical effects on the self (Chapter 7, section 7.4.1), anxiety may fail to generate a desired outcome or resolution of a challenging state/situation, and a sense of "unbearable emptiness and deadness" may overcome the self (Kohut, 1972, pp. 376-377), priming intense psychological suffering (Kohut, 1972; 1981/2010. Note that this suffering corresponds to Shneidman's notion of psychache, identified as a suicide risk factor in Study 3). This suffering motivates a suicidal wish, possibly as an escape from the perceivably unresolvable and unendurable state, and aimed at achieving self-cohesion; especially when the sufferer cannot envisage an alternative solution (Kohut, 1972; Maltzberger, 2004; Shneidman, 1993). Kelly (1961) compared this experience of anxiety to psychological death, with suicide attempts having a function of a "desperate bid for some kind, any kind, of certainty" (p. 260), to evade a sense of ensuing inner deadness. It could thus be hypothesised that depressive symptoms, defined as a sense of deadness or emptiness (as these typically occur in depression; DSM-5, 2013), follow the onset of anxiety. Empirical support for this conjecture comes from the findings of Lamers et al. (2011), who reported that, in childhood trauma victims anxiety most often preceded the

onset of depression (in 57% of the comorbid cases anxiety preceded depression, while the reverse applied to only 18% of the comorbid cases). This result could possibly explain the finding of depression as a suicide risk factor, yet, not a vulnerability factor (Studies 3 and 4). Similarly, in line with this argument, diminished self-esteem has emerged as a contributor to suicide risk, rather than a vulnerability factor (Study 3), possibly because, theoretically, it stems from anxiety.

The foregoing suggests that anxiety emerges in early years of life, when the first failures in the parental empathic connections occur (these empathic failures find reflection in the unmet childhood needs scores, underlying suicide vulnerability; Study 4). However, the extent of “readiness” to succumb to this anxiety is not a universal human feature (Kohut, 1978, p. 411). Some individuals possess appropriate and robust resources to address anxiety constructively (Kohut, 1971; Lichtenberg & Kindler, 1994), whereas others, those unable to counteract it, face a painful reality of a subsequent disintegration of the self, i.e. psychological death. This theory suggests that the presence of anxiety only becomes problematic when it is left unaddressed and acted upon by other deleterious forces that follow this condition; for example, excessive psychache, lows of depression, and diminishment in self-esteem (Study 3). This corresponds to the suggestion of anxiety as a suicide vulnerability factor, rather than a risk factor, and also aligns with Shneidman’s proposal of the cubic model of suicide), where the levels of perturbation, press, and psychache (thus anxiety) need to intersect at the highest point to activate a suicidal action (Chapter 2, section 2.2, Figure 5).

It has been demonstrated in earlier research that occurrence of anxiety and unfulfilled childhood needs are intertwined (see Chapter 2, section 2.7.2). Both Kohut and Shneidman, emphasised the role of the fulfilment of psychological childhood needs,

especially those for affiliation, nurturance, and love, in the development of a functioning and psychopathology-free self (Chapter 2, section 2.7.1; Figure 6). Given to date extensive research within the paradigm of attachment theory on deleterious effects of impoverished childhood experiences (outlined in Chapter 7, section 7.4.1), the overall effects of unmet childhood needs on lifelong anxiety and their combined effect on suicidality (as emerged in Study 4) are no longer questionable. Nonetheless, the specifics of the mechanism of this deleterious effect are still unclear and are being explored in diverse branches of research, including recently expanding neurobiological research (see Courtet et al., 2015; Schrepf et al., 2014; Chapter 1, section 1.2.5). In summary, the results of Study 4 have aligned with earlier research and with theoretical postulates of both self psychology and Bowlby's attachment theory, and are reinforced by neurocognitive and neurobiological findings (Chapter 1, section 1.2.5).

The effects of the emotions of self-hate and worthlessness (as emerged in Study 5) have earlier been implicated in suicidal tendencies in diverse research (both qualitative and quantitative, as described in Chapters 1, 8, and 9, sections 1.2.8, 8.3, and 9.4.1 respectively). Notably, it can be added here that, although Kohut only broadly presented his view on self-hate or worthlessness, similarly to Sofair's perspective, he regarded worthlessness as a sense of humiliation ensuing from a perceived failure to achieve one's own ideals, and a factor contributing to suicidality (Chapter 2, section 2.8; Kohut, 1977). Further, for Kohut, self-harm equated with a removal of a despised part of self; thus, if the totality of the selfhood is hated, an annihilation of the whole personhood would be likely (for Kohut, this was especially related to psychotic suicides; Chapters 2 and 9, sections 2.8 and 9.4.1). Generally, from the perspectives of most psychological research, from early psychoanalytic observations to contemporary cognitive sciences, self-defeating

and demoralising negative attitudes towards one's own self are often present in suicidal individuals (see Chapter 1; for example, Orbach (1997) in section 1.1.6, Goldblatt et al. (2014) and Woodmansey (1966) in section 1.2.2; Leenaars (2004) in section 1.2.4; and Linehan et al. (2012) in section 1.2.8). Thus, to associate these negative self-referential emotions with lifelong suicidal tendencies appears logical and valid.

### **10.2.2 Death lure and suicidality.**

The result of Study 5, which implicated a sense of lure of death in suicide vulnerability, is a relatively novel finding and, as foreshadowed in Chapter 9 (sections 9.3.3 and 9.4.4), warrants additional consideration. Lure, in common understanding, promises some kind of desirable outcome—either psychological satisfaction or pleasure, or physical/material benefit. For those who have attempted suicide, death appears inviting, probably by the promise of cessation of pain. Study 5's methodology, however, does not permit determining if this fascination with death existed before, or has emerged after, the self-destructive action. If the genesis of the emotion was prior to the first attempt, one could assert that death lure contributed to suicidal vulnerability. However, if the emotion emerged following an attempt and inspired consecutive attempts, this would be indicative of some other mechanisms at play, e.g., the psychological content of the experience of the suicide attempt. Nonetheless, the most intriguing possibility is that those who endorsed this emotion have already breached the psychological barriers that prevent self-killing by developing a "capacity for suicide" (see Joiner (2005); Chapter 1, section 1.2.8). They have moved closer to death and, as if unshaken by their own growing potential for self-destruction, feel drawn to it. Perhaps this could be explained by a belief that some hold in continuation of life after death; a shift from one form of existence to another (Silverberg, 1952), as in reincarnation or life in an ethereal dimension. In other

words, motivations could vary, from a conviction that the lure is for self-preservation rather than death, because suicide removes pain while the self is believed to continue its existence; to, for some, a magical solution or ascension to glory (Hendin, 1961; Maltzberger, 1997, 2004; Silverberg, 1952). Another possibility, following Adler's conviction that suicide is a means for restoring lost self-esteem (Ansbacher, 1969; Chapter 1, section 1.2.2), is that death lure is an innate response of the self to counteract fragmentation and recuperate a gratifying sense of self-cohesion (the view supported by Goldblatt & Maltzberger, 2010; Chapter 1, section 1.2.2).

Another perspective on the lure of death, fittingly corresponding to this contention, and denoting this affect as an innate vulnerability to suicide, was introduced by Nicholas Humphrey. Humphrey (2017) argued that individuals are biologically predisposed to suicide, with a death lure being an inherent genetically-governed mechanism, which is activated in response to unbearably intense psychache (research in genetic factors in suicide is a relatively new branch of science, although it is already providing evidence of genetic correlates with suicidality, as linked to childhood adverse events; Chapter 1, section 1.2.5). Suicide takes on the means of self-euthanasia in the moment of the most intense suffering, protecting the sense of self from a total collapse by giving it a sense of self-direction, power over and relief from agonising pain—a proposition which closely matches postulates of Shneidman (Chapter 2, section 2.2 and the thesis' proposal outlined in Chapter 8, section 8.2).

A background to the lure of death has not been tested in this thesis but this area could hold important implications for suicide intervention. This possibility is further considered in a proposed subsequent study outlined in Chapter 10, section 10.5.

A number of research and clinical implications arise from the findings discussed here and these are considered next, followed by acknowledgement of limitations in the program of research reported here and proposed improvements that should be considered when planning future research.

### **10.3 Research Question 2: Contribution to Suicidology Knowledge: Implications**

Conclusions discussed here are acknowledged as inferences that are subject to future confirmation by further investigations, as proposed in this chapter, section 10. 5. Implications for research and clinical practice are discussed separately in the sections below.

#### **10.3.1 Implications for research: Potential suicide vulnerability factors.**

Although the theories endorsed by Shneidman and Kohut have provided the centrepiece of this thesis, a number of commonalities with other psychological approaches have been noted in respect to the role of anxiety, childhood needs, and negative self-referential emotions in suicidality (as aforesaid and further outlined below, in this section). However, as is the case of the aforementioned empirical findings, these factors have not always been theorised as suicide vulnerability factors. Several examples of how the findings of this thesis merge with background theory and with other theories are presented below.

The presence of unmet childhood relational needs implies impoverishment in the social sphere of a person's life. For Durkheim, the nature of a social milieu was the key to suicidality (Chapter 1, section 1.2.1); the lack of empathic societal approval and unity detrimentally affects an individual's sense of self. Kohut took this notion even further, comparing the structure of the self to the structure of society (Kohut, 1991). Thus,

according to this perspective, unmet childhood needs due to poor parental empathy are paralleled with the unfulfilled sense of self of communities, due to empathic ruptures within the social system, and at both levels this was suggested to lead to suicidality.

The situation appears the same from the perspective of classical and operant conditioning approaches to development of a personhood, which suggest that social and cultural values, together with a sense of communal cohesion, determine the extent of the psychological (mal)functioning of individuals, including suicidal tendencies (Chapter 1, section 1.2.3).

Also, the points of convergence of Kohut's theory with Bowlby's attachment theory have been indicated throughout the thesis (e.g., in Chapters 1 and 2, sections 1.3 and 2.6.2, and the above section, 10.2), pointing to the role of childhood experiences in the development of unhealthy relations and consequent insecure attachments and psychopathology. According to Kohut, the self seeks to belong, to feel appreciated, and to cherish its own existence via the family/society nurturing and affirming connections (Chapter 2, section 2.6.2). Once these interpersonal investments are lost or fractured, disappointment, confusion or rage, and feelings of self-hatred ensue (Chapter 2, sections 2.6.3 and 2.8). This account, to a degree, resonates with the early traditional premises of the Freudian school of psychodynamics (e.g., Zilboorg, 1937; Chapter 1, section 1.2.2). However, these inferences are no longer grounded in theory about urges of death-drive fulfilment or a subconscious wish to kill or be killed (Menninger, 1938a, 1938b). Instead, the theoretical background is provided by an analysis of inherent human needs for affiliation and self-realisation, as advocated by Kohut and Shneidman. Further, a psychodynamic account proposes that the self, faced with a prospect of lifelong anxious and psychologically impoverished existence, becomes ambivalent about the wish to live

or die, the notion endorsed by both Shneidman (1986; 1987a; Chapters 1 and 2, sections 1.1.1 and 2.2) and Stengel (1962; Chapter 1, section 1.2.2). Further, according to Horney, this outlook could be influenced by personal beliefs about the nature of death. Horney observed that, in a state of a perceived worthless existence, the self can become trapped in the illusion of resolution by death; after all, death provides relief and, as some may understand, it is a step towards a gratifying self-actualisation, which opens the door to a blissful eternity (Horney, 1950; Chapter 1, section 1.2.2). This proposition of Horney aligns with Study 5's finding that 'death lure' is implicated in lifelong suicidal history.

Overall, it appears that the earlier, traditional psychoanalytic approach to suicide provides leads to an understanding of the suicidal process, which might be extended via empirical verification. This suggestion has been advanced by contemporary suicidologists (such as Shneidman; Chapter 2, section 2.3), with calls for a return to analyses of intrapsychic processes, in order to understand better suicidal dynamics, because these are internal to the individual and located within personality structures, and relate to psychological wellbeing more so than external to the self suicide risk factors, such as socio-economic stressors.

Additional support for the inferences drawn from the results of this thesis comes from cognitive-behavioural approaches to suicide, which implicate emotional negativity, especially in reference to the self, in suicidality (Leenaars, 2004; Chapter 1, section 1.2.4). Further support for the role of personhood in suicide vulnerability comes from Wenzel and Beck (2008), whose model incorporates personality qualities, including, as presumed here, those characteristics acquired in childhood (Chapter 1, section 1.2.4, Figure 3).

Bio-neurological approaches, implicating HPA axis, serotonin, cortisol, and oxytocin and other hormones in suicidality (Chapter 1, section 1.2.5), either directly or indirectly,

implicate the presence of elevated anxiety in suicide-prone individuals. One line of endocrinological enquiry stands out in the light of the findings of the unmet childhood needs and anxiety (Study 4); the oxytocin studies. It could be plausible that the role of oxytocin could be especially relevant to suicide vulnerability, especially that it has been suggested that oxytocin plays a role in forming attachments, seeking affiliation, decoding social cues, and stress response patterns (Bartz & Hollander, 2006; Goldberg, 2009; Insel, 1997; Young & Wang, 2004). Hopefully, the effects of this bonding- and life-promoting hormone in terms of strengthened suicide invulnerability will continue to be examined by endocrinology experts. Also, the continued research into genetic correlates of anxiety and suicidality will further inform both medical and psychology practice (see Chapter 1, section 1.2.5).

From this brief account it can be seen that commonalities and associations from within diverse scientific perspectives suggest that an amalgamation of approaches to suicidality intervention and prevention would be most beneficial, combining their knowledge and insights in the shared aim of lowering suicide vulnerability.

Moving beyond theory, and into a practical application of research efforts, it is suggested here that development of suicidality assessment measures may also, to a degree, be informed by the findings of this thesis. Specifically, it has been concluded that, to strengthen the capacity of the measure of self-cohesion (the ASCS) to detect suicidal vulnerability, it would be beneficial to supplement this scale with an index that estimates lifelong anxiety patterns. Also, it could prove beneficial to include an index of the status of current relationships, i.e., an assessment of the extent of closeness to significant others and the perceived availability of and support from those relations. These developments would be consistent with both Kohut and Shneidman's insights about the continuing role

of interpersonal relationships, as reaching far beyond childhood; as well as in accordance with their emphasis on ongoing fulfilment of needs (Shneidman et al., 1961). This could be best achieved in a manner that informs about the degree of transference of insecurities from childhood into adult relationships, a level of affiliation with or estrangement from 'idealised' (respected by the self) others, and a sense of satisfaction drawn from current relationships.

It is appropriate to highlight that, although it has been proposed in earlier suicidology research that past suicide attempts are the strongest predictors of future suicide attempts (see the introductory section in Chapter 7), it would be neglectful to ignore the ideation of suicide and focus only on a suicide history. As noted above (section 10.2), it has been found that a prevailing number of suicides are first attempts in which highly lethal methods are utilised (Bostwick, Pabbati, Geske, & McKean, 2016; Isometsä & Lönnqvist, 1998). Suicide statistics in the U.S. support these findings, showing that a majority who engage in suicidal behaviour die in their first suicide attempt (Harvard University School of Public Health, 2017). Thus, those first lethal attempts leave no history of suicide attempts that could be taken into consideration in research. It follows then that suicidal thoughts need to be considered as potential indicators of ensuing suicidal action, especially when accompanied by a diminished sense of self, manifested in a range of negative emotions, including self-hate, worthlessness, or an attraction to death or self-killing. In conclusion, the indices of suicidal ideation are not equivalent to lifetime suicide history and action (Chapter 9, sections 9.3.2 and 9.4), thus, would likely be most useful when used jointly in prediction of potential to suicide.

Moreover, although indirectly pertinent to suicide vulnerability factors (as contained in the research question), in light of Study 2 findings in respect to psychological

frailty, a new measure of psychological distress could be designed, including items which necessarily tap into the aspects of the inner workings of the self, as opposed to a broad focus on life events or other external stressors (Chapter 5, section 5.5.2). Such a measure could possibly have a dual function, i.e., signposting both risk of distress and suicidal proclivities.

### **10.3.2 Implications for clinical practice: Approaches to treatment of potential suicide vulnerability factors.**

It has been concluded in the preceding section (10.1) that results reported here are consistent with theories of Kohut and Shneidman. Specifically, it has been concluded that anxiety arising from thwarted childhood needs, accompanied by self-directed negative feelings of hatred and worthlessness, and a sense of lure of death, contribute to suicidal vulnerability (Studies 4 and 5). However, these factors are not deemed sufficient to evoke a suicidal action (Chapter 8, section 8.2); it is likely that, when other inner perturbations, such as depression, diminished self-esteem, and intensified psychache and hopelessness/feeling of inability of escape an unbearable state/situation further torment the disturbed self, motivation for continued existence decreases, as shown in the higher scores on the outcome of recent suicidal ideation and action (Studies 3 and 5).

Although suicidality vulnerability and risk factors that have been discussed here form only a small part of the suicidality factors spectrum (other complementing factors are still to be determined to account more fully for suicidality), current findings are sufficient to suggest a method of clinical intervention. It has been previously stated (Chapter 8, section 8.1) that addressing suicidality would be most effective by targeting amenable suicidality factors, i.e., those vulnerability factors known from past research to

respond to intervention. Thus addressing anxiety and other corollaries of unmet childhood psychological needs would appear justifiable.

A number of psychotherapeutic approaches have already been designed to assist those with anxiety, negative self-image, and suffering repercussions of childhood maltreatment. These maladies are being addressed, for example, via behavioural strategies such as exposure techniques aimed at desensitisation or habituation to feared stimuli, cognitive techniques, restructuring unhelpful beliefs, schema-based techniques, as well as relaxation and/or meditation. A potentially promising approach, the Acceptance and Commitment Therapy (ACT), promotes 'de-contextualising' of the self. The techniques of ACT may serve to assist in a discovery of the self, unburdened from the troubling context, and inherently genuinely at ease with itself and life. However, the reach of those interventions may be limited, because, as in the case of de-sensitisation, it may backfire and re-traumatise the individual or it may work only under specific conditions. Moreover, utilising cognitive strategies when cognition is impaired may be ineffective, because anxiety limits access to wider perspectives that otherwise would naturally emerge (e.g., attentional bias and/or tunnelling of vision; Eysenck, Derakshan, Santos, & Calvo, 2007; C. MacLeod, Mathews, & Tata, 1986; Shneidman, 2005a). Anxiety also impairs memory (Coles & Heimberg, 2002). Further, as in ACT, attempting to extract the self from the context, the same context which an anxious person perceives to be of prime importance and urgency, is not always achievable, because of the emotional investment that the individual has made in the problematic circumstances.

Possibly, as a short-term remedy, re-dressing, dampening, or camouflaging the symptoms of anxiety using those techniques may be effective. However, past childhood experiences, cannot be changed or replaced. No matter how many healthier

interpretations and scripts we devise to mitigate past lived experiences, unpleasant memories and associated neural pathways do not disappear; they still exist, parallel to the newly formed cognitions. To date research shows that such recollections might become gradually weaker or re-defined in the presence of the new interpretations, but they cannot be erased at will (Hall, 2013).

Importantly, treatment of any infirmity needs to entail a whole condition, rather than its isolated symptoms or preconditions (Pompili, 2010). Suicidality contributors, as emerged in this thesis, encompass an array of vulnerability and risk factors that jointly form an image of a fractured self (Chapter 2, section 2.6.3; Chapter 8, section 8.2), or “a storm in the *mind*” (Shneidman, 2005a, p. 8). This self endures consequences of unmet psychological needs and experiences him/herself as unfulfilled; is prone to anxiety and self-defeating self-hatred, lacking in self-worth; this self is predisposed to depression, unable to revive hope for the future, and likely attracted to death, in desperate bid to stop debilitating psychache.

The treatment of the constellation of these presentations needs to involve the totality of this perturbed self. This, as advocated by both Shneidman and Kohut (Chapter 2, sections 2.3 and 2.6.4 respectively), could be achieved by deployment of empathy, “a civilising force, [..., *that*] counteracts our tendency toward seeing meaninglessness and feeling despair, thus becoming a healing power” (Randall, 1986, pp. 139-140); a process by which psychache can be soothed, a sense of self-worth and self-cohesion restored, and hope transferred from an empathic clinician to a suffering client (Shneidman, 2004, 2005a).

Empirically, the authenticity of empathy has been validated in neurobiological studies, and understood in terms of an interplay between the minds of two individuals

(Gallese, 2003; Iacoboni & Dapretto, 2006; Rizzolatti & Craighero, 2004; Schulte-Rüther, Markowitsch, Fink, & Piefke, 2007; Shamay-Tsoory, Aharon-Peretz, & Perry, 2009). Many psychotherapy approaches, derived from within diverse divisions of the psychodynamic school (self, relational, and humanistic psychologies), have been utilising empathy in both individual and family therapies (Snyder, 1992). Elaboration on the history of the notion of empathy and its uses in therapy is beyond the scope of this thesis but can be found in Rachman (1988), Warner (1997), Kahn and Rachman (2000), Jordan (2001), Gerdes, Segal, and Lietz (2010), and many more publications. In Kohut's understanding, empathy is both the nourishment for the self, necessary for a healthy development, as well as one of the qualities of transformed narcissistic needs, next to creativity, humour, acceptance of impermanence, and wisdom (Chapter 2, section 2.6.2). The most recognised empathy advocate, Carl Rogers, emphasised the value of empathic connections above all other therapeutic methods (C. R. Rogers, 1951b, 1975, 1980). Summarising briefly the implications of empathy, it has been shown in research that empathy is positively associated with secure attachments (Mikulincer et al., 2001) and promotes psychological healing, as demonstrated in "increased self-acceptance, increased self-congruence and self-harmony, lessened self-criticism, lessened shame, heightened self-validation, changes in how one represents one's needs and one's self in relation to others, and the development of a more functional self-concept" (Bohart & Greenberg, 1997, p. 441). On individual, communal, and societal levels, it has been recognised that, across cultures, human empathic connections have the power to alleviate suicidal wish or prevent suicidal action (Mishara, 2006). This has been especially evident in the therapeutic work of Jobs and his colleagues, who have deployed empathy in their highly effective

phenomenological approach to clients in suicidal crisis (see Jobes (2000, 2012) and Jobes and Drozd (2004); the Collaborative Assessment and Management of Suicidality (CAMS)).

The mechanisms by which empathy induces positive change have not been specified or, to the knowledge of this thesis' author, empirically studied. It has been suggested that one of the crucial effects of empathy lies in its internalisation, which likely leads to a development of a capacity for *self-empathy* (Barrett-Lennard, 1997; Bohart & Greenberg, 1997; Jordan, 2001; Riker, 2012b; C. R. Rogers, 1951c, 1964, 1975; Sherman, 2014). An insight that occurred to the author of this thesis is that perhaps it is self-empathy which could be added to the already known suicide vulnerability or risk factors.

Self-empathy, although something of a tautology because empathy signifies a capacity to sense mental states of another (Siegel, 2012), is the force that empowers the self through *unconditional positive regard* (C. R. Rogers, 1957a). Self-empathy, as espoused in this thesis, is a total recognition, allowance, and understanding of the inner workings of the selfhood. This self-knowledge necessarily needs to be combined with an ability to relate to oneself in an affirmative manner (Kohut; Chapter 2, section 2.6.4). It is, as Sherman phrased, "a compassionate form of keeping self-vigil" (Sherman, 2014, p. 231), an ongoing objective and amicable self-insight which promotes a constructive responding to one's own inner states, in a self-preserving fashion. Self-empathy is seen as a process of "inner communication", which emerges from "a deeper level of being" (Barrett-Lennard, 1997, p. 109). This kind of communication is impartial, that is, it allows one "to be simultaneously conscious of feelings and detached from them" (Snyder, 1994, p. 97). It is different from self-acceptance "for it does not necessarily approve things as they are; rather, it is a readiness to recognize, a capacity to discern one's own feeling states sensitively and to care about them" (Schafer, 1964, p. 294).

The key to experiencing self-empathy is an inward attention; an objective self-insight, i.e., *introspection* (Kohut, 1959, 1977), in which the *observing self* provides an empathic nourishment to the *observed self*, appreciating the oneness of these two aspects of the self and a peaceful psychological ambiance of this introspection experience. Following Kohutian line of thought, a subjectivity of the self thus becomes one's own self-object. Barrett-Lennard (1997) elaborated that, in the self-empathy process,

[...] the impact of recognizing and accurately articulating the message of signals from a deep, precognitive, level of inner being seems to radiate through the whole person-organism. At that moment, the dual self is one; there is a peak of integration or wholeness. (Barrett-Lennard, 1997, p. 109)

For Kohut, this empathic introspection process helps to uncover the features of the self and, importantly, provides healing through a refreshed sense of self, and emerging from this, life meaning (Kohut, 1991).

In a somewhat similar fashion, Shneidman emphasised the role of empathy in assisting suicidal clients, and coined this process an *anodyne therapy* (Chapter 2, section 2.3). It is thus evident that a clinician would need to use a skilful empathic approach. And this would become a beginning of the journey for the client to experience an empathic connection (perhaps for the first time, for some) and to develop a much desired bond with the therapist, not as an authoritative professional, but as another, understanding and caring human being. This empathic alignment may help to uncover the true needs of the client and soothe suffering, re-instituting enough self-cohesion in the client to facilitate a longer-term and consistent self-insight therapy. This, in turn, may inform the client how to initiate a life-promoting self-empathy process, and enhance an objective

perspective of and positive affect towards the self. As Rogers formulated this process, on the receipt of this uncompromised empathy, the client: “comes to a deeper understanding and acceptance of all aspects of himself; is able to reorganize himself in the direction of his ideal; finds it more satisfying to be this reorganized self; discovers that he no longer needs the counsellor” (C. R. Rogers & Becker, 1950, p. 33).

Such a self-preserving function of self-knowledge, is not a novel proposition; in fact, this notion has been promoted for centuries. Nonetheless, it is perhaps often misunderstood, underestimated, or lost within a multitude of competitive contemporary scientific methods and approaches. It is the famous aphorism: ***Know Thyself***, an ancient Greek motto engraved inside the portico of the Delphi temple of Apollo, and attributed to Socrates (as retold by Plato). It may sound simple, yet it contains deep insight about the power of self-knowledge as a contributor to psychological wellbeing.

Empirical research of self-empathy has not been extensive, though some reports of studies, mostly doctoral dissertation theses, have been published (e.g., Clark, 1999; Reid, 2003). Clark (1999) demonstrated that childhood neglect and negative self-perceptions (e.g., self-blame, self-hate, shame, and/or guilt) were associated with lower levels of self-empathy. The strongest negative correlation was found between self-empathy and self-hate ( $r = -.71, p < .0001$ ; Clark, 1999, p. 128).

Clinical evidence, which supports and enriches Clark’s findings, comes typically from psychoanalytic, relational and humanistic approaches. Rogers, who committed his professional life to the study of empathy in therapy, developed a therapeutic approach known as *client-centred therapy* (C. R. Rogers, 1951a, 1951b, 1951c, 1965; C. R. Rogers & Becker, 1950). Rogers’ observation was that individuals, as they accept their own attributes, develop a different perception of themselves and improve their psychological

state of adjustment, free from debilitating anxieties and other deleterious psychological presentations (C. R. Rogers, 1947). It has also been suggested that self-empathy leads to self-assertiveness, self-confidence, and courage to accept and explore the unknown (Riker, 2012a, 2012b). Self-empathy has been found to increase the enthusiasm for life, injecting “meaningfulness, organized vital energy ready for committed involvement in the world, a feeling of one’s special singularity, and a depth of connectedness with cherished others” (Riker, 2013, p. 501). Jordan noted that “often, self-empathy [...] leads to enhanced relational capacity and to an increase in self-esteem” (Jordan, 1997, p. 345). Further, self-empathy has been attributed to the healing of a sense of moral injury, manifested in guilt, self-blame, and/or shame, i.e., the emotions associated with suicidality (Sherman, 2014).

Interestingly, Sherman, a strong advocate of self-empathy, who likened the notion of self-empathy to that of *self-love* or *self-friendship* (similarly to Kohut’s perspective on narcissism; Chapter 2, section 2.6; Kohut, 1966), argued that self-love does not necessarily equate with an infantile or egoistic self-interest, concerned with personal superiority or material gains (Sherman, 2014). To strengthen her argument, Sherman summoned Aristotle’s contention that “there is room for a good kind of self-love, [...] that is, the capacity of a self to listen to reason with equanimity”, which is “practical wisdom or virtue”, the qualities signifying a high moral standard (Sherman, 2014, p. 229). The notion of self-love, from the angle of self-awareness, self-care, self-protection and self-respect, and its role in suicidality was also delineated by Orbach (2006; Chapter 1, section 1.2.8). And this could possibly be the type of self-love that Bushman and Baumeister (1998) referred to when they proposed that suicidality entails diminishment in self-love more so than presence of self-hate (Chapter 9, section 9.4.1). Bushman and Baumeister’s

proposal found little resonance in consequent research (as noted previously), nonetheless, perhaps with the exception of Pompili, who suggested that suicide, a result of a temporary fracture (with oneself, others, world), is a manifestation of a lost or reduced ability to perceive and appreciate the positive aspects of one's own existence (Pompili, 2010). Following this line of thought, suicidal individuals would experience deficits in their capacity for positive self-directed affect and self-understanding. Further, given that self-empathy would be theoretically expected to correlate with self-esteem, and recognising that lowered self-esteem scores showed to contribute to recent suicidality (Study 3), a cautious insight that self-empathy relates to suicidality is reinforced. Further, a theoretical assertion by Kohut strengthens this contention by linking disintegration anxiety (which is proposed here to underlie suicidal vulnerability; Study 4) to diminished understandings: "disintegration anxiety means the loss of empathy, the loss of an empathic milieu, the loss of an understanding milieu, not necessarily of the correct action, but the loss of any understanding" (Kohut, 1981/2010, p. 127); this would imply the loss of insight and self-knowledge.

The road to self-empathy is via empathy (Barrett-Lennard, 1997; Jordan, 1997; Sherman, 2014). Notably, the use of empathy is compatible with most clinical treatments (Barrett-Lennard, 1997), because most of the forms of modern psychotherapy (with the exception of online non-interactive modes and self-help books) are conducted between two or more people, thus perfectly suited to a reciprocal transmission of empathy and, thus, facilitation of self-empathy. Regrettably though,

Although there is obviously an interest, there are evidently many who are completely oblivious to our appeals for a fundamentally empathic clinical approach and attitude. We are acutely aware that this relatively nascent professional

movement does not yet—and perhaps may never—reflect current standards of clinical care for suicidal patients. The lives of patients actively engaged in mental health treatment are being lost, lives that we believe might otherwise have been saved [...]. (Jobes, 2011, p. 379)

Therefore, additional research and dissemination of knowledge on the role of empathy and self-empathy in suicide is required. This may benefit especially those at risk of suicide, though the effects would likely reach beyond this population and benefit individuals across the spectrum of psychological maladjustment.

It is not claimed in this thesis that therapy with suicidal individuals is always achievable with the use of an empathic approach. Reiser (1986), for example, found that some of the individuals vulnerable to suicide (the suicidal category he labelled the *mirroring self*), are unable to turn empathy inward. These individuals can have strong empathy for others, yet, due to persistent lack of validation in childhood, cannot bring themselves to accept and appreciate their own selves and accomplishments (Reiser, 1986). Therapeutic work with such clients could be a significant challenge, potentially leading to the therapist undermining the confidence in his/her own skill and capacity to help others. Another potential issue, as Kohut advised, is that a clinician's empathic attitude may misfire for those clients who have not earlier experienced this form of attention, because "[...] empathy, especially when it is surrounded by an attitude of wanting to cure *directly* through the giving of loving understanding, may indeed become basically overbearing and annoying; i.e., it may rest on the therapist's unresolved omnipotence fantasies" (Kohut, 1971, p. 307). Thus, to instigate a positive change, self-empathy is highly required not only for the clients, but necessarily, for the clinicians themselves.

Extending on the research reported in this thesis, having gathered the proposals and findings on associations and benefits of empathy and self-empathy in respect to the self, it is hypothesised here that, individuals at risk of suicide, in addition to suffering from the vulnerabilities of the ‘fractured self’, lack in their capacity for self-empathy. It is envisaged that improving an empathic self-insight would become the means by which one can maintain self-cohesion, feel at peace with oneself and life, and over time bolster self-esteem, sustain positive self-directed affect, and a sense of self-value and self-respect. Such a cohesive, self-empathic self would have no desire nor inkling towards self-destruction, because “the bond of empathy for an independent center of [*its own*] subjectivity makes the [*self-*] killing impossible” (Summers, 2014, p. 225). Killing the self would equate to the killing of something most precious to the self. This would be against the *nuclear* self’s self-appreciation and zest for life (Kohut, 1966, 1977; C. R. Rogers, 1957b, 1964; C. R. Rogers & McCormick, 1995). An outline of a proposed further research to examine this proposition is presented in section 10.5.

#### **10.4 Directions for Future Research**

It needs to be recognized that results obtained in this thesis’ studies would require confirmation by further research, mainly because the role of anxiety appears somewhat inconclusive when considering the results of Studies 3, 4, and 5 combined. Specifically, although, in Study 3’s results, depression, along with low self-esteem and psychache surpassed the effects of anxiety in the recent suicidal ideation/action, it is not known whether or not anxiety was the force behind the emerged psychache scores—as Shneidman indicated, psychache may take form of any of a number unnerving negative emotions or mental states, with anxiety being one of them. It is probable that the OMMP

(psychache measure), containing 44 items had a stronger capacity to tap into anxiety than a 7-item subscale of Anxiety in DASS 21. In Study 5, in contrast to Study 4, anxiety was measured with an item on the PPAS as opposed to DASS 21; although in Study 5, anxiety was most frequently endorsed by participants, it did not reach statistical significance (a potential explanation for this has been provided in Chapter 9, section 9.4.5). In brief, it appears that different types of anxiety measures, and the timeline they address, render dissimilar results. To study lifelong propensity for suicidality, it would be best to utilise an anxiety measure that refers to lifelong trait of anxiousness. Two such measures have been located by the author of this thesis, the *State-Trait Anxiety Inventory* (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) and the *Manifest Anxiety Scale* (MAS; Taylor, 1953). However, it appears both have generated controversy in respect to their construct validity; see evaluation of STAI in Bados, Gómez-Benito, and Balaguer (2010), and inconsistencies in MAS as shown from different results in the studies of Buss, Wiener, Durkee, and Baer (1955); Hoyt and Magoon (1954); Kendall (1954); Lauterbach (1958); Rubin and Townsend (1958); and Siegman (1956). A different approach is thus suggested in the proposed future study (see below, section 10.5).

Another matter for improvement was the use of the STB measure; given that the focus of this thesis was placed on uncovering suicide vulnerability factors, it would be sufficient to administer only lifelong suicidality measures. However, it was crucial for the author to learn whether or not any differences existed in the contribution of the theoretically derived suicide-related factors in respect to different timeframes for suicidality. Had the contributors identified been the same for both types of suicidality measures, it would imply no difference between what is understood by suicide risk and vulnerability. Identifying this distinction was intended to be a priority of this thesis.

Another improvement to the method in this thesis could be made by incorporating an earlier validated measure of self, based on Kohutian theory, the *Selfobject Needs Inventory* (SONI; Banai et al., 2005; Chapter 2, section 2.9). Using this instrument would allow establishing the degree of correspondence between the SONI and ASCS, providing further insights about the validity of the ASCS. This was considered here but not done due to concerns about the length of the survey. However, such a comparison could be included in a prospective study.

Future research could also consider the use of both subscales of the BSE (the two-fold structure of the Beck Self-esteem measure and the decision to incorporate only the Self subscale have earlier been described in Chapter 3, section 3.3.4). It is possible, that the results of Studies 3 and 4 have been influenced by the decision to use only the Self subscale of the BSE. This decision, though, was made before realising that Bhar et al. (2008) had reported that the scores on the Other subscale of the BSE (i.e., how others evaluate one's self-esteem), rather than self-appraisal as measured by the Self subscale, relate to suicidal ideation.

In respect to Study 2, it is acknowledged that generalizability of the findings may have been compromised with the use of the SLS procedure. The exact population values could not be established reliably, because the SLS loadings comprise commonalities, and thus may not accurately reflect the true population loadings (Reise et al., 2010). Nevertheless, this study was primarily concerned with determining the underlying structure of a set of variables, more so than with precise variance values. If precise values were at stake, the author would recommend conducting regression using the maximum likelihood method, which is known to yield stronger generalisability potential (Myung, 2003).

Another possible limitation to current practices as reported here involves the use of self-report instruments, which is known to be problematic, especially when involving populations with mental health diagnoses (Atkinson, Zibin, & Chuang, 1997). Importantly, the issues of diminished insight and affective states, or stress due to detrimental life events were minimised in this study with the recruitment from a wider population, and with only 15.6% of participants declaring psychiatric diagnoses. When conducting research with psychopathology populations, the author would suggest incorporating a mixed-research methodology, i.e., complementing self-report measures with face-to-face interaction. This would inform the researcher about the mental state of the participant, and provide an indication to the validity of responses.

Further, reflecting on the inclusion of the Current Suicidality index in the survey (used in Study 5 analyses), a marginal possibility of inaccurate responses needs to be acknowledged. That is, respondents were required to provide their contact details for a potential follow up of any concerning responses. It has been considered that some suicidal individuals, perhaps those who are more distrustful and withdrawn, or those who feel less ambiguous about their decision to die, may be reluctant to disclose their true intent, to prevent a rescuing intervention, or because they find this information to be private (examples of such instances have been presented in Ganzini et al., 2013). Moreover, suicidal individuals may be reluctant to report their psychological difficulties, due to social stigmas, which continually pervades our societies (e.g., Carpiniello & Pinna, 2017). Nonetheless, this inclusion of contact information provided opportunities for the researcher to intervene in concerning cases; overall, it was decided that the personal benefits for participants outweighed the disadvantage for research. Nonetheless, future

research could implement provisions to rectify bias, for example, by conducting another study with a different population and comparing both obtained results.

The implications of ethnicity and sexuality have not been explored in this thesis (with the exception of Study 5 where differences in sexes in respect to endorsed emotions were examined). It is likely, however, the rates of suicide are higher within the sub-populations of some ethnic minorities and gay/lesbian/transgender individuals (Chapter 1, section 1.1.5). In respect to sex differences in psychopathology, it is interesting to note that a late UCLA professor, Evelyn Hooker, in her research career found that “there were about as many maladjusted heterosexuals as homosexuals, and about as many well-adjusted homosexuals as heterosexuals” (Shneidman, 1996, p. 111). In Shneidman’s opinion “homosexuality relates to suicide as psychological pain relates to suicide. If it doesn’t hurt, it doesn’t count” (Shneidman, 1996, p. 111). However, it needs to be acknowledged that in societies which condemn differences in sexual preferences and gender identification, psychache is likely to be elevated within the disadvantaged populations. The structure of the self, i.e., self-esteem and self-cohesion, would still likely depend on early childhood empathic patterns, cultural values, and acceptance of the difference in the immediate social environment.

Some of the aforementioned concerns are addressed in the following section, which outlines a proposed plan for future research to complement this thesis’ investigations.

### 10.5 Proposed Future Research

Based on the findings and improving on the limitations of the studies reported in this thesis, the proposed future study aims to examine the relevance of self-empathy (a capacity for introspection underscored by positive self-affect towards the self) to an improved understanding of lifelong suicidal tendencies. This issue will be considered in relation to those potential suicidal vulnerability factors highlighted by the studies reported here, as informed by the thesis's theoretical underpinnings and the empirical findings here and elsewhere. Those vulnerability factors are anxiety and unmet childhood needs, negative self-referential feelings, a sense of lure of death; and suicidality risk factors: depression, self-esteem, and psychache. This approach will allow both an examination of the relationship and contribution of self-empathy to suicidal tendencies, as well as consideration of psychological differences between individuals with different levels of suicidality (lethality), based on the involved corresponding measures of the examined psychological attributes (listed below). Additionally, the study should provide an opportunity to confirm and inform further the findings of this thesis.

Despite the unquestionable value of quantitative research, elicitation of the subjective and idiosyncratic psychological experiences related to suicide cannot be fully achieved with an exclusive use of quantitative measures (Kral et al., 2012; Leenaars, 2002). Especially, it has been noted that, when assessing emotions using quantitative measures, the experience is removed from its circumstantial context, and possibly confounded by the cognitive interpretations of those emotional states (Castro, Kellison, Boyd, & Kopak, 2010). Therefore, considering the subjective nature of the psychological variables considered here, this study will employ a *concurrent embedded design* within a mixed-method approach, with qualitative data nested within the quantitative data, and

merged at the point of interpretation (this method is particularly suited for phenomenological studies; Creswell, 2003). Thus, quantitative analyses will exemplify general trends in respect to suicidality and be given major weight in the analyses, while qualitative analyses will *recontextualise* the quantitative data, providing descriptive information in terms of personal meanings relating to the central psychological constructs studied or explain unique variations or contradictory survey responses (Castro et al., 2010; Morse, 1994).

This approach means that the method comprises an electronic and paper version survey containing demographic information and self-rating questionnaires, concurrent with a series of semi-structured interviews, designed to extract specific information, especially pertinent to the understanding about self-empathy, nature of self-referential feelings, and 'lure of death' in the context of suicidal tendencies. A semi-structured interview refers to the type of questioning where interviewees talk about their life experiences from their own perspective, providing voluntary descriptions in response to open-ended questions (examples of questions pertinent to this study are provided in Appendix C).

It is envisaged that recruitment of participants would involve a broad community approach. Target participants would be 18 years and older, both male and female, English speaking and of Caucasian descent. According to Cohen (1992), the sample size likely to achieve .80 power of detecting a medium effect size at probability level .01 is estimated as 63 for multivariate analyses within each of 4 groups (e.g., no suicidality, ideation only, ideation and planning, suicidal behaviours). However, considering that suicidal acts are less common than suicidal ideation, for a larger group of those who attempted suicide, either the total sample needs to be considerably larger or additional

recruitment of individuals who have attempted suicide (via mental health clinics and hospitals), could be considered (this group of volunteers would constitute a separate sub-group in the study). Alternatively, adjustments in statistical analyses could be made to compensate for inconsistencies in the number of observations (described below). Exclusion criteria would comprise traumatic brain injury, cognitive impairment, and pregnancy. All participants would complete the survey. Interview volunteers would be recruited from within the total sample, throughout the duration of the survey distribution, and include both a representative sub-sample, as well as those who endorsed extreme or ambiguous responses; possibly between 20 and 40 individuals (as suggested in Castro et al. (2010)).

The quantitative measures depicting the constructs of interest are shown in Appendix D and comprise:

- Anxiety and Depression subscales from DASS 21, with a modified response timeframe (pertaining to lifelong patterns) - 14 items
- ASCS: childhood needs, self-esteem, and rumination patterns - 23 items
- Psychache (PS; for its brevity) - 13 items
- Self-empathy (SES; Clark, 1999) - 30 items; because this measure is relatively untested, a preceding pilot study would be needed to establish its validity
- Toronto alexithymia (Bagby, Taylor, & Parker, 1994) - 20 items
- Self-rating items in respect to death lure, self-hate, self-love, worthlessness
- Columbia-Suicide Severity Rating Scale (C-SSRS; Posner et al., 2011) – 1 table
- Number and lethality of past suicide attempts - 1 table

Data from interviews should be subjected to Thematic Analysis (Braun & Clarke, 2012; Castro et al., 2010), a process of systematic identifying, organising and coding

common ideas/patterns from descriptions of diverse personal experiences, relevant to theoretical hypotheses as determined by current scientific knowledge in the field of suicide risk and vulnerability factors.

Quantitative data would be analysed with statistical methods of regression and pathway analysis, as well as multivariate analysis enabling group comparisons.

In terms of reliability of results from this study, the main constraints could arise due to uneven sub-sample sizes (which could be addressed in the statistical analyses by the use of 'weighted means' or with bootstrapping techniques). Another issue could arise if contradictory findings between quantitative and qualitative data arose. These however, could be informative and form the basis for subsequent research.

Potential concerns confounding the study mainly relate to the condition known as alexithymia. Alexithymia denotes difficulties in recognising and/or conveying emotions, including the feelings towards or about one own self. The *Toronto Alexithymia Scale* has a tri-factorial composition, assessing three categories of alexithymia tendencies: Difficulty Identifying Feelings, Difficulty Describing Feelings, and Externally-Oriented Thinking (Bagby, Parker, & Taylor, 1994). This scale has been added to the battery of tests to help identify potential problems in this area and determine the validity of individuals reporting on their self-affect. This measure has been repeatedly validated and is known to discriminate between those with and without alexithymic tendencies, as well as to specify a category of emotion-recognition or emotion conveyance difficulties, and the level of detachment from or avoidance of one's own feelings (Bagby, Taylor, et al., 1994). Further, contradicting opinions have been presented in prior literature with claims that alexithymia, when combined with psychological pain or other distress-related factors, increases the lethality of a suicidal attempt (e.g., Sayar, Acar, & Ak, 2003). This is a

plausible proposition, considering that childhood environment has been implicated in alexithymic presentations in adulthood (e.g., Joukamaa et al., 2008). This study would thus additionally provide an opportunity to test the relationship between alexithymia, self-cohesion aspects of childhood experiences, self-esteem and rumination patterns, and suicidality.

It is acknowledged that the study may cause a degree of distress to participants, although it is not envisaged that interviews would create additional psychological trauma within an already vulnerable person. It has been shown that an empathic, patient-centred interactive approach can bring a degree of emotional relief for those experiencing psychological distress. For example, Biddle et al. (2013) examined the effects of interviews on self-harming individuals. Based on data from four separate investigations, they arrived at the following conclusion:

Most participants experienced a change in wellbeing. Between 50% and 70% across studies reported improvement, many describing the cathartic value of talking. A much smaller group in each study (18–27%) reported lowering of mood as they were reminded of difficult times or forced to focus on current issues.

However, most anticipated that their distress would be transient and it was outweighed by a desire to contribute to research. An increase in distress did not therefore necessarily indicate a negative experience. (Biddle et al., 2013, p. 356)

The study outlined here has potential to advance knowledge and mental health clinical practices for suicide-oriented individuals. To date, little attention has been given to the status and role of positive self-directed affect in the experience of suicidality, with negative affectivity, specifically hopelessness and depression, mostly being the focus of suicidology research. It is thus plausible that the results of this study could complement

current understandings about the role of self-empathy in suicidality, and possibly open new venues for targeting amendable suicide vulnerability and risk factors.

In addition to the appendices of the proposed study interview questions and survey, an appendix outlining participant's invitation/information and consent is attached (Appendix E).

## **10.6 Final Conclusion**

This thesis has demonstrated that different sets of factors account for suicide vulnerability and suicide risk. It is recognised that current clinical practices already attempt to address those components of suicidality, although rates of death by suicide still remain high. Childhood relational experiences have been shown to be crucial in the suicidal malady; these probably act on genetic predispositions and can be considered to cause psychological tribulations, stemming from early anxieties and insecurities, and ultimately resulting in disintegration of the self. However, it may prove possible to capitalise on an individual's inherent need for self-advancement and a continually developing, flexible nature of the self. Therefore, it may be possible to acquire the skill of self-healing through the power of self-empathy.

This conclusion suggests that clinicians providing treatment should adopt a phenomenological, empathic approach, to both clients and to themselves. This could prove successful, because everyone perceives the world and themselves through the lenses of their own sense of self and their private experience. In his 1956 conference manuscript, Rogers reflected on the learning from his many years of clinical practice, recognising that "it is only when I can be myself, when I can accept myself, that it is possible for me to understand others and accept others" (C. R. Rogers & McCormick,

1995, p. 19). Further, Rogers implied that, once this conveyed empathic understanding of the therapist is felt, appreciated, and internalised by the client, psychache can be soothed, depression may subside, anxiety lightened, meaning restored, and hope transferred from the clinician to the client, with the re-discovered self-empathy gradually raising or stabilising client's self-esteem, and setting a pattern for achieving and maintaining self-cohesion.

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## References

- Abramson, L. Y., & Seligman, M. E. P. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology, 87*, 49-74. doi: 10.1037//0021-843X.87.1.49
- Adler, A. (1967). On suicide, with particular reference to suicide among young students. In P. Friedman (Ed.), (pp. 109-121). New York: International Universities Press.
- Alaggia, R., & Mishna, F. (2014). Self psychology and male child sexual abuse: Healing relational betrayal. *Clinical Social Work Journal, 42*, 41-48. doi: 10.1007/s10615-013-0453-2
- Ali, S., Nathani, M., Jabeen, S., Yazdani, I., Mouton, C. D., Bailey, R. K., . . . Riley, W. J. (2013). Alcohol: The lubricant to suicidality. *Innovations in Clinical Neuroscience, 10*, 20-29. doi: 10.1111/j.1943-278X.2012.00102.x
- Allen, J. G. (2012). Commentary on "conceptions of modern psychiatry": From attachment to intersubjectivity. *Psychiatry, 75*, 32-39. doi: 10.1521/psyc.2012.75.1.32
- American Association of Suicidology. (2016). Retrieved from <http://www.suicidology.org/about-aas/>.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders. DSM-5 (5th ed.)*. Washington, DC: American Psychiatric Publishing.
- Ansbacher, H. L. (1969). Suicide as communication: Adler's concept and current applications. *Journal of Individual Psychology, 25*, 513-520.
- Apter, A., Kotler, M., Sevy, S., Plutchik, R., Brown, S. L., Foster, H., . . . Van Praag, H. M. (1991). Correlates of risk of suicide in violent and nonviolent psychiatric patients. *American Journal of Psychiatry, 148*, 883-887.

- Apter, A., Van Praag, H. M., Plutchik, R., Sevy, S., Korn, M., & Brown, S. L. (1990). Interrelationships among anxiety, aggression, impulsivity, and mood: A serotonergically linked cluster? *Psychiatry Research*, *32*, 191-199. doi: 10.1016/0165-1781(90)90086-K
- Arffa, S. (1983). Cognition and suicide: A methodological review. *Suicide and Life-Threatening Behavior*, *13*, 109-122. doi: 10.1111/j.1943-278X.1983.tb00009.x
- Åsberg, M., Träskman, L., & Thorén, P. (1976). 5-HIAA in the cerebrospinal fluid. A biochemical suicide predictor? *Archives of general psychiatry*, *33*, 1193-1197. doi: 10.1001/archpsyc.1976.01770100055005
- Atkinson, M., Zibin, S., & Chuang, H. (1997). Characterizing quality of life among patients with chronic mental illness: A critical examination of the self-report methodology. *American Journal of Psychiatry*, *154*, 99-105.
- Australian Bureau of Statistics. (2007). *Feature article 2: Mental health*. 1301.0 - Year Book Australia, 2009–10. Retrieved from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/3309.0/>.
- Australian Bureau of Statistics. (2016). *Causes of death*. 3309.0 - *Suicides, Australia, 2010; latest issue 2012*. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/bySubject/3303.0~2014~MainFeatures~KeyCharacteristics~10054>.
- Australian Institute of Health and Welfare. (2016). *Leading causes of death*. Canberra: Australian Institute of Health and Welfare. Retrieved from <http://www.aihw.gov.au/deaths/leading-causes-of-death/#leading-age>.

- Bados, A., Gómez-Benito, J., & Balaguer, G. (2010). The state-trait anxiety inventory, trait version: Does it really measure anxiety? *Journal of Personality Assessment, 92*, 560-567. doi: 10.1080/00223891.2010.513295
- Bagby, R. M., Parker, J. D. A., & Taylor, G. T. (1994). The twenty-item Toronto Alexithymia Scale - I: Item selection and cross-validation of the factor structure. *Journal of Psychosomatic Research, 38*, 23-32. doi: 10.1016/0022-3999(94)90005-1
- Bagby, R. M., Taylor, G. J., & Parker, J. D. A. (1994). The twenty-item Toronto Alexithymia Scale - II: Convergent, discriminant, and concurrent validity. *Journal of Psychosomatic Research, 38*, 33-40. doi: 10.1016/0022-3999(94)90006-X
- Baker, H. S., & Baker, M. N. (1987). Heinz Kohut's self psychology: An overview. *American Journal of Psychiatry, 144*, 1-9.
- Banai, E., Mikulincer, M., & Shaver, P. R. (2005). "Selfobject" needs in Kohut's self psychology: Links with attachment, self-cohesion, affect regulation, and adjustment. *Psychoanalytic Psychology, 22*, 224-260. doi: 10.1037/0736-9735.22.2.224
- Barber, J. G. (2001). Relative misery and suicide. *Australian and New Zealand Journal of Psychiatry, 35*, 49-57.
- Barraclough, B., & Shepherd, D. (1994). A necessary neologism: The origin and uses of suicide. *Suicide and Life-Threatening Behavior, 24*, 113-125.
- Barrett-Lennard, G. T. (1997). The recovery of empathy - Toward others and self. In A. C. Bohart & L. S. Greenberg (Eds.), *Empathy reconsidered: New directions in psychotherapy* (pp. 103-121). Washington, DC, US: American Psychological Association.

- Bartz, J. A., & Hollander, E. (2006). The neuroscience of affiliation: Forging links between basic and clinical research on neuropeptides and social behavior. *Hormones and Behavior, 50*, 518-528. doi: 10.1016/j.yhbeh.2006.06.018
- Baumeister, R. F. (1990). Suicide as escape from self. *Psychological Review, 97*, 90-113.
- Beautrais, A. L., Joyce, P. R., & Mulder, R. T. (1996). Risk factors for serious suicide attempts among youths aged 13 through 24 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 1174-1182.
- Beck, A. T., Brown, G. K., Steer, R. A., Kuyken, W., & Grisham, J. (2001). Psychometric properties of the Beck Self-Esteem scales. *Behaviour Research and Therapy, 39*, 115-124. doi: 10.1016/S0005-7967(00)00028-0
- Beck, A. T., Kovacs, M., & Weissman, A. (1975). Hopelessness and suicidal behavior: An overview. *JAMA: The Journal of the American Medical Association, 234*, 1146-1149. doi: 10.1001/jama.1975.03260240050026
- Beck, A. T., Lester, D., & Albert, N. (1973). Suicidal wishes and symptoms of depression. *Psychological Reports, 33*, 770.
- Beck, A. T., Steer, R. A., Beck, J. S., & Newman, C. F. (1993). Hopelessness, depression, suicidal ideation, and clinical diagnosis of depression. *Suicide and Life-Threatening Behavior, 23*, 139-145.
- Beck, A. T., Steer, R. A., Epstein, N., & Brown, G. (1990). Beck Self-Concept Test. *Psychological Assessment, 2*, 191-197.
- Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The hopelessness scale. *Journal of Consulting and Clinical Psychology, 42*, 861-865. doi: 10.1037/h0037562

- Beer, M. D. (1996). Psychosis: A history of the concept. *Comprehensive Psychiatry*, *37*, 273-291.
- Beghi, M., Rosenbaum, J. F., Cerri, C., & Cornaggia, C. M. (2013). Risk factors for fatal and nonfatal repetition of suicide attempts: A literature review. *Neuropsychiatric Disease and Treatment*, *9*, 1725-1736. doi: 10.2147/NDT.S40213
- Berlim, M. T., Mattevi, B. S., Pavanello, D. P., Caldieraro, M. A., Fleck, M. P. A., Wingate, L. R., & Joiner Jr, T. E. (2003). Psychache and suicidality in adult mood disordered outpatients in Brazil. *Suicide and Life-Threatening Behavior*, *33*, 242-248. doi: 10.1521/suli.33.3.242.23220
- Bertolote, J. M., Fleischmann, A., De Leo, D., Bolhari, J., Botega, N., De Silva, D., . . . Wasserman, D. (2005). Suicide attempts, plans, and ideation in culturally diverse sites: The WHO SUPRE-MISS community survey. *Psychological Medicine*, *35*, 1457-1465. doi: 10.1017/S0033291705005404
- Bhar, S., Ghahramanlou-Holloway, M., Brown, G., & Beck, A. T. (2008). Self-esteem and suicide ideation in psychiatric outpatients. *Suicide and Life-Threatening Behavior*, *38*, 511-516. doi: 10.1521/suli.2008.38.5.511
- Bhugra, D., & Mastrogianni, A. (2004). Globalisation and mental disorders: Overview with relation to depression. *British Journal of Psychiatry*, *184*, 10-20. doi: 10.1192/bjp.184.1.10
- Bion, W. R. (1957). Differentiation of the psychotic from the non-psychotic personalities. *International Journal of Psycho-Analysis*, *38*, 266-275.
- Bion, W. R. (1962a). *Learning from experience*. London: Heinemann Medical Books.
- Bion, W. R. (1962b). The psycho-analytic study of thinking. A theory of thinking. *International Journal of Psycho-Analysis*, *43*, 306-310.

- Boden, J. M., Fergusson, D. M., & Horwood, L. (2007). Anxiety disorders and suicidal behaviours in adolescence and young adulthood: Findings from a longitudinal study. *Psychological Medicine, 37*, 431-440.
- Bohart, A. C., & Greenberg, L. S. (1997). Empathy: Where are we and where do we go from here? In A. C. Bohart & L. S. Greenberg (Eds.), *Empathy reconsidered: New directions in psychotherapy* (pp. 419-449). Washington, DC, US: American Psychological Association.
- Bolger, E. A. (1999). Grounded theory analysis of emotional pain. *Psychotherapy Research, 9*, 342-362.
- Bortolato, M., Pivac, N., Muck Seler, D., Nikolac Perkovic, M., Pessia, M., & Di Giovanni, G. (2013). The role of the serotonergic system at the interface of aggression and suicide. *Neuroscience, 236*, 160-185. doi: 10.1016/j.neuroscience.2013.01.015
- Bostwick, J. M., Pabbati, C., Geske, J. R., & McKean, A. J. (2016). Suicide attempt as a risk factor for completed suicide: Even more lethal than we knew. *American Journal of Psychiatry, 173*, 1094-1100. doi: 10.1176/appi.ajp.2016.15070854
- Bowlby, J. (1977). The making and breaking of affectional bonds. I. Aetiology and psychopathology in the light of attachment theory. An expanded version of the Fiftieth Maudsley Lecture, delivered before the Royal College of Psychiatrists, 19 November 1976. *British Journal of Psychiatry, 130*, 201-210.
- Box, G. E. P., & Cox, D. R. (1964). An analysis of transformations. *Journal of the Royal Statistical Society. Series B (Methodological), 26*, 211-252. doi: 10.2307/2984418
- Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological,*

*and biological* (pp. 57 - 71). Washington, DC, US: American Psychological Association.

Brown, M. Z. (2006). Linehan's theory of suicidal behavior: Theory, research, and dialectical behavior therapy. In T. E. Ellis (Ed.), *Cognition and suicide: Theory, research, and therapy* (Vol. xviii, pp. 91-117). Washington, DC, US: American Psychological Association.

Browne, T. S. (1952). *The Religio Medici and other writings*. London: J.M. Dent.

Bruffaerts, R., Demyttenaere, K., Borges, G., Haro, J. M., Chiu, W. T., Hwang, I., . . . Nock, M. K. (2010). Childhood adversities as risk factors for onset and persistence of suicidal behaviour. *British Journal of Psychiatry*, *197*, 20-27. doi: 10.1192/bjp.bp.109.074716

Brüne, M., Schoumlbel, A., Karau, R., Faustmann, P. M., Dermietzel, R., Juckel, G., & Petrasch-Parwez, E. (2011). Neuroanatomical correlates of suicide in psychosis: The possible role of von Economo neurons. *PLoS ONE*, *6*(6), 1-6. doi: 10.1371/journal.pone.0020936

Bryan, A. B. O., Bryan, C. J., Morrow, C. E., Etienne, N., & Sannerud, B. R. (2014). Moral injury, suicidal ideation, and suicide attempts in a military sample. *Traumatology*, *20*, 154-160. doi: 10.1037/h0099852

Bryan, C. J., Morrow, C. E., Etienne, N., & Ray-Sannerud, B. (2013). Guilt, shame, and suicidal ideation in a military outpatient clinical sample. *Depression and Anxiety*, *30*, 55-60. doi: 10.1002/da.22002

Büchi, S., & Sensky, T. (1998). Pictorial representation of illness and self measure (PRISM) - A simple visualisation method for research and practice. *Pictorial Representation*

*of illness and Self Measure (PRISM) - Eine einfache Visualisierungsmethode für  
Forschung und Praxis, 8, 112-117.*

Büchi, S., & Sensky, T. (1999). PRISM: Pictorial representation of illness and self measure: A brief nonverbal measure of illness impact and therapeutic aid in psychosomatic medicine. *Psychosomatics, 40*, 314-320.

Bürgy, M. (2008). Phenomenological investigation of despair in depression. *Psychopathology, 41*, 147-156. doi: 10.1159/000113007

Burke, T. A., Jacobucci, R., Ammerman, B. A., Piccirillo, M., McCloskey, M. S., Heimberg, R. G., & Alloy, L. B. (2018). Identifying the relative importance of non-suicidal self-injury features in classifying suicidal ideation, plans, and behavior using exploratory data mining. *Psychiatry Research, 262*, 175-183. doi: 10.1016/j.psychres.2018.01.045

Busch, K. A., Fawcett, J., & Jacobs, D. G. (2003). Clinical correlates of inpatient suicide. *Journal of Clinical Psychiatry, 64*, 14-19.

Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology, 75*, 219-229.

Buss, A. H., Wiener, M., Durkee, A., & Baer, M. (1955). The measurement of anxiety in clinical situations. *Journal of Consulting Psychology, 19*, 125-129. doi: 10.1037/h0048964

Cáceda, R., Durand, D., Cortes, E., Prendes-Alvarez, S., Moskovciak, T., Harvey, P. D., & Nemeroff, C. B. (2014). Impulsive choice and psychological pain in acutely suicidal depressed patients. *Psychosomatic Medicine, 76*, 445-451. doi: 10.1097/PSY.0000000000000075

- Cai, H., Wu, Q., & Brown, J. D. (2009). Is self-esteem a universal need? Evidence from the People's Republic of China. *Asian Journal of Social Psychology, 12*, 104-120. doi: 10.1111/j.1467-839X.2009.01278.x
- Cain, A. C. (1961). The presuperego 'turning-inward' of aggression. *The Psychoanalytic quarterly, 30*, 171-208.
- Campos, R. C., Besser, A., Abreu, H., Parreira, T., & Blatt, S. J. (2014). Personality vulnerabilities in adolescent suicidality: The mediating role of psychological distress. *Bulletin of the Menninger Clinic, 78*, 115-139. doi: 10.1521/bumc.2014.78.2.115
- Campos, R. C., Besser, A., & Blatt, S. J. (2013). Recollections of parental rejection, self-criticism and depression in suicidality. *Archives of Suicide Research, 17*, 58-74. doi: 10.1080/13811118.2013.748416
- Campos, R. C., & Holden, R. R. (2015). Testing models relating rejection, depression, interpersonal needs, and psychache to suicide risk in nonclinical individuals. *Journal of Clinical Psychology, 71*, 994-1003. . doi: 10.1002/jclp.22196
- Canivez, G. L., & Watkins, M. W. (2010). Exploratory and Higher-Order Factor Analyses of the Wechsler Adult Intelligence Scale-Fourth Edition (WAIS-IV) Adolescent Subsample. *School Psychology Quarterly, 25*, 223-235. doi: 10.1037/a0022046
- Carpiniello, B., & Pinna, F. (2017). The reciprocal relationship between suicidality and stigma. *Frontiers in Psychiatry, 8*(Article 35), 1-9.
- Carroll, B. J. (1994). Brain mechanisms in manic depression. *Clinical Chemistry, 40*, 303-308.
- Carter, R., Silverman, W. K., Allen, A., & Ham, L. (2008). Measures matter: the relative contribution of anxiety and depression to suicidal ideation in clinically referred

anxious youth using brief versus full length questionnaires. *Depression and Anxiety*, 25, E27-E35. doi: 10.1002/da.20468

Case, N. (1986). Hopelessness and suicide. *The American journal of psychiatry*, 143, 272-273.

Cassell, E. J. (1999). Diagnosing suffering: A perspective. *Annals of internal medicine*, 131, 531-534.

Cassells, C., Paterson, B., Dowding, D., & Morrison, R. (2005). Long- and short-term risk factors in the prediction of inpatient suicide. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 26, 53-63. doi: 10.1027/0227-5910.26.2.53

Castro, F. G., Kellison, J. G., Boyd, S. J., & Kopak, A. (2010). A methodology for conducting integrative mixed methods research and data analyses. *Journal of Mixed Methods Research*, 4, 342-360. doi: 10.1177/1558689810382916

Cattell, R. B. (1964). Psychological definition and measurement of anxiety. *Journal of neuropsychiatry*, 5, 396-402.

Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research*, 1, 245-276.

Cénat, J. M., Hébert, M., Blais, M., Lavoie, F., Guerrier, M., & Derivois, D. (2014). Cyberbullying, psychological distress and self-esteem among youth in Quebec schools. *Journal of Affective Disorders*, 169, 7-9. doi: 10.1016/j.jad.2014.07.019

Chamberlain, P. (2010). *Self murder: Suicide and the intolerable state of the fragmented self*. (Unpublished doctoral dissertation thesis). The University of Adelaide, Australia.

Chandler, M. (1994). Self-continuity in suicidal and nonsuicidal adolescents. *New Directions for Child and Adolescent Development*, 1994(64), 55-70.

- Chandler, M. J., Lalonde, C. E., Sokol, B. W., & Hallett, D. (2003). Personal persistence, identity development, and suicide: A study of native and non-native North American adolescents. *Monographs of the Society for Research in Child Development, 68*, 1-130+139+vii.
- Chatard, A., Selimbegović, L., & Konan, P. N. (2009). Self-esteem and suicide rates in 55 nations. *European Journal of Personality, 23*, 19-32. doi: 10.1002/per.701
- Chávez-Hernández, A. M., & Leenaars, A. A. (2010). Edwin S. Shneidman and the modern suicidology. *Salud Mental, 33*, 355-360.
- Chin, J., & Holden, R. R. (2013). Multidimensional future time perspective as moderators of the relationships between suicide motivation, preparation, and its predictors. *Suicide and Life-Threatening Behavior, 43*, 395-405. doi: 10.1111/sltb.12025
- Chistiakov, D. A., Kekelidze, Z. I., & Chekhonin, V. P. (2012). Endophenotypes as a measure of suicidality. *Journal of Applied Genetics, 53*, 389-413. doi: 10.1007/s13353-012-0113-1
- Chodkiewicz, J. (2013). Psychological pain - Conceptualization and measurement tools (Ból psychiczny - Konceptualizacja i narzędzia pomiaru). *Psychiatria, 10*, 109-115.
- Cicero, D. C., & Kerns, J. G. (2010). Multidimensional factor structure of positive schizotypy. *Journal of Personality Disorders, 24*, 327-343. doi: 10.1521/pedi.2010.24.3.327
- Claassen, C. A., Yip, P. S., Corcoran, P., Bossarte, R. M., Lawrence, B. A., & Currier, G. W. (2010). National suicide rates a century after Durkheim: do we know enough to estimate error? *Suicide & life-threatening behavior, 40*, 193-223.

- Clark, C. A. (1999). The measurement of self-empathy based on the relational model: A pilot study. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 60(4-B), 1845.
- Cohen, J. (1986). Statistical approaches to suicidal risk factor analysis. *Annals of the New York Academy of Sciences*, 487, 34-41. doi: 10.1111/j.1749-6632.1986.tb27883.x
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155-159.
- Coles, M. E., & Heimberg, R. G. (2002). Memory biases in the anxiety disorders: Current status. *Clinical Psychology Review*, 22, 587-627. doi: 10.1016/S0272-7358(01)00113-1
- Conner, K. R., Duberstein, P. R., Conwell, Y., & Caine, E. D. (2003). Reactive aggression and suicide: Theory and evidence. *Aggression and Violent Behavior*, 8, 413-432. doi: 10.1016/S1359-1789(02)00067-8
- Conner, K. R., Duberstein, P. R., Conwell, Y., Seidlitz, L., & Caine, E. D. (2001). Psychological vulnerability to completed suicide: A review of empirical studies. *Suicide and Life-Threatening Behavior*, 31, 367-385. doi: 10.1521/suli.31.4.367.22048
- Cooper-Evans, S., Alderman, N., Knight, C., & Oddy, M. (2008). Self-esteem as a predictor of psychological distress after severe acquired brain injury: An exploratory study. *Neuropsychological Rehabilitation*, 18, 607-626. doi: 10.1080/09602010801948516
- Cooper, W. E. (1992). William James's theory of the self. *Monist*, 75, 504 - 521.
- Corona, C. D., Jobes, D. A., Nielsen, A. C., Pedersen, C. M., Jennings, K. W., Lento, R. M., & Brazaitis, K. A. (2013). Assessing and treating different suicidal states in a Danish outpatient sample. *Archives of Suicide Research*, 17, 302-312.

- Cotton, C. R., & Range, L. M. (1996). Suicidality, hopelessness, and attitudes toward life and death in clinical and nonclinical adolescents. *Death Studies, 20*, 601-610.
- Courtet, P., Jaussent, I., Genty, C., Dupuy, A. M., Guillaume, S., Ducasse, D., & Olié, E. (2015). Increased CRP levels may be a trait marker of suicidal attempt. *European Neuropsychopharmacology, 25*, 1824-1831. doi: 10.1016/j.euroneuro.2015.05.003
- Craig, L., Powell, A., & Brown, J. E. (2016). Gender patterns in domestic labour among young adults in different living arrangements in Australia. *Journal of Sociology, 52*, 772-788. doi: 10.1177/1440783315593181
- Cramer, D. (1998). *Fundamental statistics for social research: Step-by-step calculations and computer techniques using SPSS for Windows*. New York: Routledge.
- Creemers, D. H. M., Scholte, R. H. J., Engels, R. C. M. E., Prinstein, M. J., & Wiers, R. W. (2012). Implicit and explicit self-esteem as concurrent predictors of suicidal ideation, depressive symptoms, and loneliness. *Journal of Behavior Therapy and Experimental Psychiatry, 43*, 638-646. doi: 10.1016/j.jbtep.2011.09.006
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed method approaches* (2nd ed. ed.). Thousand Oaks, California: Sage Publications.
- Crosby, A. E., Han, B., Ortega, L. A. G., Parks, S. E., & Gfroerer, J. (2011). Suicidal thoughts and behaviors among adults aged  $\geq 18$  years--United States, 2008-2009. *Morbidity and mortality weekly report. Surveillance summaries (Washington, D.C.: 2002)*(13), 1.
- Dang, M. T. (2014). Social connectedness and self-esteem: Predictors of resilience in mental health among maltreated homeless youth. *Issues in Mental Health Nursing, 35*, 212-219. doi: 10.3109/01612840.2013.860647

- Davie, B. J. (2005). *"Never a 'needless' suicide": An empirical test of Shneidman's theory of psychological needs, psychological pain, and suicidality*. Doctoral Dissertation, University of Windsor, Ontario, Canada.
- De Gioannis, A., & De Leo, D. (2012). Managing suicidal patients in clinical practice. *Open Journal of Psychiatry, 2*, 49-60. doi: 10.4236/ojpsych.2012.21008
- De Leo, D. (2010). Australia revises its mortality data on suicide. *Crisis, 31*, 169-173. doi: 10.1027/0227-5910/a000043
- De Leo, D., Burgis, S., Bertolote, J., Kerkhof, A. J. F. M., & Bille-Brahe, U. (2006). Definitions of suicidal behavior. Lessons learned from the WHO/EURO Multicentre Study. *Crisis, 27*, 4-15.
- De Man, A. F., & Gutiérrez, B. I. B. (2002). The relationship between level of self-esteem and suicidal ideation with stability of self-esteem as moderator. *Canadian Journal of Behavioural Science, 34*, 235-238.
- De Rosis, L. E. (1961). Suicide: The Horney point of view. In N. L. Farberow & E. S. Shneidman (Eds.), *The cry for help* (pp. 236 - 254). New York, Toronto, London: The Blakiston Division, McGraw-Hill Book Company, Inc.
- Deeley, S. T., & Love, A. W. (2012). The emotion self-confidence model of suicidal ideation. *Advances in Mental Health, 10*, 246-257.
- Delfabbro, P. H., Winefield, H. R., & Winefield, A. H. (2013). Life-time and current suicide-ideation in Australian secondary school students: Socio-demographic, health and psychological predictors. *Journal of Affective Disorders, 151*, 514-524. doi: 10.1016/j.jad.2013.06.036

- DeLisle, M. M., & Holden, R. R. (2009). Differentiating between depression, hopelessness, and psychache in university undergraduates. *Measurement and Evaluation in Counseling and Development, 42*, 46-63. doi: 10.1177/0748175609333562
- Den Heijer, M., Seynaeve, C., Vanheusden, K., Duivenvoorden, H. J., Vos, J., Bartels, C. C. M., . . . Tibben, A. (2011). The contribution of self-esteem and self-concept in psychological distress in women at risk of hereditary breast cancer. *Psycho-Oncology, 20*, 1170-1175. doi: 10.1002/pon.1824
- Department of Environment and Energy. (2016). *Whale and dolphin rescue*. Commonwealth of Australia. Retrieved from <https://www.environment.gov.au/marine/marine-species/cetaceans/whale-dolphin-rescue>.
- Derogatis, L. R., & Cleary, P. A. (1977). Confirmation of the dimensional structure of the SCL-90: a study in construct validation. *Journal of Clinical Psychology, 33*, 981-989.
- Diefenbach, G. J., Woolley, S. B., & Goethe, J. W. (2009). The association between self-reported anxiety symptoms and suicidality. *Journal of Nervous and Mental Disease, 197*, 92-97. doi: 10.1097/NMD.0b013e318196127c
- Dieserud, G., Røysamb, E., Ekeberg, Ø., & Kraft, P. (2001). Toward an integrative model of suicide attempt: A cognitive psychological approach. *Suicide and Life-Threatening Behavior, 31*, 153-168. doi: 10.1521/suli.31.2.153.21511
- Dohrenwend, B. (1959). *Egoism, altruism, anomie, and fatalism: A conceptual analysis of Durkheim's types* (Vol. 24): American Sociological Review.
- Draper, E., & Margolis, P. (1976). A psychodynamic approach to suicide prevention. *Community Mental Health Journal, 12*, 376-382.

- DSM-5. (2013). *Diagnostic and statistical manual of mental disorders* (A. P. Association Ed. 5th ed.). Washington, DC: American Psychiatric Publishing.
- Du, L., Faludi, G., Palkovits, M., Bakish, D., & Hrdina, P. D. (2001). Serotonergic genes and suicidality. *Crisis, 22*, 54-60. doi: 10.1027//0227-5910.22.2.54
- Durkheim, E. (1966). *Suicide, a study in sociology; Translated by John A. Spaulding and George Simpson*. New York: Free Press.
- Edlund, S. M., Carlsson, M. L., Linton, S. J., Fruzzetti, A. E., & Tillfors, M. (2014). I see you're in pain - The effects of partner validation on emotions in people with chronic pain. *Scandinavian Journal of Pain, In press*. doi: 10.1016/j.sjpain.2014.07.003
- Eisenberger, N. I., Lieberman, M. D., & Williams, K. D. (2003). Does rejection hurt? An fMRI study of social exclusion. *Science, 302*, 290-292. doi: 10.1126/science.1089134
- Elkins, G. R., Fisher, W. I., Johnson, A. K., Kendrick, C., Koep, L., Bunn, J., & Perfect, M. (2012). Initial development of a brief measure of psychological distress. *Psychological Reports, 110*, 218-226. doi: 10.2466/02.PRO.110.1.218-226
- Engert, V., Koester, A. M., Riepenhausen, A., & Singer, T. (2016). Boosting recovery rather than buffering reactivity: Higherstress-induced oxytocin secretion is associated with increased cortisolreactivity and faster vagal recovery after acute psychosocial stress. *Psychoneuroendocrinology, 74*, 111-120. doi: 10.1016/j.psyneuen.2016.08.029
- Eskin, M., Sun, J. M., Abuidhail, J., Yoshimasu, K., Kujan, O., Janghorbani, M., . . . Voracek, M. (2016). Suicidal behavior and psychological distress in university students: A

12-nation study. *Archives of Suicide Research*, 20, 369-388. doi:

10.1080/13811118.2015.1054055

Everett, D. L. (2005). Cultural constraints on grammar and cognition in Pirahã: Another look at the design features of human language. *Current Anthropology*, 46, 621-646. doi: 10.1086/431525

Everett, D. L. (2009). *From missionary to atheist. The Pirahã: people who define happiness without God: Daniel Everett*. Paper presented at the Freedom From Religion Foundation's 32nd Annual Convention, Seattle

Everett, D. L. (2012). The Amazon's Pirahã people's secret to happiness: Never talk of the past or future [Interview by D. Godrèche, Indian Country Today Media Network, LLC]. Retrieved from

<http://indiancountrytodaymedianetwork.com/2012/06/25/amazons-piraha-peoples-secret-happiness-never-talk-past-or-future-120213>

Everett, D. L. (2014). Concentric circles of attachment among the Pirahã: A brief survey. In H. Otto & H. Keller (Eds.), *Different faces of attachment: Cultural variations on a universal human need* (pp. 169-186). Cambridge, UK: Cambridge University Press.

Eysenck, M. W., Derakshan, N., Santos, R., & Calvo, M. G. (2007). Anxiety and cognitive performance: Attentional control theory. *Emotion*, 7, 336-353. doi: 10.1037/1528-3542.7.2.336

Fabrigar, L. R., MacCallum, R. C., Wegener, D. T., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4, 272-299. doi: 10.1037/1082-989X.4.3.272

Fabrigar, L. R., & Wegener, D. T. (2012). *Exploratory factor analysis. Understanding statistics*. New York: Oxford University Press.

- Falgares, G., Marchetti, D., De Santis, S., Carrozzino, D., Kopala-Sibley, D. C., Fulcheri, M., & Verrocchio, M. C. (2017). Attachment styles and suicide-related behaviors in adolescence: The mediating role of self-criticism and dependency. *Frontiers in Psychiatry, 8*. doi: 10.3389/fpsyt.2017.00036
- Fan, T., Wu, X., Yao, L., & Dong, J. (2013). Abnormal baseline brain activity in suicidal and non-suicidal patients with major depressive disorder. *Neuroscience Letters, 534*, 35-40. doi: 10.1016/j.neulet.2012.11.032
- Farberow, N. L. (2016). Encyclopedia of death and dying. History. Retrieved 31 December 2016, from <http://www.deathreference.com/Sh-Sy/Suicide-Basics.html>
- Farberow, N. L., & Shneidman, E., (eds.). (1961). *The cry for help*. New York, Toronto, London: The Blakiston Division, McGraw-Hill Book Company.
- Farberow, N. L., Shneidman, E. S., & Leonard, C. V. (1961). Suicide among schizophrenic mental hospital patients. In N. L. Farberow & E. S. Shneidman (Eds.), *The cry for help* (pp. 78-109). New York, Toronto, London: The Blakiston Division, McGraw-Hill Book Company, Inc.
- Fava, G. A., Tomba, E., & Sonino, N. (2012). Clinimetrics: The science of clinical measurements. *International Journal of Clinical Practice, 66*, 11-15. doi: 10.1111/j.1742-1241.2011.02825.x
- Fawcett, J., Busch, K. A., Jacobs, D., Kravitz, H. M., & Fogg, L. (1997) Suicide: A four-pathway clinical-biochemical model. *Vol. 836. Annals of the New York Academy of Sciences* (pp. 288-301).
- Fazaa, N., & Page, S. (2003). Dependency and self-criticism as predictors of suicidal behavior. *Suicide and Life-Threatening Behavior, 33*, 172-185. doi: 10.1521/suli.33.2.172.22777

- Fedyszyn, I. E., Robinson, J., Harris, M. G., Paxton, S. J., & Francey, S. (2012). Predictors of suicide-related behaviors during treatment following a first episode of psychosis: The contribution of baseline, past, and recent factors. *Schizophrenia Research, 140*, 17-24. doi: 10.1016/j.schres.2012.06.022
- Feng, D., & Xu, L. (2014). The relationship between perceived discrimination and psychological distress among Chinese pulmonary tuberculosis patients: The moderating role of self-esteem. *Psychology, Health and Medicine, In press*. doi: 10.1080/13548506.2014.958505
- Ferrero, M. (2006). Martyrdom contracts. *Journal of Conflict Resolution, 50*, 855-877. doi: 10.1177/0022002706293466
- Finlay, L. (2015). *Relational Integrative Psychotherapy: Process and theory in practice*. Chichester, E. Sussex: Wiley-Blackwell.
- Fiori, L. M., & Turecki, G. (2010). Gene expression profiling of suicide completers. *European Psychiatry, 25*, 287-290. doi: 10.1016/j.eurpsy.2009.12.013
- Firestone, L. (2009). Suicide: The warning signs. What goes on in the mind of a person leading up to their suicide attempt. Retrieved from Psychology Today. Compassion Matters. website: <https://www.psychologytoday.com/blog/compassion-matters/200906/suicide-the-warning-signs>
- Fitzgerald, F. T. (1986). The therapeutic value of pets. *Western Journal of Medicine, 144*, 103-105.
- Flamenbaum, R., & Holden, R. R. (2007). Psychache as a mediator in the relationship between perfectionism and suicidality. *Journal of Counseling Psychology, 54*, 51-61. doi: 10.1037/0022-0167.54.1.51

- Fleming, M. (2008). On mental pain: From Freud to Bion. *International Forum of Psychoanalysis*, 17, 27-36. doi: 10.1080/08037060701743100
- Flett, R., Biggs, H., & Alpass, F. (1995). Job-related tension, self-esteem and psychological distress in rehabilitation professionals. *International Journal of Rehabilitation Research*, 18, 123-131.
- Foley, D. L., Goldston, D. B., Costello, E. J., & Angold, A. (2006). Proximal psychiatric risk factors for suicidality in youth: The Great Smoky Mountains study. *Archives of general psychiatry*, 63, 1017-1024. doi: 10.1001/archpsyc.63.9.1017
- Foster, T. (2003). Suicide note themes and suicide prevention. *International Journal of Psychiatry in Medicine*, 33, 323-331. doi: 10.2190/T210-E2V5-A5M0-QLJU
- Frankl, V. E. (1962). Psychiatry and man's quest for meaning. *Journal of Religion and Health*, 1, 93-103.
- Frederick, C. J., & Resnik, H. L. (1971). How suicidal behaviors are learned. *American Journal of Psychotherapy*, 25, 37-55.
- Freud, S. (1922). Mourning and melancholia. *The Journal of Nervous and Mental Disease*, 56, 543-545. doi: 10.1097/00005053-192211000-00066
- Freud, S. (1926). Inhibitions, symptoms and anxiety. In J. Strachey (Ed.), *The standard edition of the complete psychological works of Sigmund Freud: An autobiographical study, Inhibitions, symptoms and anxiety, The question of lay analysis and other works* (Vol. XX (1925-1926), pp. 1-292). London: The Hogarth Press and the Institute of Psycho-analysis.
- Freud, S. (1961/1995). The economic problems of masochism. In M. A. Fitzpatrick Hanly (Ed.), *Essential papers on masochism* (pp. 274-285). New York: New York University Press.

- Freud, S. (1962). *The ego and the id* (Translated by Riviere, J.; Strachey, J. ed.). London: Hogarth Press and the Institute of Psycho-Analysis.
- Frey, R. G. (1978). Did Socrates commit suicide? *Philosophy*, *53*(203), 106-108. doi: 10.1017/S0031819100016375
- Fusé, T. (1980). Suicide and culture in Japan: A study of seppuku as an institutionalized form of suicide. *Social Psychiatry*, *15*, 57-63. doi: 10.1007/BF00578069
- Gallese, V. (2003). The roots of empathy: The shared manifold hypothesis and the neural basis of intersubjectivity. *Psychopathology*, *36*, 171-180. doi: 10.1159/000072786
- Games, P. A., & Lucas, P. A. (1966). Power of the analysis of variance of independent groups on non-normal and normally transformed data. *Educational and Psychological Measurement*, *26*, 311-327. doi: 10.1177/001316446602600205
- Ganança, L., Oquendo, M. A., Tyrka, A. R., Cisneros-Trujillo, S., Mann, J. J., & Sublette, M. E. (2016). The role of cytokines in the pathophysiology of suicidal behavior. *Psychoneuroendocrinology*, *63*, 296-310. doi: 10.1016/j.psyneuen.2015.10.008
- Ganzini, L., Denneson, L. M., Press, N., Bair, M. J., Helmer, D. A., Poat, J., & Dobscha, S. K. (2013). Trust is the basis for effective suicide risk screening and assessment in veterans. *Journal of General Internal Medicine*, *28*, 1215-1221. doi: 10.1007/s11606-013-2412-6
- Garrison, E. P. (1991). Attitudes toward suicide in Ancient Greece. *Transactions of the American Philological Association (1974)*, *121*, 1-34. doi: 10.2307/284440
- Gerdes, K. E., Segal, E. A., & Lietz, C. A. (2010). Conceptualising and measuring empathy. *British Journal of Social Work*, *40*, 2326-2343. doi: 10.1093/bjsw/bcq048
- Gertler, B. (2003). Self-knowledge. In E. Zalta, N (Ed.), *The Stanford encyclopedia of philosophy* (Summer 2015 ed.): Center for the Study of Language and Information

(CSLI), Stanford University. Retrieved from

<http://plato.stanford.edu/archives/sum2015/entries/self-knowledge>.

Ghaziuddin, N., King, C. A., Naylor, M. W., & Ghaziuddin, M. (2000). Anxiety contributes to suicidality in depressed adolescents. *Depression and Anxiety, 11*, 134-138. doi: 10.1002/(SICI)1520-6394(2000)11:3<134::AID-DA9>3.0.CO2-V

Gifuni, A. J., Ding, Y., Olié, E., Lawrence, N., Cyprien, F., Le Bars, E., . . . Jollant, F. (2015). Subcortical nuclei volumes in suicidal behavior: nucleus accumbens may modulate the lethality of acts. *Brain Imaging and Behavior, In press*. doi: 10.1007/s11682-015-9369-5

Gil, S. (2005). Suicide attempters vs. ideators: Are there differences in personality profiles? *Archives of Suicide Research, 9*, 153-161. doi: 10.1080/13811110590904007

Goldberg, D. (2009). The interplay between biological and psychological factors in determining vulnerability to mental disorders. *Psychoanalytic Psychotherapy, 23*, 236-247. doi: 10.1080/02668730903220698

Goldblatt, M. J. (2008). Hostility and suicide: The experience of aggression from within and without. In S. Briggs, A. Lemma, & W. Crouch (Eds.), *Relating to self-harm and suicide: Psychoanalytic perspectives on practice, theory and prevention* (pp. 95-108). New York, NY: Routledge/Taylor & Francis Group; US.

Goldblatt, M. J., Herbstman, B., & Maltzberger, J. T. (2014). Superego distortions and self-attack. *Scandinavian Psychoanalytic Review, 37*, 15-23. doi: 10.1080/01062301.2014.891797

- Goldblatt, M. J., & Maltzberger, J. T. (2010). Self attack as a means of self-preservation. *International Journal of Applied Psychoanalytic Studies*, 7, 58-72. doi: 10.1002/aps.228
- Goldney, R. D. (2002). A global view of suicidal behaviour. *Emergency Medicine*, 14, 24-34. doi: 10.1046/j.1442-2026.2002.00282.x
- Goldney, R. D. (2010). A note on the reliability and validity of suicide statistics. *Psychiatry, Psychology and Law*, 17, 52-56. doi: 10.1080/13218710903268014
- Goldney, R. D. (2014). Time for change: Homicide bombers, not suicide bombers. *Australian and New Zealand Journal of Psychiatry*, 48, 579-584. doi: 10.1177/0004867414532552
- Gorsuch, R. L. (1983). *Factor analysis* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Gould, M. S., King, R., Greenwald, S., Fisher, P., Schwab-Stone, M., Kramer, R., . . . Shaffer, D. (1998). Psychopathology associated with suicidal ideation and attempts among children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 37, 915-923.
- Grayson, D. (2004). Some myths and legends in quantitative psychology. *Understanding Statistics*, 3, 101-134.
- Grbich, C. (1992). Societal response to familial role change in Australia: Marginalisation of social change? *Journal of Comparative Family Studies*, 23, 79-94.
- Gregory, R. L. (Ed.). (1987). *The Oxford companion to the mind*. US: Oxford University Press.
- Guimarães, R., Fleming, M., & Cardoso, M. F. (2013). Validation of the Orbach & Mikulincer Mental Pain scale (OMMP) on a drug addicted population. *Social*

*Psychiatry and Psychiatric Epidemiology*, 49, 405-415. doi: 10.1007/s00127-013-0751-6

Gündel, H., O'Connor, M. F., Littrell, L., Fort, C., & Lane, R. D. (2003). Functional neuroanatomy of grief: An fMRI study. *American Journal of Psychiatry*, 160, 1946-1953. doi: 10.1176/appi.ajp.160.11.1946

Gvion, Y., & Apter, A. (2012). Suicide and suicidal behavior. *Public Health Reviews*, 34(2), 1-17.

Gvion, Y., Horresh, N., Levi-Belz, Y., Fischel, T., Treves, I., Weiser, M., . . . Apter, A. (2014). Aggression-impulsivity, mental pain, and communication difficulties in medically serious and medically non-serious suicide attempters. *Comprehensive Psychiatry*, 55, 40-50. doi: 10.1016/j.comppsy.2013.09.003

Hall, S. S. (2013). Repairing bad memories. *Technology Review*, 116(4), 46-54.

Halling, S. (2008). *Intimacy, transcendence, and psychology: Closeness and openness in everyday life*. New York: Palgrave Macmillan.

Hamza, C. A., Stewart, S. L., & Willoughby, T. (2012). Examining the link between nonsuicidal self-injury and suicidal behavior: A review of the literature and an integrated model. *Clinical Psychology Review*, 32, 482-495. doi: 10.1016/j.cpr.2012.05.003

Hankoff, L. D., & Einsidler, B. (1979). *Suicide. Theory and clinical aspects* (L. D. Hankoff & B. Einsidler Eds.). Littleton, Massachusetts: PSG Publishing Company, Inc.

Hansen, N. B., Harrison, B., Fambro, S., Bodnar, S., Heckman, T. G., & Sikkema, K. J. (2013). The structure of coping among older adults living with HIV/AIDS and depressive symptoms. *Journal of Health Psychology*, 18, 198-211. doi: 10.1177/1359105312440299

- Harkess-Murphy, E., MacDonald, J., & Ramsay, J. (2013). Self-harm and psychosocial characteristics of looked after and looked after and accommodated young people. *Psychology, Health and Medicine, 18*, 289-299. doi: 10.1080/13548506.2012.712706
- Harvard University School of Public Health. (2017). *Means matter: Attempters' longterm survival*. Harvard University: Retrieved from <https://www.hsph.harvard.edu/means-matter/means-matter/survival/>.
- Hawley, J. S. (1994). *Sati, the blessing and the curse: The burning of wives in India*. New York: Oxford University Press, Inc. .
- Hawton, K., & Van Heeringen, K. (2009). Suicide. *The Lancet, 373*, 1372-1381. doi: 10.1016/S0140-6736(09)60372-X
- Hayter, M. R., & Dorstyn, D. S. (2014). Resilience, self-esteem and self-compassion in adults with spina bifida. *Spinal Cord, 52*, 167-171. doi: 10.1038/sc.2013.152
- Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational Research Methods, 7*, 191-205. doi: 10.1177/1094428104263675
- Hendin, H. (1961). Suicide: Psychoanalytic point of view. In N. L. Farberow & E. S. Shneidman (Eds.), *The cry for help* (pp. 181-192). New York, Toronto, London: The Blakiston Division, McGraw-Hill Book Company, Inc.
- Hendin, H. (1963). The psychodynamics of suicide. *Journal of Nervous and Mental Disease, 136*, 236-244.
- Hendin, H. (1991). Psychodynamics of suicide, with particular reference to the young. *American Journal of Psychiatry, 148*, 1150-1158.

- Hendin, H., Maltsberger, J. T., Haas, A. P., Szanto, K., & Rabinowicz, H. (2004). Desperation and other affective states in suicidal patients. *Suicide and Life-Threatening Behavior, 34*, 386-394. doi: 10.1521/suli.34.4.386.53734
- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the depression anxiety stress scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology, 44*, 227-239. doi: 10.1348/014466505X29657
- Henson, R. K. (2001). Understanding internal consistency reliability estimates: A conceptual primer on coefficient alpha. *Measurement and Evaluation in Counseling and Development, 34*, 177-189.
- Hill, R. M., Castellanos, D., & Pettit, J. W. (2011). Suicide-related behaviors and anxiety in children and adolescents: A review. *Clinical Psychology Review, 31*, 1133-1144. doi: 10.1016/j.cpr.2011.07.008
- Holden, R. R., Kerr, P. S., Mendonca, J. D., & Velamoor, V. R. (1998). Are some motives more linked to suicide proneness than others? *Journal of Clinical Psychology, 54*, 569-576. doi: 10.1002/(SICI)1097-4679(199808)54:5<569::AID-JCLP2>3.0.CO;2-G
- Holden, R. R., Mehta, K., Cunningham, E. J., & McLeod, L. D. (2001). Development and preliminary validation of a scale of psychache. *Canadian Journal of Behavioural Science, 33*, 224-232.
- Holden, R. R., Mendonca, J. D., & Serin, R. C. (1989). Suicide, hopelessness, and social desirability: A test of an interactive model. *Journal of Consulting and Clinical Psychology, 57*, 500-504.
- Holzinger, K. J., & Swineford, F. (1937). The bi-factor method. *Psychometrika, 2*, 41-54. doi: 10.1007/BF02287965

- Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika*, *30*, 179-185. doi: 10.1007/BF02289447
- Horney, K. (1950). *Neurosis and human growth: The struggle toward self-realization*. New York, London: W. W. Norton.
- Hoyt, D. P., & Magoon, T. M. (1954). A validation study of the Taylor Manifest Anxiety Scale. *Journal of Clinical Psychology*, *10*, 357-361. doi: 10.1002/1097-4679(195410)10:4<357::AID-JCLP2270100411>3.0.CO;2-0
- Humphrey, N. (2017). Awareness of death and personal mortality: Implications for anthropogeny: The lure of death: Suicide as a uniquely human phenomenon. *Center for Academic Research and Training in Anthropogeny*. from <https://carta.anthropogeny.org/events/awareness-death-and-personal-mortality-implications-anthropogeny>
- Iacoboni, M., & Dapretto, M. (2006). The mirror neuron system and the consequences of its dysfunction. *Nature Reviews Neuroscience*, *7*, 942-951. doi: 10.1038/nrn2024
- IBM Corp. (2012). IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.
- Iemmi, V., Bantjes, J., Coast, E., Channer, K., Leone, T., McDaid, D., . . . Lund, C. (2016). Suicide and poverty in low-income and middle-income countries: A systematic review. *The Lancet Psychiatry*, *3*, 774-783. doi: 10.1016/S2215-0366(16)30066-9
- Insel, T. R. (1997). A neurobiological basis of social attachment. *American Journal of Psychiatry*, *154*, 726-735.
- Isometsä, E. T., & Lönnqvist, J. K. (1998). Suicide attempts preceding completed suicide. *British Journal of Psychiatry*, *173*, 531-535.
- Israeli, R. (1997). Islamikaze and their significance. *Terrorism and Political Violence*, *9*, 96-121.

- James, W. (1890). Chapter 10: The consciousness of self. *The principles of psychology*.  
New York: Holt.
- Jeon, H. J., Park, J. I., Fava, M., Mischoulon, D., Sohn, J. H., Seong, S., . . . Cho, M. J. (2014).  
Feelings of worthlessness, traumatic experience, and their comorbidity in relation  
to lifetime suicide attempt in community adults with major depressive disorder.  
*Journal of Affective Disorders, 166*, 206-212. doi: 10.1016/j.jad.2014.05.010
- Jobes, D. A. (2011). Summary, next steps, and conclusion. In K. Michel & D. A. Jobes (Eds.),  
*Building a therapeutic alliance with the suicidal patient* (pp. 379-393). Washington,  
DC, US: American Psychological Association.
- Jobes, D. A., & Drozd, J. F. (2004). The CAMS approach to working with suicidal patients.  
*Journal of Contemporary Psychotherapy, 34*, 73-85. doi:  
10.1023/B:JOCP.0000010914.98781.6a
- Jobes, D. A., Kahn-Greene, E., Greene, J. A., & Goeke-Morey, M. (2009). Clinical  
improvements of suicidal outpatients: Examining suicide status form responses as  
predictors and moderators. *Archives of Suicide Research, 13*, 147-159. doi:  
10.1080/138111110902835080
- Jobes, D. A., & Nelson, K. N. (2006). Shneidman's contributions to the understanding of  
suicidal thinking. In T. E. Ellis (Ed.), *Cognition and suicide: Theory, research, and  
therapy* (Vol. xviii, pp. 29-49). Washington, DC, US: American Psychological  
Association.
- Jobes, D. A., Nelson, K. N., Peterson, E. M., Pentiuic, D., Downing, V., Francini, K., &  
Kiernan, A. (2004). Describing suicidality: An investigation of qualitative SSF  
responses. *Suicide and Life-Threatening Behavior, 34*, 99-112. doi:  
10.1521/suli.34.2.99.32788

- Joe, S., Baser, R. E., Breeden, G., Neighbors, H. W., & Jackson, J. S. (2006). Prevalence of and risk factors for lifetime suicide attempts among blacks in the united states. *JAMA: The Journal of the American Medical Association*, *296*, 2112-2123. doi: 10.1001/jama.296.17.2112
- Joffe, W. G., & Sandler, J. (1967). On the concept of pain, with special reference to depression and psychogenic pain. *Journal of Psychosomatic Research*, *11*, 69-75.
- Johns, D., & Holden, R. R. (1997). Differentiating suicidal motivations and manifestations in a nonclinical population. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, *29*, 266-274. doi: 10.1037/0008-400X.29.4.266
- Joiner Jr, T. E., Brown, J. S., & Wingate, L. R. (2005). The psychology and neurobiology of suicidal behavior. *Annual Review of Psychology*, *56*, 287-314. doi: 10.1146/annurev.psych.56.091103.070320
- Joiner Jr, T. E., Gencoz, F., Gencoz, T., Metalsky, G. I., & Rudd, M. D. (2001). The relation of self-hatred and suicidality in people with schizophrenia-spectrum symptoms. *Journal of Psychopathology and Behavioral Assessment*, *23*, 107-115.
- Joiner Jr, T. E., Johnson, F., & Soderstrom, K. (2002). Association between serotonin transporter gene polymorphism and family history of attempted and completed suicide. *Suicide and Life-Threatening Behavior*, *32*, 329-332. doi: 10.1521/suli.32.3.329.22167
- Joiner Jr, T. E., & Rudd, M. D. (1996). Disentangling the interrelations between hopelessness, loneliness, and suicidal ideation. *Suicide and Life-Threatening Behavior*, *26*, 19-26.
- Joiner, T. E. (2005). *Why people die by suicide*. Cambridge: Harvard University Press.

- Jokinen, J., Chatzittofis, A., Hellström, C., Nordström, P., Uvnäs-Moberg, K., & Åsberg, M. (2012). Low CSF oxytocin reflects high intent in suicide attempters. *Psychoneuroendocrinology*, *37*, 482-490. doi: 10.1016/j.psyneuen.2011.07.016
- Jokinen, J., & Nordström, P. (2008). HPA axis hyperactivity as suicide predictor in elderly mood disorder inpatients. *Psychoneuroendocrinology*, *33*, 1387-1393. doi: 10.1016/j.psyneuen.2008.07.012
- Jollant, F. (2016). Neuroimaging of suicidal behavior. *Advances in Biological Psychiatry*, *30*, 110-122. doi: 10.1159/000434744
- Jollant, F., Lawrence, N. S., Olie, E., O'Daly, O., Malafosse, A., Courtet, P., & Phillips, M. L. (2010). Decreased activation of lateral orbitofrontal cortex during risky choices under uncertainty is associated with disadvantageous decision-making and suicidal behavior. *NeuroImage*, *51*, 1275-1281. doi: 10.1016/j.neuroimage.2010.03.027
- Jollant, F., Lemogne, C., & Fossati, P. (2017). Self-reference in suicidal behaviour. *Cognitive Neuropsychiatry*, *In press*, 1-9. doi: 10.1080/13546805.2017.1399114
- Jordan, J. V. (1997). Relational development through mutual empathy. In A. C. Bohart & L. S. Greenberg (Eds.), *Empathy reconsidered: New directions in psychotherapy* (pp. 343-351). Washington, DC, US: American Psychological Association.
- Jordan, J. V. (2001). A relational-cultural model: Healing through mutual empathy. *Bulletin of the Menninger Clinic*, *65*, 92-103. doi: 10.1521/bumc.65.1.92.18707
- Joukamaa, M., Luutonen, S., Von Reventlow, H., Patterson, P., Karlsson, H., & Salokangas, R. K. R. (2008). Alexithymia and childhood abuse among patients attending primary and psychiatric care: Results of the RADEP study. *Psychosomatics*, *49*, 317-325. doi: 10.1176/appi.psy.49.4.317

- Jung, C. G. (1954). *The collected works of C.G. Jung*. [Editors: Sir H. Read, M. Fordham, G. Adler; translated from the German by R.F.C. Hull]. London: Routledge & Kegan Paul.
- Kacel, E., Gao, X., & Prigerson, H. G. (2011). Understanding bereavement: What every oncology practitioner should know. *Journal of Supportive Oncology, 9*, 172-180. doi: 10.1016/j.suponc.2011.04.007
- Kahn, E., & Rachman, A. W. (2000). Carl Rogers and Heinz Kohut: A historical perspective. *Psychoanalytic Psychology, 17*, 294-312. doi: 10.1037//0736-9735.17.2.294
- Kanter, J. W., Parker, C. R., & Kohlenberg, R. J. (2001). Finding the self: A behavioral measure and its clinical implications. *Psychotherapy, 38*, 198-211.
- Kaplan, R. D., Kottler, D. B., & Frances, A. J. (1982). Reliability and rationality in the prediction of suicide. *Hospital and Community Psychiatry, 33*, 212-215.
- Kavanaugh, K., & Ayres, L. (1998). "Not as bad as it could have been": Assessing and mitigating harm during research interviews on sensitive topics. *Research in Nursing and Health, 21*, 91-97.
- Kehrer, C. A., & Linehan, M. M. (1996). Interpersonal and emotional problem solving skills and parasuicide among women with borderline personality disorder. *Journal of Personality Disorders, 10*, 153-163.
- Keilp, J. G., Stanley, B. H., Beers, S. R., Melhem, N. M., Burke, A. K., Cooper, T. B., . . . John Mann, J. (2016). Further evidence of low baseline cortisol levels in suicide attempters. *Journal of Affective Disorders, 190*, 187-192. doi: 10.1016/j.jad.2015.10.012

- Keith-Spiegel, P., & Spiegel, D. E. (1967). Affective states of patients immediately preceding suicide. *Journal of Psychiatric Research*, *5*, 89-93. doi: 10.1016/0022-3956(67)90025-8
- Keller, H. (2016). Attachment. A pancultural need but a cultural construct. *Current Opinion in Psychology*, *8*, 59-63.
- Kellison, I., Bussing, R., Bell, L., & Garvan, C. (2010). Assessment of stigma associated with attention-deficit hyperactivity disorder: Psychometric evaluation of the ADHD Stigma Questionnaire. *Psychiatry Research*, *178*, 363-369. doi: 10.1016/j.psychres.2009.04.022
- Kelly, G. A. (1961). Suicide: the personal construct point of view. In N. L. Farberow & E. S. Shneidman (Eds.), *The cry for help* (pp. 255-280). New York, Toronto, London: McGraw-Hill Book Company, Inc. The Blakiston Division.
- Kendall, E. (1954). The Validity of Taylor's Manifest Anxiety Scale. *Journal of Consulting Psychology*, *18*, 429-432. doi: 10.1037/h0057760
- Kennedy, T., Rae, M., Sheridan, A., & Valadkhani, A. (2017). Reducing gender wage inequality increases economic prosperity for all: Insights from Australia. *Economic Analysis and Policy*, *55*, 14-24. doi: 10.1016/j.eap.2017.04.003
- Kenny, D. A. (2015). Moderator variables. from <http://davidakenny.net/cm/moderation.htm#DD>
- Ker, J. (2010). *The Deaths of Seneca*. New York: Oxford University Press, Inc.
- Kersten, P. M. (1958). Psychic pain. *Journal. Iowa State Medical Society*, *48*, 16-18.
- Khazem, L. R., & Anestis, M. D. (2016). Thinking or doing? An examination of well-established suicide correlates within the ideation-to-action framework. *Psychiatry Research*, *245*, 321-326. doi: 10.1016/j.psychres.2016.08.038

- Kleiman, E. M., & Riskind, J. H. (2013). Utilized social support and self-esteem mediate the relationship between perceived social support and suicide ideation: A test of a multiple mediator model. *Crisis, 34*, 42-49. doi: 10.1027/0227-5910/a000159
- Klein, D. F. (1974). Endogenomorphic depression. A conceptual and terminological revision. *Archives of general psychiatry, 31*, 447-454.
- Klonsky, E. D., & Muehlenkamp, J. J. (2007). Self-injury: A research review for the practitioner. *Journal of Clinical Psychology, 63*, 1045-1056. doi: 10.1002/jclp.20412
- Klugman, D. (2002). The existential side of Kohut's Tragic Man. *Clinical Social Work Journal, 30*, 9-21. doi: 10.1023/a:1014270210519
- Kohut, H. (1959). Introspection, empathy, and psychoanalysis. An examination of the relationship between mode of observation and theory. *Journal of the American Psychoanalytic Association, 7*, 459-483. doi: 10.1177/000306515900700304
- Kohut, H. (1966). Forms and transformations of narcissism. *Journal of the American Psychoanalytic Association, 14*, 243-272.
- Kohut, H. (1971). *The analysis of the self: A systematic approach to the psychoanalytic treatment of narcissistic personality disorders*. Chicago, IL: University of Chicago Press.
- Kohut, H. (1972). Thoughts on narcissism and narcissistic rage. *Psychoanalytic Study of the Child, 27*, 360-400.
- Kohut, H. (1977). *The restoration of the self*. New York: International Universities Press.
- Kohut, H. (1978). *The search for the self: Selected writings of Heinz Kohut: 1950-1978 [Edited by P. Ornstein]* (Vol. 1). New York: International Universities Press, Inc.
- Kohut, H. (1981/2010). On empathy (1981). *International Journal of Psychoanalytic Self Psychology, 5*, 122-131. doi: 10.1080/15551021003610026

- Kohut, H. (1982). Introspection, empathy, and the semi-circle of mental health. *International Journal of Psycho-Analysis*, 63, 395-407.
- Kohut, H. (1984). *How does analysis cure?* (H. Kohut Ed.). Chicago, IL: University of Chicago Press.
- Kohut, H. (1991). *Search for the self: Selected writings of Heinz Kohut, 1978-1981* (P. Ornstein Ed.). New York: International Universities Press.
- Kohut, H. (1994). Self deficits and addiction. In J. D. Levin & R. H. Weiss (Eds.), *The dynamics and treatment of alcoholism: Essential papers* (pp. 344-346). US: Jason Aronson Inc.
- Kohut, H. (2011). Four basic concepts in self psychology (1979). In H. Kohut & P. Ornstein (Eds.), *The search for the self* (pp. 447-470). London: Karnac Books.
- Kohut, H., & Goldberg, A. (Eds.). (1978). *The psychology of the self: A casebook*. New York: International Universities Press.
- Kohut, H., & Wolf, E. S. (1978). The disorders of the self and their treatment: An outline. *International Journal of Psycho-Analysis*, 59, 413-425.
- Kohyama, J. (2013). Serotonin is a key neurotransmitter in suicide. *Serotonergic Systems: Evolution, Functions and Roles in Disease* (pp. 147-160): Nova Science Publishers, Inc.
- Kral, M. J., Links, P. S., & Bergmans, Y. (2012). Suicide studies and the need for mixed methods research. *Journal of Mixed Methods Research*, 6, 236-249. doi: 10.1177/1558689811423914
- Kral, M. J., & Sakinofsky, I. (1994). Clinical model for suicide risk assessment. *Death Studies*, 18, 311-326.

- Lachal, J., Orri, M., Sibeoni, J., Moro, M. R., & Revah-Levy, A. (2015). Metasynthesis of youth suicidal behaviours: Perspectives of youth, parents, and health care professionals. *PLoS ONE*, *10*(5), 1 - 25. doi: 10.1371/journal.pone.0127359
- Lakeman, R., & Fitzgerald, M. (2008). How people live with or get over being suicidal: A review of qualitative studies. *Journal of advanced nursing*, *64*, 114-126. doi: 10.1111/j.1365-2648.2008.04773.x
- Lahey, C. E., Hirsch, J. K., Nelson, L. A., & Nsamenang, S. A. (2014a). Effects of contingent self-esteem on depressive symptoms and suicidal behavior. *Death Studies*. doi: 10.1080/07481187.2013.809035
- Lahey, C. E., Hirsch, J. K., Nelson, L. A., & Nsamenang, S. A. (2014b). Effects of contingent self-esteem on depressive symptoms and suicidal behavior. *Death Studies*, *38*, 563-570. doi: 10.1080/07481187.2013.809035
- Lam, B. C. P., Bond, M. H., Chen, S. X., & Wu, W. C. H. (2010). Worldviews and individual vulnerability to suicide: The role of social axioms. *European Journal of Personality*, *24*, 602-622. doi: 10.1002/per.762
- Lamers, F., Van Oppen, P., Comijs, H. C., Smit, J. H., Spinhoven, P., Van Balkom, A. J. L. M., . . . Penninx, B. W. J. H. (2011). Comorbidity patterns of anxiety and depressive disorders in a large cohort study: The Netherlands Study of Depression and Anxiety (NESDA). *Journal of Clinical Psychiatry*, *72*, 342-348. doi: 10.4088/JCP.10m06176blu
- Lamis, D. A., Wilson, C. K., Shahane, A. A., & Kaslow, N. J. (2014). Mediators of the childhood emotional abuse-hopelessness association in African American women. *Child Abuse and Neglect*, *38*, 1341-1350. doi: 10.1016/j.chiabu.2013.11.006

- Lara, M. A., Navarrete, L., Nieto, L., & Le, H. N. (2015). Childhood abuse increases the risk of depressive and anxiety symptoms and history of suicidal behavior in Mexican pregnant women. *Revista Brasileira de Psiquiatria, 37*, 203-210. doi: 10.1590/1516-4446-2014-1479
- Lauterbach, C. G. (1958). The Taylor A Scale and clinical measures of anxiety. *Journal of Consulting Psychology, 22*, 314. doi: 10.1037/h0045750
- Lechtenberg, S., & Lam, B. (2011). The suicide paradox [Radio podcast]. United States: Freakonomics, LLC.
- Lecomte, D., & Fornes, P. (1998). Suicide among youth and young adults, 15 through 24 years of age. A report of 392 cases from Paris, 1989-1996. *Journal of Forensic Sciences, 43*, 964-968.
- Ledgerwood, D. M. (1999). Suicide and attachment: Fear of abandonment and isolation from a developmental perspective. *Journal of Contemporary Psychotherapy, 29*, 65-73. doi: 10.1023/A:1022909326217
- LeDoux, J. (2003). The self: Clues from the brain. *Annals of the New York Academy of Sciences, 1001*, 295-304. doi: 10.1196/annals.1279.017
- Lee, A. Y. S., & Pridmore, S. (2014). Emerging correlations between measures of population well-being, suicide and homicide: A look at global and Australian data. *Australasian Psychiatry, 22*, 112-117. doi: 10.1177/1039856213510577
- Lee, R., Ferris, C., Van de Kar, L. D., & Coccaro, E. F. (2009). Cerebrospinal fluid oxytocin, life history of aggression, and personality disorder. *Psychoneuroendocrinology, 34*, 1567-1573. doi: 10.1016/j.psyneuen.2009.06.002
- Leenaars, A. A. (1996). Suicide: A multidimensional malaise. *Suicide and Life-Threatening Behavior, 26*, 221-236.

- Leenaars, A. A. (2002). The quantitative and qualitative in suicidological science: An editorial. *Archives of Suicide Research, 6*, 1-3. doi: 10.1080/13811110213121
- Leenaars, A. A. (2004). *Psychotherapy with suicidal people. A person-centred approach*. Chichester: John Wiley & Sons, Ltd.
- Leenaars, A. A. (2005). Psychotherapy with suicidal people: Some notes and a case illustration at the end of the suicidal road *Psychotherapy in Australia, 11*(2), 34-44.
- Leenaars, A. A., & Lester, D. (2004). A note on Shneidman's psychological pain assessment scale. *Omega: Journal of Death and Dying, 50*, 301-307. doi: 10.2190/WH9X-80M3-NJ54-5GCU
- Leffers, J. M., Martins, D. C., McGrath, M. M., Brown, D. G., Mercer, J., Sullivan, M. C., & Viau, P. (2004). Development of a theoretical construct for risk and vulnerability from six empirical studies. *Research and theory for nursing practice, 18*, 15-34.
- Leonard, C. V. (1977). The MMPI as a suicide predictor. *Journal of Consulting and Clinical Psychology, 45*, 367-377. doi: 10.1037//0022-006X.45.3.367
- Lester, D. (1994). A comparison of 15 theories of suicide. *Suicide and Life-Threatening Behavior, 24*, 80-88. doi: 10.1111/j.1943-278X.1994.tb00665.x
- Lester, D. (1997a). The role of shame in suicide. *Suicide and Life-Threatening Behavior, 27*, 352-361.
- Lester, D. (1997b). Suicidality in German concentration camps. *Archives of Suicide Research, 3*, 223-224. doi: 10.1080/13811119708258274
- Lester, D. (1998). The association of shame and guilt with suicidality. *Journal of Social Psychology, 138*, 535-536.
- Lester, D. (2000). Psychache, depression, and personality. *Psychological Reports, 87*, 940.

- Lester, D. (2013). An essay on loss of self versus escape from self in suicide: Illustrative cases from diaries left by those who died by suicide. *Suicidology Online*, 4, 16-20.
- Lester, D. (2014). *The "I" of the storm : Understanding the suicidal mind*. Warschau/Berlin, DE: De Gruyter Open.
- Lester, D., & Saito, Y. (1998). The reasons for suicide in Japan. *Omega*, 38(1), 65-68.
- Levi, Y., Horesh, N., Fischel, T., Treves, I., Or, E., & Apter, A. (2008). Mental pain and its communication in medically serious suicide attempts: An "impossible situation". *Journal of Affective Disorders*, 111, 244-250. doi: 10.1016/j.jad.2008.02.022
- Levine, D. W., & Dunlap, W. P. (1982). Power of the F test with skewed data: Should one transform or not? *Psychological Bulletin*, 92, 272-280. doi: 10.1037/0033-2909.92.1.272
- Lewitzka, U., Spirling, S., Ritter, D., Smolka, M., Goodday, S., Bauer, M., . . . Bschor, T. (2017). Suicidal ideation vs. suicide attempts: Clinical and psychosocial profile differences among depressed patients: A study on personality traits, psychopathological variables, and sociodemographic factors in 228 patients. *Journal of Nervous and Mental Disease*, *In press*. doi: 10.1097/NMD.0000000000000667
- Li, H., Xie, W., Luo, X., Fu, R., Shi, C., Ying, X., . . . Wang, X. (2014). Clarifying the role of psychological pain in the risks of suicidal ideation and suicidal acts among patients with major depressive episodes. *Suicide and Life-Threatening Behavior*, 44, 78-88. doi: 10.1111/sltb.12056
- Li, S., Galynker, I. I., Briggs, J., Duffy, M., Frechette-Hagan, A., Kim, H. J., . . . Yaseen, Z. S. (2017). Attachment style and suicide behaviors in high risk psychiatric inpatients

- following hospital discharge: The mediating role of entrapment. *Psychiatry Research*, 257, 309-314. doi: 10.1016/j.psychres.2017.07.072
- Lichtenberg, J. D. (1996). Caregiver-infant, analyst-analysand exchanges: Models of interaction. *Psychoanalytic Inquiry*, 16, 54-66.
- Lichtenberg, J. D., & Kindler, A. R. (1994). A motivational systems approach to the clinical experience. *Journal of the American Psychoanalytic Association*, 42, 405-420.
- Lin, C. C. (2015). The relationships among gratitude, self-esteem, depression, and suicidal ideation among undergraduate students. *Scandinavian Journal of Psychology*, 56, 700-707. doi: 10.1111/sjop.12252
- Lindelov, M., Hardy, R., & Rodgers, B. (1997). Development of a scale to measure symptoms of anxiety and depression in the general UK population: The psychiatric symptom frequency scale. *Journal of Epidemiology and Community Health*, 51, 549-557.
- Linehan, M. M. (1993). *Cognitive behavioral therapy of borderline personality disorder*. New York: Guilford Press.
- Linehan, M. M., Chiles, J. A., Egan, K. J., Devine, R. H., & Laffaw, J. A. (1986). Presenting problems of parasuicides versus suicide ideators and nonsuicidal psychiatric patients. *Journal of Consulting and Clinical Psychology*, 54, 880-881. doi: 10.1037/0022-006X.54.6.880
- Linehan, M. M., Comtois, K. A., & Ward-Ciesielski, E. F. (2012). Assessing and managing risk with suicidal individuals. *Cognitive and Behavioral Practice*, 19, 218-232. doi: 10.1016/j.cbpra.2010.11.008

- Linehan, M. M., & Shearin, E. (1988). Lethal stress: A social-behavioural model of suicidal behaviour. In S. Fisher & J. Reason (Eds.), *Handbook of life stress, cognition, and health* (pp. 265-285). New York: Wiley.
- Litman, R. E., & Farberow, N. L. (1961). Emergency evaluation of self-destructive potentiality. In N. L. Farberow & E. S. Shneidman (Eds.), *The cry for help* (pp. 48-59). New York, Toronto, London: The Blakiston Division, McGraw-Hill Book Company, Inc.
- Lizardi, D., Grunebaum, M. F., Burke, A., Stanley, B., Mann, J. J., Harkavy-Friedman, J., & Oquendo, M. (2011). The effect of social adjustment and attachment style on suicidal behaviour. *Acta Psychiatrica Scandinavica*, *124*, 295-300. doi: 10.1111/j.1600-0447.2011.01724.x
- Lopez-Castroman, J., Jaussent, I., Beziat, S., Genty, C., Olié, E., De Leon-Martinez, V., . . . Guillaume, S. (2012). Suicidal phenotypes associated with family history of suicidal behavior and early traumatic experiences. *Journal of Affective Disorders*, *142*, 193-199. doi: 10.1016/j.jad.2012.04.025
- Lovibond, P. F. (1998). Long-term stability of depression, anxiety, and stress syndromes. *Journal of Abnormal Psychology*, *107*, 520-526. doi: 10.1037/0021-843X.107.3.520
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck depression and anxiety inventories. *Behaviour Research and Therapy*, *33*, 335-343. doi: 10.1016/0005-7967(94)00075-U
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scales*. Sydney: Psychology Foundation.

- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1*, 130-149.
- MacDonald, G., & Leary, M. R. (2005). Why does social exclusion hurt? The relationship between social and physical pain. *Psychological Bulletin, 131*, 202-223. doi: 10.1037/0033-2909.131.2.202
- MacIsaac, D. S. (1997). Empathy: Heinz Kohut's contribution. In A. C. Bohart & L. S. Greenberg (Eds.), *Empathy reconsidered: New directions in psychotherapy*. (pp. 245-264). Washington, DC, US: American Psychological Association.
- Macleod, A. K., Williams, J. M. G., & Linehan, M. M. (1992). New developments in the understanding and treatment of suicidal behaviour. *Behavioural Psychotherapy, 20*, 193-218. doi: 10.1017/S0141347300017201
- MacLeod, C., Mathews, A., & Tata, P. (1986). Attentional bias in emotional disorders. *Journal of Abnormal Psychology, 95*, 15-20. doi: 10.1037/0021-843X.95.1.15
- Maier, S. F., & Seligman, M. E. (1976). Learned helplessness: Theory and evidence. *Journal of Experimental Psychology: General, 105*, 3-46. doi: 10.1037/0096-3445.105.1.3
- Maiese, A., Gitto, L., Dell'Aquila, M., & Bolino, G. (2014). A peculiar case of suicide enacted through the ancient Japanese ritual of Jigai. *American Journal of Forensic Medicine and Pathology, 35*, 8-10. doi: 10.1097/PAF.0000000000000070
- Maltsberger, J. T. (1993). Confusions of the body, the self, and others in suicidal states. *Suicidology: Essays in honor of Edwin S Shneidman* (pp. 148-171). Lanham, MD: Jason Aronson; US.
- Maltsberger, J. T. (1997). Ecstatic suicide. *Archives of Suicide Research, 3*, 283-301. doi: 10.1023/A:1009686803234

- Maltsberger, J. T. (2004). The descent into suicide. *International Journal of Psychoanalysis*, *85*, 653-668. doi: 10.1516/002075704774200799
- Maltsberger, J. T., Gill, M. J., & Orbach, I. (1996). Roberta Hyalos: A case of hidden psychosis *Suicide and Life-Threatening Behavior*, *26*, 308-314.
- Mann, J. J., Waternaux, C., Haas, G. L., & Malone, K. M. (1999). Toward a clinical model of suicidal behavior in psychiatric patients. *American Journal of Psychiatry*, *156*, 181-189.
- Marcus, D. A. (2009). Fibromyalgia: Diagnosis and treatment options. *Gender Medicine*, *6*, 139-151. doi: 10.1016/j.genm.2009.01.004
- Maris, R. W. (1997). Social and familial risk factors in suicidal behavior. *Psychiatric Clinics of North America*, *20*, 519-550. doi: 10.1016/S0193-953X(05)70328-2
- Marquardt, D. W. (1970). Generalized inverses, ridge regression, biased linear estimation, and nonlinear estimation. *Technometrics*, *12*, 591-612. doi: 10.1080/00401706.1970.10488699
- Marquardt, D. W., & Snee, R. D. (1975). Ridge regression in practice. *American Statistician*, *29*, 3-20. doi: 10.1080/00031305.1975.10479105
- Martin, J. S., Ghahramanlou-Holloway, M., Englert, D. R., Bakalar, J. L., Olsen, C., Nademin, E. M., . . . Branlund, S. (2013). Marital status, life stressor precipitants, and communications of distress and suicide intent in a sample of United States air force suicide decedents. *Archives of Suicide Research*, *17*, 148-160. doi: 10.1080/13811118.2013.776456
- Marzuk, P. M., Hartwell, N., Leon, A. C., & Portera, L. (2005). Executive functioning in depressed patients with suicidal ideation. *Acta Psychiatrica Scandinavica*, *112*, 294-301. doi: 10.1111/j.1600-0447.2005.00585.x

- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, *50*, 370-396.  
doi: 10.1037/h0054346
- Masson, M., & Muirheid-Delacroix, B. (2014). Psychological pain: A French-speaking clinical concept revisited. *Annales Medico-Psychologiques*, *172*, 139-145. doi: 10.1016/j.amp.2014.01.006
- Matthews, S., Spadoni, A., Knox, K., Strigo, I., & Simmons, A. (2012). Combat-exposed war veterans at risk for suicide show hyperactivation of prefrontal cortex and anterior cingulate during error processing. *Psychosomatic Medicine*, *74*, 471-475. doi: 10.1097/PSY.0b013e31824f888f
- Mayo, D. J. (1983). Contemporary philosophical literature on suicide: A review. *Suicide and Life-Threatening Behavior*, *13*, 313-345. doi: 10.1111/j.1943-278X.1983.tb00027.x
- Mazmanian, D., Mendonca, J. D., Holden, R. R., & Dufton, B. (1987). Psychopathology and response styles in the SCL-90 responses of acutely distressed persons. *Journal of Psychopathology and Behavioral Assessment*, *9*, 135-148. doi: 10.1007/BF00960570
- McClelland, G. H., & Judd, C. M. (1993). Statistical difficulties of detecting interactions and moderator effects. *Psychological Bulletin*, *114*, 376-390. doi: 10.1037/0033-2909.114.2.376
- McKelvey, R. S., Davies, L. C., Pfaff, J. J., Acres, J., & Edwards, S. (1998). Psychological distress and suicidal ideation among 15-24-year-olds presenting to general practice: A pilot study. *Australian and New Zealand Journal of Psychiatry*, *32*, 344-348.

- McKeown, A., Clarbour, J., Heron, R., & Thomson, N. D. (2017). Attachment, coping, and suicidal behavior in male prisoners. *Criminal Justice and Behavior, 44*, 566-588. doi: 10.1177/0093854816683742
- McLaughlin, C. (2007). *Suicide-related behaviour. Understanding, caring and therapeutic responses*. Chichester, England: John Wiley & Sons, Ltd.
- McMillan, F. D. (2005). Stress, distress, and emotion: Distinctions and implications for mental well-being. In F. D. McMillan (Ed.), *Mental health and well-being in animals* (1st ed. ed.). Ames, Iowa: Blackwell Publishing Ltd.
- Mearns, R. (1996). The psychology of self: An update. *Australian and New Zealand Journal of Psychiatry, 30*, 312-316.
- Mee, S., Bunney, B. G., Bunney, W. E., Hetrick, W., Potkin, S. G., & Reist, C. (2011). Assessment of psychological pain in major depressive episodes. *Journal of Psychiatric Research, 45*, 1504-1510. doi: 10.1016/j.jpsychires.2011.06.011
- Mee, S., Bunney, B. G., Reist, C., Potkin, S. G., & Bunney, W. E. (2006). Psychological pain: A review of evidence. *Journal of Psychiatric Research, 40*, 680-690. doi: 10.1016/j.jpsychires.2006.03.003
- Meerwijk, E. L., Chesla, C. A., & Weiss, S. J. (2014). Psychological pain and reduced resting-state heart rate variability in adults with a history of depression. *Psychophysiology, 51*, 247-256. doi: 10.1111/psyp.12175
- Meerwijk, E. L., Ford, J. M., & Weiss, S. J. (2013). Suicidal crises because of diminishing tolerance to psychological pain. *Brain Imaging and Behavior, 7*, 245-247. doi: 10.1007/s11682-013-9234-3
- Meerwijk, E. L., & Weiss, S. J. (2011). Toward a unifying definition of psychological pain. *Journal of Loss and Trauma, 16*, 402-412. doi: 10.1080/15325024.2011.572044

- Mendonca, J. D., & Holden, R. R. (1996). Are all suicidal ideas closely linked to hopelessness? *Acta Psychiatrica Scandinavica*, *93*, 246-251.
- Menninger, K. A. (1938a). *Man against himself*. New York: Harcourt, Brace & World.
- Menninger, K. A. (1938b). Psychoanalytic aspects of suicide. *The Psychoanalytic Review*, *25*, 571-576.
- Mikulincer, M., & Florian, V. (2002). The effects of mortality salience on self-serving attributions - Evidence for the function of self-esteem as a terror management mechanism. *Basic and Applied Social Psychology*, *24*, 261-271.
- Mikulincer, M., Gillath, O., Halevy, V., Avihou, N., Avidan, S., & Eshkoli, N. (2001). Attachment theory and reactions to others' needs: Evidence that activation of the sense of attachment security promotes empathic responses. *Journal of Personality and Social Psychology*, *81*, 1205-1224. doi: 10.1037//0022-3514.81.6.1205
- Mikulincer, M., & Orbach, I. (1995). Attachment styles and repressive defensiveness: The accessibility and architecture of affective memories. *Journal of Personality and Social Psychology*, *68*, 917-925.
- Miller, J. M., Hesselgrave, N., Ogden, R. T., Sullivan, G. M., Oquendo, M. A., Mann, J. J., & Parsey, R. V. (2013). Positron emission tomography quantification of serotonin transporter in suicide attempters with major depressive disorder. *Biological Psychiatry*, *74*, 287-295. doi: 10.1016/j.biopsych.2013.01.024
- Mills, J. F., Green, K., & Reddon, J. R. (2005). An evaluation of the psychache scale on an offender population. *Suicide and Life-Threatening Behavior*, *35*, 570-580. doi: 10.1521/suli.2005.35.5.570

- Mishara, B. L. (1999). Conceptions of death and suicide in children ages 6-12 and their implications for suicide prevention. *Suicide and Life-Threatening Behavior, 29*, 105-118.
- Mishara, B. L. (2006). Cultural specificity and universality of suicide: Challenges for the International Association for Suicide Prevention. *Crisis, 27*, 1-3. doi: 10.1027/0227-5910.27.1.1
- Mishara, B. L., & Weisstub, D. N. (2005). Ethical and legal issues in suicide research. *International Journal of Law and Psychiatry, 28*, 23-41.
- Modai, I., Kuperman, J., Goldberg, I., Goldish, M., & Mendel, S. (2004). Suicide risk factors and suicide vulnerability in various major psychiatric disorders. *Medical Informatics and the Internet in Medicine, 29*, 65-74. doi: 10.1080/14639230410001662651
- Moore, C. (1790). *A full inquiry into the subject of suicide: To which are added (as being closely connected with the subject) two treatises on duelling and gaming* (Vol. 1 and 2). London: J. F. and C. Rivington. Retrieved from Google eBooks [https://books.google.com.au/books?id=f24PAAAAIAAJ&printsec=frontcover&dq=inauthor:"22Charles+Moore"&hl=en&sa=X&ved=0ahUKEwi3mcbny6XRAhUojFQKHUEEDucQ6AEIPzAI#v=onepage&q&f=false](https://books.google.com.au/books?id=f24PAAAAIAAJ&printsec=frontcover&dq=inauthor:).
- Morgan, W. G. (2002). Origin and history of the earliest thematic apperception test pictures. *Journal of Personality Assessment, 79*, 422-445.
- Morrison, A. P. (1997). *Shame: The underside of narcissism*. Hillsdale, NJ, US: Analytic Press, Inc.
- Morse, J. M. (1994). Critical issues in qualitative research methods. In J. M. Morse (Ed.), *Qualitative research methods*. Thousand Oaks, CA: Sage Pub.

- Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.
- Myung, I. J. (2003). Tutorial on maximum likelihood estimation. *Journal of Mathematical Psychology, 47*, 90-100. doi: 10.1016/S0022-2496(02)00028-7
- Næs, T., & Mevik, B. H. (2001). Understanding the collinearity problem in regression and discriminant analysis. *Journal of Chemometrics, 15*, 413-426. doi: 10.1002/cem.676
- Nahaliel, S., Sommerfeld, E., Orbach, I., Weller, A., Apter, A., & Zalsman, G. (2014). Mental pain as a mediator of suicidal tendency: A path analysis. *Comprehensive Psychiatry, 55*, 944-951. doi: 10.1016/j.comppsy.2013.12.014
- Nash, W. P., Marino Carper, T. L., Alice Mills, M., Au, T., Goldsmith, A., & Litz, B. T. (2013). Psychometric evaluation of the moral injury events scale. *Military Medicine, 178*, 646-652. doi: 10.7205/MILMED-D-13-00017
- National Action Alliance for Suicide Prevention: Research Prioritization Task Force. (2014). *A prioritized research agenda for suicide prevention: An action plan to save lives*. Rockville, MD, USA: National Institute of Mental Health and the Research Prioritization Task Force. Retrieved from [www.suicide-research-agenda.org](http://www.suicide-research-agenda.org).
- Neimeyer, R. A. (1995). Constructivist psychotherapies: Features, foundations, and future directions. In R. A. Neimeyer & M. J. Mahoney (Eds.), *Constructivism in psychotherapy* (pp. 11-38). Washington, DC, US: American Psychological Association.
- Neimeyer, R. A., & Winter, D. A. (2006). To be or not to be: Personal constructions of the suicidal choice. In T. E. Ellis (Ed.), *Cognition and suicide: Theory, research, and therapy* (Vol. xviii, pp. 149-169). Washington, DC, US: American Psychological Association.

- Neisser, U. (1988). Five kinds of self-knowledge. *Philosophical Psychology*, *1*, 35-59. doi: 10.1080/09515088808572924
- Newman, L. (1997). Descartes' epistemology. In Zalta, E. N (Ed.), *Stanford encyclopaedia of philosophy* (Winter 2014 ed.): Center for the Study of Language and Information (CSLI), Stanford University. Retrieved from [plato.stanford.edu/entries/descartes-epistemology/](http://plato.stanford.edu/entries/descartes-epistemology/).
- Nock, M. K., Borges, G., Bromet, E. J., Cha, C. B., Kessler, R., & Lee, S. (2008). Suicide and suicidal behavior. *Epidemiologic Reviews*, *30*, 133-154. doi: 10.1093/epirev/mxn002
- O'Carroll, P. W., Berman, A. L., Maris, R. W., Moscicki, E. K., Tanney, B. L., & Silverman, M. M. (1996). Beyond the Tower of Babel: A nomenclature for suicidology. *Suicide and Life-Threatening Behavior*, *26*, 237-252.
- O'Connor, R. C. (2011). Towards an integrated motivational-volitional model of suicidal behaviour. In R. C. O'Connor, S. Platt, & J. Gordon (Eds.), *International handbook of suicide prevention: Research, policy and practice* (pp. 181-198). Chichester: Wiley Blackwell.
- O'Connor, R. C., Connery, H., & Cheyne, W. M. (2000). Hopelessness: The role of depression, future directed thinking and cognitive vulnerability. *Psychology, Health and Medicine*, *5*, 155-161.
- O'Connor, R. C., Rasmussen, S., & Hawton, K. (2012). Distinguishing adolescents who think about self-harm from those who engage in self-harm. *British Journal of Psychiatry*, *200*, 330-335. doi: 10.1192/bjp.bp.111.097808
- O'Connor, R. C., Smyth, R., Ferguson, E., Ryan, C., & Williams, J. M. G. (2013). Psychological processes and repeat suicidal behavior: A four-year prospective

study. *Journal of Consulting and Clinical Psychology*, *81*, 1137-1143. doi:

10.1037/a0033751

O'Connor, S. S., Beebe, T. J., Lineberry, T. W., Jobes, D. A., & Conrad, A. K. (2012). The association between the Kessler 10 and suicidality: A cross-sectional analysis.

*Comprehensive Psychiatry*, *53*, 48-53. doi: 10.1016/j.comppsy.2011.02.006

O'Connor, S. S., Jobes, D. A., Lineberry, T. W., & Michael Bostwick, J. (2010). An

investigation of emotional upset in suicide ideation. *Archives of Suicide Research*,

*14*, 35-43. doi: 10.1080/13811110903479029

O'Shaughnessy, E. (1999). Relating to the superego. *International Journal of Psycho-*

*Analysis*, *80*, 861-870.

Ohana, I., Golander, H., & Barak, Y. (2014). Balancing psychache and resilience in aging

Holocaust survivors. *International Psychogeriatrics*, *26*, 929-934. doi:

10.1017/S104161021400012X

Olié, E., Guillaume, S., Jausent, I., Courtet, P., & Jollant, F. (2010). Higher psychological

pain during a major depressive episode may be a factor of vulnerability to suicidal

ideation and act. *Journal of Affective Disorders*, *120*, 226-230. doi:

10.1016/j.jad.2009.03.013

Orbach, I. (1994). Dissociation, physical pain, and suicide: A hypothesis. *Suicide and Life-*

*Threatening Behavior*, *24*, 68-79.

Orbach, I. (1996). The role of the body experience in self-destruction. *Clinical Child*

*Psychology and Psychiatry*, *1*, 607-619.

Orbach, I. (1997). A taxonomy of factors related to suicidal behavior. *Clinical Psychology:*

*Science and Practice*, *4*, 208-224.

- Orbach, I. (2003). Mental pain and suicide. *Israel Journal of Psychiatry and Related Sciences, 40*, 191-201.
- Orbach, I. (2006). The body-mind of the suicidal person. In T. E. Ellis (Ed.), *Cognition and suicide: Theory, research, and therapy* (Vol. xviii, pp. 193-214). Washington, DC, US: American Psychological Association.
- Orbach, I., Bar-Joseph, H., & Dror, N. (1990). Styles of problem solving in suicidal individuals. *Suicide and Life-Threatening Behavior, 20*, 56-64.
- Orbach, I., Mikulincer, M., Gilboa-Schechtman, E., & Sirota, P. (2003). Mental pain and its relationship to suicidality and life meaning. *Suicide and Life-Threatening Behavior, 33*, 231-241.
- Orbach, I., Mikulincer, M., Sirota, P., & Gilboa-Schechtman, E. (2003). Mental pain: A multidimensional operationalisation and definition. *Suicide and Life-Threatening Behavior, 33*, 219-230.
- Oreland, L., Wiberg, Å., Åsberg, M., Träskman, L., Sjöstrand, L., Thorén, P., . . . Tybring, G. (1981). Platelet MAO activity and monoamine metabolites in cerebrospinal fluid in depressed and suicidal patients and in healthy controls. *Psychiatry Research, 4*, 21-29.
- Orenius, T. (2007). Psychological factors in complex regional pain syndrome. *Journal of Neuropathic Pain and Symptom Palliation, 2*(3), 41-45. doi: 10.1300/J426v02n03\_09
- Ornstein, P. (2011). Introduction: The evolution of Heinz Kohut's psychoanalytic psychology of the self. In H. Kohut & P. Ornstein (Eds.), *The search for the self* (pp. 1-105). London: Karnac Books.

- Osvath, P., Vörös, V., & Fekete, S. (2004). Life events and psychopathology in a group of suicide attempters. *Psychopathology*, *37*, 36-40. doi: 10.1159/000077018
- Overholser, J. C., Adams, D. M., Lehnert, K. L., & Brinkman, D. C. (1995). Self-esteem deficits and suicidal tendencies among adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, *34*, 919-928. doi: 10.1097/00004583-199507000-00016
- Owoeye, O. A., Aina, O. F., Omoluabi, P. F., & Olumide, Y. M. (2007). An assessment of emotional pain among subjects with chronic dermatological problems in Lagos, Nigeria. *International Journal of Psychiatry in Medicine*, *37*, 129-138. doi: 10.2190/H275-837T-844P-030H
- Padurariu, M., Prepelita, R., Ciobica, A., Dobrin, R., Timofte, D., Stefanescu, C., & Chirita, R. (2016). Concept of suicide: Neurophysiological/genetic theories and possible oxytocin relevance. *Neurophysiology*, *48*, 312-320. doi: 10.1007/s11062-016-9603-9
- Palitsky, D., Mota, N., Afifi, T. O., Downs, A. C., & Sareen, J. (2013). The association between adult attachment style, mental disorders, and suicidality: Findings from a population-based study. *Journal of Nervous and Mental Disease*, *201*, 579-586. doi: 10.1097/NMD.0b013e31829829ab
- Palmer Jr, C. J. (2004). Suicide attempt history, self-esteem, and suicide risk in a sample of 116 depressed voluntary inpatients. *Psychological Reports*, *95*, 1092-1094.
- Pantazatos, S. P., Huang, Y. Y., Rosoklija, G. B., Dwork, A. J., Arango, V., & Mann, J. J. (2016). Whole-transcriptome brain expression and exon-usage profiling in major depression and suicide: evidence for altered glial, endothelial and ATPase activity. *Molecular Psychiatry*, *In press*. doi: 10.1038/mp.2016.130

- Park, H. J., Heppner, P. P., & Lee, D. G. (2010). Maladaptive coping and self-esteem as mediators between perfectionism and psychological distress. *Personality and Individual Differences, 48*, 469-474. doi: 10.1016/j.paid.2009.11.024
- Parkitny, L., & McAuley, J. (2010). The Depression Anxiety Stress Scale (DASS). *Journal of Physiotherapy, 56*, 204. doi: 10.1016/S1836-9553(10)70030-8
- Patterson, A. A., & Holden, R. R. (2012). Psychache and suicide ideation among men who are homeless: A test of Shneidman's model. *Suicide and Life-Threatening Behavior, 42*, 147-156. doi: 10.1111/j.1943-278X.2011.00078.x
- Patton, M. J., Connor, G. E., & Scott, K. J. (1982). Kohut's psychology of the self: Theory and measures of counseling outcome. *Journal of Counseling Psychology, 29*, 268-282.
- Peralta, V., Moreno-Izco, L., Calvo-Barrena, L., & Cuesta, M. J. (2013). The low- and higher-order factor structure of symptoms in patients with a first episode of psychosis. *Schizophrenia Research, 147*, 116-124. doi: 10.1016/j.schres.2013.03.018
- Perrot, C., Vera, L., & Gorwood, P. (2016). Poor self-esteem is correlated with suicide intent, independently from the severity of depression. *Encephale, In press*. doi: 10.1016/j.encep.2016.10.003
- Peteet, B. J., Brown, C. M., Lige, Q. M., & Lanaway, D. A. (2014). Impostorism is associated with greater psychological distress and lower self-esteem for African American students. *Current Psychology, In press*. doi: 10.1007/s12144-014-9248-z
- Pfeiffer, P. N., Ganoczy, D., Ilgen, M., Zivin, K., & Valenstein, M. (2009). Comorbid anxiety as a suicide risk factor among depressed veterans. *Depression and Anxiety, 26*, 752-757. doi: 10.1002/da.20583

- Philip, A. E., & McCulloch, J. W. (1968). Some psychological features of persons who have attempted suicide. *British Journal of Psychiatry*, *114*, 1299-1300.
- Phillips, M. R., Liu, H., & Zhang, Y. (1999). Suicide and social change in China. *Culture, Medicine and Psychiatry*, *23*, 25-50. doi: 10.1023/A:1005462530658
- Phillips, M. R., Yang, G., Zhang, Y., Wang, L., Ji, H., & Zhou, M. (2002). Risk factors for suicide in China: A national case-control psychological autopsy study. *The Lancet*, *360*, 1728-1736. doi: 10.1016/S0140-6736(02)11681-3
- Pickering, W. S. F., & Walford, G., (eds.). (2000). *Durkheim's suicide: A century of research and debate*. London: Routledge, Taylor and Francis Group, British Centre for Durkheimian Studies.
- Plener, P. L., Libal, G., Keller, F., Fegert, J. M., & Muehlenkamp, J. J. (2009). An international comparison of adolescent non-suicidal self-injury (NSSI) and suicide attempts: Germany and the USA. *Psychological Medicine*, *39*, 1549-1558. doi: 10.1017/S0033291708005114
- Poeldinger, W. J., Gehring, A., & Blaser, P. (1973). Suicide risk and MMPI scores, especially as related to anxiety and depression. *Suicide and Life-Threatening Behavior*, *3*, 147-153. doi: 10.1111/j.1943-278X.1973.tb00981.x
- Pompili, M. (2010). Exploring the phenomenology of suicide. *Suicide and Life-Threatening Behavior*, *40*, 234-244. doi: 10.1521/suli.2010.40.3.234
- Pompili, M. (2013). Phenomenology of suicide risk: Unique individuals with unique motives for the suicidal act. *European Psychiatry, Abstracts of the 21th European Congress of Psychiatry*, *28*( Suppl. 1), 1.
- Pompili, M., Gibiino, S., Innamorati, M., Serafini, G., Del Casale, A., De Risio, L., . . . Girardi, P. (2012). Prolactin and thyroid hormone levels are associated with suicide

attempts in psychiatric patients. *Psychiatry Research*, 200, 389-394. doi:

10.1016/j.psychres.2012.05.010

Pompili, M., Lester, D., Leenaars, A. A., Tatarelli, R., & Girardi, P. (2008). Psychache and suicide: A preliminary investigation. *Suicide and Life-Threatening Behavior*, 38, 116-121. doi: 10.1521/suli.2008.38.1.116

Pompili, M., Serafini, G., Innamorati, M., Möller-Leimkühler, A. M., Giupponi, G., Girardi, P., . . . Lester, D. (2010). The hypothalamic-pituitary-adrenal axis and serotonin abnormalities: A selective overview for the implications of suicide prevention. *European Archives of Psychiatry and Clinical Neuroscience*, 260, 583-600. doi: 10.1007/s00406-010-0108-z

Posner, K., Brown, G. K., Stanley, B., Brent, D. A., Yershova, K. V., Oquendo, M. A., . . . Mann, J. J. (2011). The Columbia-Suicide Severity Rating Scale: Initial validity and internal consistency findings from three multisite studies with adolescents and adults. *American Journal of Psychiatry*, 168, 1266-1277. doi: 10.1176/appi.ajp.2011.10111704

Preti, A. (2007). Suicide among animals: A review of evidence. *Psychological Reports*, 101, 831-848. doi: 10.2466/PRO.101.3.831-848

Preti, A. (2011). Animal model and neurobiology of suicide. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 35, 818-830. doi: 10.1016/j.pnpbp.2010.10.027

Rachman, A. W. (1988). The rule of empathy: Sandor Ferenczi's pioneering contributions to the empathic method in psychoanalysis. *Journal of the American Academy of Psychoanalysis*, 16, 1-27.

- Rajecki, D. W., Lamb, M. E., & Obmascher, P. (1978). Toward a general theory of infantile attachment: A comparative review of aspects of the social bond. *Behavioral and Brain Sciences*, 1, 417-464. doi: 10.1017/S0140525X00075828
- Randall, R. L. (1986). The cultural psychology of Kohut's self psychology. *Journal of Religion & Health*, 25, 137-141. doi: 10.1007/BF01533243
- Rao, S., Leung, C. S. T., Lam, M. H., Wing, Y. K., Waye, M. M. Y., & Tsui, S. K. W. (2016). Resequencing three candidate genes discovers seven potentially deleterious variants susceptibility to major depressive disorder and suicide attempts in Chinese. *Gene*, *In press*. doi: 10.1016/j.gene.2016.12.006
- Reid, L., M. (2003). *Validation of the Self-Empathy Scale*. (Master of Arts in Psychology), University of Regina, Canada, ProQuest Dissertations Publishing.
- Reisch, T., Seifritz, E., Esposito, F., Wiest, R., Valach, L., & Michel, K. (2010). An fMRI study on mental pain and suicidal behavior. *Journal of Affective Disorders*, 126, 321-325. doi: 10.1016/j.jad.2010.03.005
- Reise, S. P., Moore, T. M., & Haviland, M. G. (2010). Bifactor models and rotations: Exploring the extent to which multidimensional data yield univocal scale scores. *Journal of Personality Assessment*, 92, 544-559. doi: 10.1080/00223891.2010.496477
- Reiser, D. E. (1986). Self psychology and the problem of suicide. *Progress in Self Psychology*, 2, 227-241.
- Riker, J. H. (2012a). Empathy, otherness, and ethical life: A response to Frank Summers. *Journal of Theoretical and Philosophical Psychology*, 32, 246-250. doi: 10.1037/a0030218

- Riker, J. H. (2012b). Self psychology and the problem of the other. *International Journal of Psychoanalytic Self Psychology*, 7, 165-179. doi: 10.1080/15551024.2012.656349
- Riker, J. H. (2013). The philosophical importance of Kohut's notion of the self. *International Journal of Psychoanalytic Self Psychology*, 8, 495-504. doi: 10.1080/15551024.2013.825952
- Rizzolatti, G., & Craighero, L. (2004). The mirror-neuron system. *Annual Review of Neuroscience*, 27, 169-192. doi: 10.1146/annurev.neuro.27.070203.144230
- Robbins, S. B., & Patton, M. J. (1985). Self-psychology and career development. Construction of the Superiority and Goal Instability Scales. *Journal of Counseling Psychology*, 32, 221-231. doi: 10.1037/0022-0167.32.2.221
- Rogers, C. R. (1947). Some observations on the organization of personality. *The American psychologist*, 2, 358-368.
- Rogers, C. R. (1951a). Through the eyes of a client-Part III - Client-centered therapy has, as its end result, not more self-consciousness, but less. *Pastoral Psychology*, 2(8), 26-32. doi: 10.1007/BF01964479
- Rogers, C. R. (1951b). Through the eyes of a client - Part II - The therapeutic relationship. *Pastoral Psychology*, 2(7), 45-50. doi: 10.1007/BF01838588
- Rogers, C. R. (1951c). Through the eyes of a client - Therapy depends not only upon the counselor's personality, techniques, and attitudes, but upon the way these are experienced by the client. *Pastoral Psychology*, 2(6), 32-40. doi: 10.1007/BF01955967
- Rogers, C. R. (1957a). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology*, 21, 95-103. doi: 10.1037/h0045357

- Rogers, C. R. (1957b). A note on the "nature of man.". *Journal of Counseling Psychology*, 4, 199-203. doi: 10.1037/h0048308
- Rogers, C. R. (1964). Toward a modern approach to values: The valuing process in the mature person. *Journal of Abnormal and Social Psychology*, 68, 160-167. doi: 10.1037/h0046419
- Rogers, C. R. (1965). The concept of the fully functioning person. *Pastoral Psychology*, 16(3), 21-33. doi: 10.1007/BF01769775
- Rogers, C. R. (1975). Empathic: An unappreciated way of being. *The Counseling Psychologist*, 5(2), 2-10. doi: 10.1177/001100007500500202
- Rogers, C. R. (1980). *A way of being*. Boston: Houghton Mifflin.
- Rogers, C. R., & Becker, R. J. (1950). A basic orientation for counseling - Man has within him the latent capacity for change and growth; He himself must discover and free it. *Pastoral Psychology*, 1(1), 26-34. doi: 10.1007/BF01843708
- Rogers, C. R., & McCormick, D. W. (1995). What understanding and acceptance mean to me. *Journal of Humanistic Psychology*, 35(4), 7-22. doi: 10.1177/00221678950354002
- Rogers, J. R. (2001). Theoretical grounding: The "missing link" in suicide research. *Journal of Counseling and Development*, 79, 16-25.
- Rogers, J. R., Bromley, J. L., McNally, C. J., & Lester, D. (2007). Content analysis of suicide notes as a test of the motivational component of the existential-constructivist model of suicide. *Journal of Counseling & Development*, 85, 182-188. doi: 10.1002/j.1556-6678.2007.tb00461.x
- Rogers, J. R., & Lester, D. (2010). *Understanding suicide: Why we don't and how we might*. Massachusetts, USA: Hogrefe Publishing.

- Rogers, J. R., & Soyka, K. M. (2004). "One size fits all": An existential-constructivist perspective on the crisis intervention approach with suicidal individuals. *Journal of Contemporary Psychotherapy, 34*, 7-22. doi: 10.1023/B:JOCP.0000010910.74165.3a
- Rohlf, M. (2010). Immanuel Kant. In E. Zalta, N (Ed.), *The Stanford encyclopedia of philosophy* (Spring 2016 Edition ed.): Center for the Study of Language and Information (CSLI), Stanford University. Retrieved from [plato.stanford.edu/archives/spr2016/entries/kant](http://plato.stanford.edu/archives/spr2016/entries/kant).
- Rosellini, A. J., & Bagge, C. L. (2014). Temperament, hopelessness, and attempted suicide: Direct and indirect effects. *Suicide and Life-Threatening Behavior, 44*, 353-361. doi: 10.1111/sltb.12078
- Rosen, C. S., Drescher, K. D., Moos, R. H., Finney, J. W., Murphy, R. T., & Gusman, F. (2000). Six- and ten-item indexes of psychological distress based on the symptom checklist-90. *Assessment, 7*, 103-111.
- Rosenberg, M. L., Davidson, L. E., Smith, J. C., Berman, A. L., Buzbee, H., Gantner, G., . . . Jobes, D. (1988). Operational criteria for the determination of suicide. *Journal of Forensic Sciences, 33*, 1445-1456.
- Ross, C. A. (2013). Self-blame and suicidal ideation among combat veterans. *American Journal of Psychotherapy, 67*, 309-322.
- Roy, A. (2011). Combination of family history of suicidal behavior and childhood trauma may represent correlate of increased suicide risk. *Journal of Affective Disorders, 130*, 205-208. doi: 10.1016/j.jad.2010.09.022

- Roy, A., Jong, J., & Linnoila, M. (1989). Cerebrospinal fluid monoamine metabolites and suicidal behavior in depressed patients: A 5-year follow-up study. *Archives of general psychiatry*, *46*, 609-612. doi: 10.1001/archpsyc.1989.01810070035005
- Rubin, H., & Townsend, A. H. (1958). The Taylor Manifest Anxiety Scale in differential diagnosis. *Journal of Clinical Psychology*, *14*, 81-83. doi: 10.1002/1097-4679(195801)14:1<81::AID-JCLP2270140125>3.0.CO;2-3
- Saint-Laurent, D. (2016). Encyclopedia of death and dying. *Epidemiology*. Retrieved 31 December 2016, from <http://www.deathreference.com/Sh-Sy/Suicide-Basics.html>
- Sandin, B., Chorot, P., Santed, M. A., Valiente, R. M., & Joiner Jr, T. E. (1998). Negative life events and adolescent suicidal behavior: A critical analysis from the stress process perspective. *Journal of Adolescence*, *21*, 415-426. doi: 10.1006/jado.1998.0172
- Sayar, K., Acar, B., & Ak, I. (2003). Alexithymia and suicidal behavior. *Israel Journal of Psychiatry and Related Sciences*, *40*, 165-173.
- Schafer, R. (1964). The clinical analysis of affects. *Journal of the American Psychoanalytic Association*, *12*, 275-299. doi: 10.1177/000306516401200201
- Schott, G., & Bellin, W. (2001). Reassessing psychometric techniques in exploration of a relational self. *School Psychology International*, *22*, 434-450.
- Schrepf, A., Markon, K., & Lutgendorf, S. K. (2014). From childhood trauma to elevated c-reactive protein in adulthood: The role of anxiety and emotional eating. *Psychosomatic Medicine*, *76*, 327-336. doi: 10.1097/PSY.0000000000000072
- Schulte-Rüther, M., Markowitsch, H. J., Fink, G. R., & Piefke, M. (2007). Mirror neuron and theory of mind mechanisms involved in face-to-face interactions: A functional magnetic resonance imaging approach to empathy. *Journal of Cognitive Neuroscience*, *19*, 1354-1372. doi: 10.1162/jocn.2007.19.8.1354

- Scocco, P., & Toffol, E. (2012). Loss, hopelessness and suicide. In A. Shrivastava, M. Kembrell, & D. Lester (Eds.), *Suicide from a Global Perspective: Psychosocial Approaches* (pp. 11-17). New York: Nova Science Publishers, Inc.
- Segen, J. C. (2006). *Concise dictionary of modern medicine*. New York: McGraw-Hill.
- Seidel, G. (1995). Suicide in the elderly in antiquity. *International Journal of Geriatric Psychiatry, 10*, 1077-1084. doi: 10.1002/gps.930101216
- Sequeira, A., Gwadry, F. G., Ffrench-Mullen, J. M. H., Canetti, L., Gingras, Y., Casero Jr, R. A., . . . Turecki, G. (2006). Implication of SSAT by gene expression and genetic variation in suicide and major depression. *Archives of general psychiatry, 63*, 35-48. doi: 10.1001/archpsyc.63.1.35
- Shamay-Tsoory, S. G., Aharon-Peretz, J., & Perry, D. (2009). Two systems for empathy: A double dissociation between emotional and cognitive empathy in inferior frontal gyrus versus ventromedial prefrontal lesions. *Brain, 132*, 617-627. doi: 10.1093/brain/awn279
- Sharma, A. (1988). *Sati: Historical and phenomenological essays*. New Delhi: Motilal Banarsidass Publishing.
- Sharma, B. R. (2004). Ethical and practical principles underlying the end of life decisions. *American Journal of Forensic Medicine and Pathology, 25*, 216-219. doi: 10.1097/01.paf.0000127393.74705.b0
- Shea, T. L., Tennant, A., & Pallant, J. F. (2009). Rasch model analysis of the Depression, Anxiety and Stress Scales (DASS). *BMC Psychiatry, 9:21*, 1-10. doi: 10.1186/1471-244X-9-21

- Sheftall, A. H., Schoppe-Sullivan, S. J., & Bridge, J. A. (2014). Insecure attachment and suicidal behavior in adolescents. *Crisis, 35*, 426-430. doi: 10.1027/0227-5910/a000273
- Shelef, L., Fruchter, E., Hassidim, A., & Zalsman, G. (2015). Emotional regulation of mental pain as moderator of suicidal ideation in military settings. *European Psychiatry, 30*, 765-769. doi: 10.1016/j.eurpsy.2014.12.004
- Sher, L. (2006). Alcohol consumption and suicide. *QJM - Monthly Journal of the Association of Physicians, 99*, 57-61. doi: 10.1093/qjmed/hci146
- Sher, L., Grunebaum, M. F., Sullivan, G. M., Burke, A. K., Cooper, T. B., Mann, J. J., & Oquendo, M. A. (2012). Testosterone levels in suicide attempters with bipolar disorder. *Journal of Psychiatric Research, 46*, 1267-1271. doi: 10.1016/j.jpsychires.2012.06.016
- Sherman, N. (2014). Recovering lost goodness: Shame, guilt, and self-empathy. *Psychoanalytic Psychology, 31*, 217-235. doi: 10.1037/a0036435
- Shneidman, E. S. (1969). Prologue: Fifty-eight years. In E. Shneidman (Ed.), *On the nature of suicide*. San Francisco, US: Jossey-Bass Inc., Publishers.
- Shneidman, E. S. (1978). A proposed conceptualization of four basic components of some suicidal acts. *Psychiatria Fennica, Suppl.*, 43-46.
- Shneidman, E. S. (1979). An overview: Personality, motivation, and behaviour theories. In L. D. Hankoff & B. Einsidler (Eds.), *Suicide. Theory and clinical aspects*. (pp. 143-163). Littleton, Massachusetts: PSG Publishing Company, Inc.
- Shneidman, E. S. (1982). On "therefore I must kill myself". *Suicide and Life-Threatening Behavior, 12*, 52-55.

- Shneidman, E. S. (1984). Aphorisms of suicide and some implications for psychotherapy. *American Journal of Psychotherapy*, 38, 319-328.
- Shneidman, E. S. (1985). *Definition of suicide*. New York: John Wiley & Sons, Inc.
- Shneidman, E. S. (1986). Ten commonalities of suicide and their implications for response. *Crisis*, 7, 88-93.
- Shneidman, E. S. (1987a). A psychological approach to suicide. In G. R. VandenBos & B. K. Bryant (Eds.), *Cataclysms, crises, and catastrophes: Psychology in action. Master lectures series* (pp. 147 - 183). Washington, DC, US: American Psychological Association.
- Shneidman, E. S. (1987b). A psychological approach to suicide. In G. R. VandenBos & B. K. Bryant (Eds.), *Cataclysms, crises, and catastrophes: Psychology in action* (pp. 151 - 183). Washington, DC: American Psychological Association.
- Shneidman, E. S. (1993). Suicide as psychache. *Journal of Nervous and Mental Disease*, 181, 145-147.
- Shneidman, E. S. (1996). *The suicidal mind*. New York, Oxford: Oxford University Press.
- Shneidman, E. S. (1998). Perspective on suicidology: Further reflections on suicide and psychache. *Suicide and Life-Threatening Behavior*, 28, 245-250.
- Shneidman, E. S. (1999). The Psychological Pain Assessment Scale. *Suicide and Life-Threatening Behavior*, 29, 287-294.
- Shneidman, E. S. (2001). Suicidology and the university: A founder's reflections at 80. *Suicide and Life-Threatening Behavior*, 31, 1-8.
- Shneidman, E. S. (2004). *Autopsy of a suicidal mind*. New York: Oxford University Press; US.

- Shneidman, E. S. (2005a). Anodyne psychotherapy for suicide: A psychological view of suicide. *Clinical Neuropsychiatry: Journal of Treatment Evaluation*, *2*, 7-12.
- Shneidman, E. S. (2005b). Prediction of suicide revisited: A brief methodological note. *Suicide and Life-Threatening Behavior*, *35*, 1-2. doi: 10.1521/suli.35.1.1.59265
- Shneidman, E. S., & Farberow, N. L. (1956). Clues to suicide. *Public Health Reports*, *71*, 109-114.
- Shneidman, E. S., & Farberow, N. L. (1957). The logic of suicide. In E. S. Shneidman & N. L. Farberow (Eds.), *Clues to suicide* (pp. 31 - 40). New York: McGraw-Hill Book Company, Inc.
- Shneidman, E. S., Farberow, N. L., & Litman, R. E. (1961). The Suicide Prevention Center. In E. S. Shneidman & N. L. Farberow (Eds.), *The cry for help* (pp. 6-18). New York, Toronto, London: The Blakiston Division, McGraw-Hill Book Company, Inc.
- Siegel, D. J. (2012). *The developing mind. How relationships and the brain interact to shape who we are*. New York, London: Mind Your Brain Inc., The Guilford Press.
- Sieglman, A. W. (1956). Cognitive, affective, and psychopathological correlates of the Taylor Manifest Anxiety Scale. *Journal of Consulting Psychology*, *20*, 137-141. doi: 10.1037/h0042136
- Silverberg, W. V. (1952). *Childhood experience and personal destiny: A psychoanalytic theory of neurosis*. New York, NY: Springer Publishing Co; US.
- Silverman, M. M., Berman, A. L., Sanddal, N. D., O'Carroll, P. W., & Joiner Jr, T. E. (2007a). Rebuilding the tower of Babel: A revised nomenclature for the study of suicide and suicidal behaviors part 1: Background, rationale, and methodology. *Suicide and Life-Threatening Behavior*, *37*, 248-263. doi: 10.1521/suli.2007.37.3.248

- Silverman, M. M., Berman, A. L., Sanddal, N. D., O'Carroll, P. W., & Joiner Jr, T. E. (2007b).  
 Rebuilding the tower of babel: A revised nomenclature for the study of suicide and  
 suicidal behaviors part 2: Suicide-related ideations, communications, and  
 behaviors. *Suicide and Life-Threatening Behavior*, *37*, 264-277. doi:  
 10.1521/suli.2007.37.3.264
- Silvestrini, B. (1986). Trazodone and the mental pain hypothesis of depression.  
*Neuropsychobiology*, *15*(SUPPL. 1), 2-9.
- Simon, R. I. (2006). Imminent suicide: The illusion of short-term prediction. *Suicide and  
 Life-Threatening Behavior*, *36*, 296-301. doi: 10.1521/suli.2006.36.3.296
- Sinharay, S., Haberman, S., & Puhan, G. (2007). Subscores based on classical test theory:  
 To report or not to report. *Educational Measurement: Issues and Practice*, *26*(4),  
 21-28. doi: 10.1111/j.1745-3992.2007.00105.x
- Smedstad, L. M., Vaglum, P., Moum, T., & Kvien, T. K. (1997). The relationship between  
 psychological distress and traditional clinical variables: A 2 year prospective study  
 of 216 patients with early rheumatoid arthritis. *British Journal of Rheumatology*,  
*36*, 1304-1311.
- Smith, J. D. (2015). Creative restorations: Holding a mirror to the self in brief dynamic  
 therapy. *Psychodynamic Practice*, *21*, 300-319. doi:  
 10.1080/14753634.2015.1074606
- Snyder, M. (1992). The meaning of empathy: Comments on Hans Strupp's case of Helen R.  
*Psychotherapy*, *29*, 318-322.
- Snyder, M. (1994). The development of social intelligence in psychotherapy: Empathic  
 and dialogic processes. *Journal of Humanistic Psychology*, *34*, 84-108. doi:  
 10.1177/00221678940341006

- Sofair, J. B. (2011). Feeling socially safe. *Psychiatric Times*, 28(6), 65-68.
- Solano, P., Pizzorno, E., Pompili, M., Serafini, G., & Amore, M. (2017). Conceptualizations of suicide through time and socio-economic factors: A historical mini-review. *Irish Journal of Psychological Medicine*, *In press*, 1-12. doi: 10.1017/ipm.2017.57
- Soumani, A., Damigos, D., Oulis, P., Masdrakis, V., Ploumpidis, D., Mavreas, V., & Konstantakopoulos, G. (2011). Mental pain and suicide risk: Application of the Greek version of the Mental Pain and the Tolerance of Mental Pain Scale. *Psychiatriki*, 22, 330-340.
- Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Spoletini, I., Piras, F., Fagioli, S., Rubino, I. A., Martinotti, G., Siracusano, A., . . . Spalletta, G. (2011). Suicidal attempts and increased right amygdala volume in schizophrenia. *Schizophrenia Research*, 125, 30-40. doi: 10.1016/j.schres.2010.08.023
- Stefansson, J., Chatzittofis, A., Nordström, P., Arver, S., Åsberg, M., & Jokinen, J. (2016). CSF and plasma testosterone in attempted suicide. *Psychoneuroendocrinology*, 74, 1-6. doi: 10.1016/j.psyneuen.2016.08.009
- Stein, R. (2002). Evil as love and as liberation. *Psychoanalytic Dialogues*, 12, 393-420.
- Stengel, E. (1962). Self-destructiveness and self-preservation. *Clinical medicine*, 69, 2275-2279.
- Stepp, S. D., Morse, J. Q., Yaggi, K. E., Reynolds, S. K., Reed, L. I., & Pilkonis, P. A. (2008). The role of attachment styles and interpersonal problems in suicide-related behaviors. *Suicide and Life-Threatening Behavior*, 38, 592-607. doi: 10.1521/suli.2008.38.5.592

- Stoff, D. M., & Mann, J. J. (1997). Suicide research. *Annals of the New York Academy of Sciences*, 836, 1-11. doi: 10.1111/j.1749-6632.1997.tb52352.x
- Strozier, C. B. (2001). *Heinz Kohut: The making of a psychoanalyst*. New York: Farrar Straus Giroux.
- Studenmund, A. H. (2006). *Using econometrics: A practical guide (5th ed.)*. Boston: Pearson, Addison Wesley.
- Sullivan, H. S. (1953). *Interpersonal theory of psychiatry*. New York: W. W. Norton.
- Summers, F. (2014). The bonds of empathy: Beyond the selfobject concept. *International Journal of Psychoanalytic Self Psychology*, 9, 222-236. doi: 10.1080/15551024.2014.917464
- Sym, J. (1988). *Lifes preservative against self-killing*. [Original 1637 version edited by Michael MacDonald]. London and New York: Routledge.
- Tabachnick, N. D., & Farberow, N. L. (1961). The assessment of self-destructive potentiality. In N. L. Farberow & E. S. Shneidman (Eds.), *The cry for help* (pp. 60 - 77). New York, Toronto, London: The Blakiston Division, McGraw-Hill Book Company, Inc.
- Taylor, J. A. (1953). A personality scale of manifest anxiety. *Journal of Abnormal and Social Psychology*, 48, 285-290. doi: 10.1037/h0056264
- Terman, D. M. (2012). Self psychology. In G. O. Gabbard, B. E. Litowitz, & P. Williams (Eds.), *Textbook of psychoanalysis (2nd ed.)* (pp. 199-210). Washington, DC: American Psychiatric Publishing.
- Thibodeau, M. A., Welch, P. G., Sareen, J., & Asmundson, G. J. G. (2013). Anxiety disorders are independently associated with suicide ideation and attempts: Propensity score

matching in two epidemiological samples. *Depression and Anxiety*, 30, 947-954.

doi: 10.1002/da.22203

Thornhill, N. W., & Thornhill, R. (1990). An evolutionary analysis of psychological pain following rape: I. The effects of victim's age and marital status. *Ethology and Sociobiology*, 11, 155-176.

Tossani, E. (2013). The concept of mental pain. *Psychotherapy and Psychosomatics*, 82, 67-73. doi: 10.1159/000343003

Träskman, L., Åsberg, M., Bertilsson, L., & Sjöstrand, L. (1981). Monoamine metabolites in CSF and suicidal behavior. *Archives of general psychiatry*, 38, 631-636.

Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research*, 27, 247-259. doi: 10.1023/A:1023910315561

Troister, T., D'Agata, M. T., & Holden, R. R. (2015). Suicide risk screening: Comparing the Beck Depression Inventory-II, Beck Hopelessness Scale, and Psychache Scale in undergraduates. *Psychological Assessment*, 27, 1500-1506. doi: 10.1037/pas0000126

Troister, T., Davis, M. P., Lowndes, A., & Holden, R. R. (2013). A five-month longitudinal study of psychache and suicide ideation: Replication in general and high-risk university students. *Suicide and Life-Threatening Behavior*, 43, 611-620. doi: 10.1111/sltb.12043

Troister, T., & Holden, R. R. (2010). Comparing psychache, depression, and hopelessness in their associations with suicidality: A test of Shneidman's theory of suicide. *Personality and Individual Differences*, 49, 689-693. doi: 10.1016/j.paid.2010.06.006

- Troister, T., Links, P. S., & Cutcliffe, J. (2008). Review of predictors of suicide within 1 year of discharge from a psychiatric hospital. *Current Psychiatry Reports, 10*, 60-65. doi: 10.1007/s11920-008-0011-8
- Tsai, S.-J., Hong, C.-J., & Liou, Y.-J. (2011). Recent molecular genetic studies and methodological issues in suicide research. *Progress in Neuro-Psychopharmacology and Biological Psychiatry, 35*, 809-817. doi: 10.1016/j.pnpbp.2010.10.014
- Tulving, E. (2001). The origin of autoevidence in episodic memory. In H. L. Roediger, J. S. Nairne, I. Neath, & A. M. Suprenant (Eds.), *The nature of remembering: Essays in honor of Robert G. Crowder* (pp. 17–34). Washington, DC American Psychological Association.
- Valente, S. M. (1994). Messages of psychiatric patients who attempted or committed suicide. *Clinical nursing research, 3*, 316-333.
- van Heeringen, K. (2001). *Understanding suicidal behaviour: The suicidal process approach to research, treatment, and prevention* (K. v. Heeringen Ed.). Chichester, New York: Wiley.
- van Heeringen, K., Van den Abbeele, D., Vervaeke, M., Soenen, L., & Audenaert, K. (2010). The functional neuroanatomy of mental pain in depression. *Psychiatry Research: Neuroimaging, 181*, 141-144. doi: 10.1016/j.pscychresns.2009.07.011
- van Hooff, A. J. (1993). Suicide and parasuicide in ancient personal testimonies. *Crisis, 14*, 76-82.
- Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner Jr, T. E. (2010). The Interpersonal Theory of Suicide. *Psychological Review, 117*, 575-600. doi: 10.1037/a0018697

- Van Orden, K. A., Witte, T. K., Gordon, K. H., Bender, T. W., & Joiner Jr, T. E. (2008). Suicidal desire and the capability for suicide: Tests of the interpersonal-psychological theory of suicidal behavior among adults. *Journal of Consulting and Clinical Psychology, 76*, 72-83. doi: 10.1037/0022-006X.76.1.72
- Van Praag, H. M. (1982). Depression, suicide and the metabolism of serotonin in the brain. *Journal of Affective Disorders, 4*, 275-290. doi: 10.1016/0165-0327(82)90025-8
- Vang, F. J., Ryding, E., Träskman-Bendz, L., van Westen, D., & Lindström, M. B. (2010). Size of basal ganglia in suicide attempters, and its association with temperament and serotonin transporter density. *Psychiatry Research: Neuroimaging, 183*, 177-179. doi: 10.1016/j.psychresns.2010.05.007
- Videgård, T. (2013). Kohut's and Heidegger's selves: Dwelling near the source. *International Journal of Psychoanalytic Self Psychology, 8*, 115-120. doi: 10.1080/15551024.2013.739142
- Vijayakumar, L., & Rajkumar, S. (1999). Are risk factors for suicide universal? A case-control study in India. *Acta Psychiatrica Scandinavica, 99*, 407-411.
- Vitiello, B., & Stoff, D. M. (1997). Subtypes of aggression and their relevance to child psychiatry. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 307-315. doi: 10.1097/00004583-199703000-00008
- Wager-Smith, K., & Markou, A. (2011). Depression: A repair response to stress-induced neuronal microdamage that can grade into a chronic neuroinflammatory condition? *Neuroscience and Biobehavioral Reviews, 35*, 742-764. doi: 10.1016/j.neubiorev.2010.09.010

- Wakefield, J. C., & Schmitz, M. F. (2016). Feelings of worthlessness during a single complicated major depressive episode predict postremission suicide attempt. *Acta Psychiatrica Scandinavica*, *133*, 257-265. doi: 10.1111/acps.12521
- Wallace, D. F. (1996). *Infinite jest*. Boston, MA: Little, Brown and Company.
- Walton, R. E. (1980). Socrates' alleged suicide. *The Journal of Value Inquiry*, *14*, 287-299. doi: 10.1007/BF00145134
- Wanner, B., Vitaro, F., Tremblay, R. E., & Turecki, G. (2012). Childhood trajectories of anxiousness and disruptiveness explain the association between early-life adversity and attempted suicide. *Psychological Medicine*, *42*, 2373-2382. doi: 10.1017/s0033291712000438
- Warner, M. S. (1997). Does empathy cure? A theoretical consideration of empathy, processing, and personal narrative. In A. C. Bohart & L. S. Greenberg (Eds.), *Empathy reconsidered: New directions in psychotherapy* (pp. 125-140). Washington, DC, US: American Psychological Association.
- Warton, D. I., & Hui, F. K. C. (2011). The arcsine is asinine: The analysis of proportions in ecology. *Ecology*, *92*, 3-10. doi: 10.1890/10-0340.1
- Wasserman, D., Geijer, T., Sokolowski, M., Rozanov, V. A., & Wasserman, J. (2007). Nature and nurture in suicidal behavior, the role of genetics: Some novel findings concerning personality traits and neural conduction. *Physiology & Behavior*, *92*, 245-249. doi: 10.1016/j.physbeh.2007.05.061
- Weisfogel, J. (1969). A psychodynamic study of an attempted suicide. *The Psychiatric Quarterly*, *43*, 257-284. doi: 10.1007/BF01564246
- Weitoft, G. R., & Rosen, M. (2005). Is perceived nervousness and anxiety a predictor of premature mortality and severe morbidity? A longitudinal follow up of the

- Swedish survey of living conditions. *Journal of Epidemiology and Community Health, 59*, 794-798.
- Wellek, J. S. (1993). Kohut's tragic man: An example from "death of a salesman". *Clinical Social Work Journal, 21*, 213-225. doi: 10.1007/BF00754535
- Wenzel, A., & Beck, A. T. (2008). A cognitive model of suicidal behavior: Theory and treatment. *Applied and Preventive Psychology, 12*, 189-201. doi: 10.1016/j.appsy.2008.05.001
- Whitlock, J., Pietrusza, C., & Purington, A. (2013). Young adult respondent experiences of disclosing self-injury, suicide-related behavior, and psychological distress in a web-based survey. *Archives of Suicide Research, 17*, 20-32.
- Wille, R. S. G. (2011). On the capacity to endure psychic pain. *Scandinavian Psychoanalytic Review, 34*, 23-30.
- Wolff, H. G., & Preising, K. (2005). Exploring item and higher order factor structure with the Schmid-Leiman solution: Syntax codes for SPSS and SAS. *Behavior Research Methods, 37*, 48-58.
- Wood, R. L., Williams, C., & Lewis, R. (2010). Role of alexithymia in suicide ideation after traumatic brain injury. *Journal of the International Neuropsychological Society, 16*, 1108-1114.
- Woodmansey, A. C. (1966). The internalization of external conflict. *International Journal of Psycho-Analysis, 47*, 349-355.
- World Health Organisation. (2014). *Preventing suicide: a global imperative*. Geneva, Switzerland: The World Health Organization.
- World Health Organisation. (2016). Mental health. Suicide data. Retrieved 20 December, 2016, from

[http://www.who.int/gho/publications/world\\_health\\_statistics/2016/whs2016\\_An nexA\\_Suicide.pdf?ua=1&ua=1](http://www.who.int/gho/publications/world_health_statistics/2016/whs2016_An nexA_Suicide.pdf?ua=1&ua=1)

- Wreen, M. (1988). The definition of suicide. *Social Theory and Practice, 14*, 1 - 23. doi: 10.5840/soctheorpract19881416
- Xie, W., Li, H., Luo, X., Fu, R., Ying, X., Wang, N., . . . Shi, C. (2014). Anhedonia and pain avoidance in the suicidal mind: Behavioral evidence for motivational manifestations of suicidal ideation in patients with major depressive disorder. *Journal of Clinical Psychology, 70*, 681-692. doi: 10.1002/jclp.22055
- Yalom, V., & Bugental, J. F. T. (1997). Support in existential-humanistic psychotherapy. *Journal of Psychotherapy Integration, 7*, 119-128.
- Yanagi, M., Shirakawa, O., Kitamura, N., Okamura, K., Sakurai, K., Nishiguchi, N., . . . Maeda, K. (2005). Association of 14-3-3  $\epsilon$  gene haplotype with completed suicide in Japanese. *Journal of Human Genetics, 50*, 210-216. doi: 10.1007/s10038-005-0241-0
- Yen, C. F., Lai, C. Y., Ko, C. H., Liu, T. L., Tang, T. C., Wu, Y. Y., & Yang, P. (2014). The associations between suicidal ideation and attempt and anxiety symptoms and the demographic, psychological, and social moderators in Taiwanese adolescents. *Archives of Suicide Research, 18*, 104-116. doi: 10.1080/13811118.2013.824826
- Yen, S., & Siegler, I. C. (2003). Self-blame, social introversion, and male suicides: Prospective data from a longitudinal study. *Archives of Suicide Research, 7*, 17-27. doi: 10.1080/13811110301569
- You, Z., Song, J., Wu, C., Qin, P., & Zhou, Z. (2014). Effects of life satisfaction and psychache on risk for suicidal behaviour: A cross-sectional study based on data

- from Chinese undergraduates. *BMJ Open*, 4(3), 1-9. doi: 10.1136/bmjopen-2013-004096
- Young, L. J., & Wang, Z. (2004). The neurobiology of pair bonding. *Nature Neuroscience*, 7, 1048-1054. doi: 10.1038/nn1327
- Yung, Y. F., Thissen, D., & McLeod, L. D. (1999). On the relationship between the higher-order factor model and the hierarchical factor model. *Psychometrika*, 64, 113-128.
- Zeyrek, E. Y., Gençöz, F., Bergman, Y., & Lester, D. (2009). Suicidality, problem-solving skills, attachment style, and hopelessness in Turkish students. *Death Studies*, 33, 815-827.
- Zhang, H., Chen, Z., Jia, Z., & Gong, Q. (2014). Dysfunction of neural circuitry in depressive patients with suicidal behaviors: A review of structural and functional neuroimaging studies. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 53, 61-66. doi: 10.1016/j.pnpbp.2014.03.002
- Zilboorg, G. (1937). Considerations on suicide, with particular reference to that of the young. *American Journal of Orthopsychiatry*, 7, 15-31. doi: 10.1111/j.1939-0025.1937.tb05556.x
- Zisk, A., Abbott, C. H., Ewing, S. K., Diamond, G. S., & Kobak, R. (2017). The suicide narrative interview: adolescents' attachment expectancies and symptom severity in a clinical sample. *Attachment and Human Development*, 19, 447-462. doi: 10.1080/14616734.2016.1269234

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**APPENDIX A: Inter-correlations between the ASCS items****Table A1***Self-concept Subscale: Inter-Correlations between the items*

	1	2	3	4	5	6	7	8	9	10	11	12
1. Full	-											
2. Self-loving	.62	-										
3. Pleasant	.54	.61	-									
4. Complete	.72	.66	.64	-								
5. Interesting	.44	.56	.55	.49	-							
6. Worthwhile	.60	.75	.64	.65	.68	-						
7. Lovable	.53	.71	.66	.65	.65	.81	-					
8. Desirable	.54	.68	.63	.62	.60	.74	.80	-				
9. Popular	.42	.55	.56	.50	.64	.61	.63	.67	-			
10. Attractive	.43	.61	.52	.50	.56	.63	.63	.77	.60	-		
11. Powerful	.54	.62	.53	.56	.57	.68	.63	.62	.61	.58	-	
12. Energetic	.61	.63	.58	.63	.48	.58	.55	.59	.52	.47	.58	-
13. In control	.62	.65	.55	.68	.47	.61	.55	.53	.49	.43	.66	.66

Note. Correlations significant at 0.01 level; two-tailed;  $N = 359$

**Table A2***Childhood Needs Subscale: Inter-correlations*

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1 Having Voice	-			
2 Being Acknowledged	.81	-		
3 Being Heard	.85	.87	-	
4 Feeling Connected	.70	.70	.70	-
5 Being Treated Loyally	.65	.70	.69	.72

Note. Correlations significant at 0.01 level; two-tailed;  $N = 359$

**Table A3***Rumination Subscale: Inter-correlations*

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1 What am I doing to deserve this?	-			
2 Why do I always react this way?	.38	-		
3 Why do I have problems other people don't have?	.43	.44	-	
4 Why can't I handle things better?	.34	.66	.49	-
5 I wish the bad situation had gone better	.41	.45	.46	.53

Note. Correlations significant at 0.01 level; two-tailed;  $N = 3$

## APPENDIX B: Relationships of Psychache with other Psychological Factors

A review has been conducted of research that has used diverse psychological variables in the context of psychache, with attention largely focused on the affective aspects of human experience. Examples of results from a range of quantitative studies located in the Scopus and PsycInfo databases, are summarized in Table A1. The electronic searches involved the following key terms: psychological pain, psychache, mental pain, PS, and OMMP in separate combination with *suicid\** (a term allowing to explore any variety of terms build from this 'prefix'). Repetition of similar or related studies (e.g., those with the same variables, measurement instruments or data) has been avoided. This allowed insight into a broad picture of associations between psychache and other psychological variables, and in diverse populations, as considered noteworthy by earlier research.

In summary, the review has revealed that the most frequently examined variables were: depression, hopelessness, anxiety, stress, inner perturbation (including narcissistic wounds and unmet psychological needs), emotional regulation, loneliness, impulsivity, anger, personality traits, as well as cognitive aspects, such as self-condemnation, communication/language difficulties, motivations, and evaluations of meaningfulness of life (details are presented in Table A1).

The most frequently reported findings pertained to depression and hopelessness in the contexts of psychache and suicidality. Among quantitative reports concerned with the construct of psychache, no references were found in respect to psychological constructs such as a sense of self or self-cohesion. It appeared that a focus on those variables relating to the self has mostly been limited to non-psychometric, qualitative

dissertations, such as those by Lakeman and Fitzgerald (2008), Jobes et al. (2004), and Valente (1994).

Main conclusions from the review were:

- Correlations between depression and psychache that were statistically significant at  $p < .001$  varied between  $r = .61$  and  $.76$  for the PS; and  $r = .35$  and  $.82$  for OMMP. The reason for this variability, especially among the correlations involving the OMMP, is unclear, given that both the highest and lowest values were obtained from relatively similar samples. However, for correlations involving the PS, correlations appeared to fall within a consistently close range.
- Moderate to high positive correlations were reported for both depression and hopelessness, with various suicidality indices.
- For hopelessness, the correlations with psychache at  $p < .001$  ranged from  $r = .48$  (OMMP) to  $.69$  (PS), the former being drawn from a sample of psychiatric patients and community members, and the latter from a sample of prison inmates. The qualitative and circumstantial differences between these two populations could possibly explain the differences in the strength of correlations. For example, maintaining high levels of hope could be much more challenging for prison inmates, relative to environmentally unconfined participants.
- Apart from reports by Orbach (2003) and Holden et al. (2001), limited psychometric research has been directed to inner perturbed emotional states, the variable suggested by Shneidman.
- Investigations of *self*-referential emotions, such as self-respect, self-love, or self-esteem, in relation to psychache were few; some sub-scales relating to the self

and positive affect were found, for example, in Orbach, Mikulincer, Gilboa-Schechtman, et al. (2003), with the OMMP scale, which comprises of subscales of self-estrangement, narcissistic wounds, and emptiness.

**Table B1***Examples of frequently cited findings pertaining to psychache and other psychological factors*

Study	Population, age and <i>N</i>	Psychache index	Suicidality index	Other psychological indices	Main findings
Holden et al. (2001)	Undergraduates  Age <i>M</i> = 19.1 <i>SD</i> = 1.6  <i>N</i> = 294 24% males	PS	Suicidal Manifestations Questionnaire	<ul style="list-style-type: none"> <li>• Beck Hopelessness Scale</li> <li>• Internal Perturbation-Based Reasons (IPBR; subscale of the Reasons for Attempting Suicide Questionnaire)</li> </ul>	<p>Correlations at <math>p &lt; .01</math>:</p> <p><math>r = .52</math> - PS and SI<sup>a</sup>  <math>r = .45</math> - IPBR and SI  <math>r = .40</math> - hopelessness and SI  <math>r = .32</math> - hopelessness and SA<sup>b</sup>  <math>r = .32</math> - IPBR and SA  <math>r = .30</math> - PS and SA</p> <p>Regression statistics:  <math>R^2 = .33</math> (<math>p &lt; .01</math>) - PS regressed on SI  <math>R^2 = .26</math> (<math>p &lt; .01</math>) - IPBR regressed on SI  <math>R^2 = .22</math> (<math>p &lt; .01</math>) - IPBR regressed on SA  <math>R^2 = .18</math> (<math>p &lt; .01</math>) - hopelessness regressed on SA  <math>R^2 = .13</math> (<math>p &lt; .05</math>) - hopelessness regressed on SI  <math>R^2 = .07</math> (<i>ns</i>) - PS regressed on SA</p>
Orbach, Mikulincer, Gilboa-Schechtman, et al. (2003) Study 1	Inpatients with suicide history  Age <i>M</i> = 32.4 <i>SD</i> = 5.4  <i>N</i> = 32 43.7% males	OMMP factors: 1) Irreversibility 2) Loss of control 3) Narcissistic wounds 4) Emotional flooding 5) Freezing	Multi-Attitude Suicidal Tendencies Scale (MAST): 1) attraction to life 2) repulsion by life 3) attraction to death	<ul style="list-style-type: none"> <li>• Beck Hopelessness Scale</li> <li>• Cognitions Checklist</li> <li>• Emotional Expressiveness Scale</li> </ul>	<ul style="list-style-type: none"> <li>• Correlations of 'repulsion by death' across all factors - <i>ns</i></li> <li>• Correlations of narcissistic wounds and social distancing with all MAST factors - <i>ns</i></li> <li>• Narcissistic wounds positively correlated with hopelessness, depression, anxiety, Negative expressivity, and Inputs intensity</li> <li>• Positive expressivity negatively correlated with Loss of control (<math>r = -.23</math>) and positively correlated with Emptiness (<math>r = .41</math>)</li> </ul>

<p><i>Table B1 cont'd</i></p>		<p>6) Self-estrangement 7) Confusion 8) Social distancing 9) Emptiness</p>	<p>(4) repulsion by death</p>		<ul style="list-style-type: none"> <li>• Positive correlations found between MAST and hopelessness, depression, and anxiety (<math>r</math> between .27 and .64, <math>p &lt; .01</math>)</li> </ul>
<p>Orbach, Mikulincer, Gilboa-Schechtman, et al. (2003) Study 2</p>	<p>University students  Age 19 - 39 years  <math>N = 98</math> 23.5% males</p>	<p>OMMP factors as above</p>		<ul style="list-style-type: none"> <li>• Life Orientation Test</li> <li>• Batista and Almond Life Regard Scale</li> </ul>	<ul style="list-style-type: none"> <li>• Correlations of narcissistic wounds and social distancing with all OMMP factors - <i>ns</i></li> <li>• All other factors of OMMP correlated negatively with Optimism and Life Regard between <math>r = -.21</math> and <math>-.35</math></li> <li>• Optimism most strongly negatively correlated with Irreversibility and Freezing (both <math>r = -.35</math>)</li> <li>• Life Regard most strongly negatively correlated with Freezing, <math>r = -.32</math></li> </ul>
<p>Mills et al. (2005)</p>	<p>Prison inmates  Age <math>M = 38</math> <math>SD = 11</math>  <math>N = 136</math> 100% males</p>	<p>PS</p>	<p>Critical Item Checklist</p>	<ul style="list-style-type: none"> <li>• Depression, Hopelessness and Suicide Screening Form</li> </ul>	<p>Correlations of PS at <math>p &lt; .001</math> <math>r = .70</math> - depression <math>r = .69</math> - hopelessness <math>r = .35</math> - historical index of suicide</p>
<p>Flamenbaum and Holden (2007)</p>	<p>Undergraduates  Age <math>M = 18.9</math> <math>SD = 3.34</math>  <math>N = 264</math> 24.2% males</p>	<p>PS</p>	<p>Beck Scale for Suicide Ideation, Reasons for Attempting Suicide Questionnaire</p>	<ul style="list-style-type: none"> <li>• The Multidimensional Perfectionism Scale</li> <li>• The Psychache Needs Questionnaire (<i>unpublished</i>)</li> </ul>	<p>Correlations of PS at <math>p &lt; .01</math> <math>r = .57</math> - suicide motivation <math>r = .56</math> - IPBR <math>r = .51</math> - suicide preparation <math>r = .44</math> - socially-prescribed perfectionism <math>r = .40</math> - unfulfilled needs <math>r = .28</math> - suicide intent <math>r = .28</math> - self-oriented perfectionism <math>r = .23</math> - extrapunitive/manipulative motivations</p>

<p><i>Table B1 cont'd</i></p>					<p><math>r = .22</math> - number of suicide attempts</p> <p>Factors differentiating suicide attempters from non-attempters:</p> <ul style="list-style-type: none"> <li>• Suicide preparation <math>t = -10.26</math> (<math>p &lt; .01</math>), Cohen's <math>d</math> 2.16</li> <li>• IPBR <math>t = -7.30</math> (<math>p &lt; .01</math>), Cohen's <math>d</math> 1.54</li> <li>• Suicide motivation <math>t = -3.75</math> (<math>p &lt; .01</math>), Cohen's <math>d</math> 1.45</li> <li>• PS <math>t = -4.08</math> (<math>p &lt; .01</math>), Cohen's <math>d</math> 0.86</li> <li>• Manipulative/extrapunitive motivations <math>t = -2.29</math> (<math>p &lt; .05</math>), Cohen's <math>d</math> 0.48</li> <li>• Other-oriented perfectionism <math>t = 2.13</math> (<math>p &lt; .05</math>), Cohen's <math>d</math> 0.45</li> <li>• Unfulfilled needs <math>t = -2.07</math> (<math>p &lt; .05</math>), Cohen's <math>d</math> 0.44</li> </ul>
<p>Levi et al. (2008)</p>	<p>Medical centre patients with suicide attempt history and non-suicidal community volunteers</p> <p>Age 20 – 85 years old</p> <p><math>N = 173</math> 49.7% males</p>	<p>OMMP</p>	<p>Lethality Rating Scale (LRS)</p>	<ul style="list-style-type: none"> <li>• Schedule of Life Events (SLE)</li> <li>• Jourard Self-Disclosure Questionnaire (JSDQ)</li> <li>• Toronto Alexithymia Scale (TAS-20)</li> <li>• UCLA Loneliness Scale (ULS)</li> </ul>	<ul style="list-style-type: none"> <li>• All measures statistically significantly differentiated suicide attempters from non-attempters</li> <li>• Communication difficulties (especially JSDQ and ULS) were associated with seriousness of suicide attempts; association of seriousness of attempts with OMMP – <i>ns</i></li> <li>• Lethality was most strongly associated with JSDQ, schizoid scale, and ULS</li> <li>• Alexithymia was associated with lethality of attempts</li> <li>• OMMP predicted suicidal behaviour, while communication difficulties predicted lethality of that behaviour</li> </ul>

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<p><i>Table B1 cont'd</i></p> <p>DeLisle and Holden (2009)</p>	<p>Undergraduates</p> <p>Age <math>M = 18.7</math> <math>SD = 2.5</math></p> <p><math>N = 587</math> 22% males</p>	PS	<p>Reasons for Attempting Suicide Questionnaire, Beck Scale for Suicide Ideation</p>	<ul style="list-style-type: none"> <li>• Beck Depression Inventory (BDI)</li> <li>• Beck Hopelessness Scale</li> </ul>	<p>Correlations of PS at <math>p &lt; .01</math>:</p> <p><math>r = .76</math> - depression  <math>r = .62</math> - hopelessness  <math>r = .61</math> - suicide motivation  <math>r = .59</math> - IPBR  <math>r = .51</math> - suicide preparation  <math>r = .50</math> - suicide intent  <math>r = .33</math> - number of prior suicide attempts</p>
<p>Troister and Holden (2010)</p>	<p>Undergraduates</p> <p>Age <math>M = 18.4</math> <math>SD = 2.1</math></p> <p><math>N = 1475</math> 29% males</p>	PS	<p>Beck Scale for Suicide Ideation</p>	<ul style="list-style-type: none"> <li>• Beck Depression Inventory</li> <li>• Beck Hopelessness Scale</li> </ul>	<p>Correlations of PS at <math>p &lt; .01</math>:</p> <p><math>r = .65</math> - depression  <math>r = .55</math> - SI  <math>r = .51</math> - suicide motivation  <math>r = .48</math> - hopelessness  <math>r = .48</math> - number of prior attempts  <math>r = .46</math> - suicide preparation  <math>r = .25</math> - prior suicide attempts</p>
<p>Soumani et al. (2011)</p>	<p>Non-clinical community members</p> <p><math>M = 42.5</math> <math>SD = 12.1</math></p> <p><math>N = 112</math> 34.8% males</p>	<p>OMMP (Greek version; MPS) Tolerance of Mental Pain Scale (TMPS)</p>	<p>Suicide Risk Scale (SRS)</p>	<ul style="list-style-type: none"> <li>• Beck Depression Inventory</li> </ul>	<p>Correlations:</p> <p><math>r = .69</math> (<math>p &lt; .001</math>) - MPS and SRS  <math>r = .61</math> (<math>p &lt; .001</math>) - MPS and depression  <math>r = -.54</math> (<math>p &lt; .01</math>) - TMPS and suicide risk</p> <p>Regression statistics for predictors regressed on SRS at  <math>p = 0.001</math>:</p> <p><math>\beta = 0.41</math> - MPS  <math>\beta = -0.27</math> - TMPS  <math>\beta = 0.23</math> - depression  <math>R^2 = 0.57</math></p>
<p>Patterson and Holden (2012)</p>	<p>Residents of homeless shelters</p>	PS	<p>Beck Scale for Suicide Ideation,</p>	<ul style="list-style-type: none"> <li>• Beck Depression Inventory</li> </ul>	<p>Correlations of PS at <math>p &lt; .01</math>:</p> <p><math>r = .78</math> - depression  <math>r = .65</math> - hopelessness</p>

<p><i>Table B1 cont'd</i></p>	<p>Age <i>M</i> = 46.6 <i>SD</i> = 12.0</p> <p><i>N</i> = 97 100% males</p>			<ul style="list-style-type: none"> <li>• Beck Hopelessness Scale</li> <li>• Fulfilment subscale of the Multidimensional Life Meaning Scale</li> </ul>	<p><i>r</i> = .65 - life meaning (negative; MLMS) <i>r</i> = .63 - SI <i>r</i> = .60 - suicide motivation <i>r</i> = .54 - prior suicide attempts <i>r</i> = .53 - suicide preparation <i>r</i> = .52 - number of prior attempts</p> <p>Regression coefficients for depression, hopelessness, and life meaning - <i>ns</i> Regression coefficients for PS (<i>p</i> &lt; 0.5) in the model with depression, hopelessness and life meaning: <i>β</i> = .42 - regressed on SI <i>β</i> = .39 - regressed on suicide preparation <i>β</i> = .38 - regressed on prior suicide attempts <i>β</i> = .34 - regressed on number of attempts <i>β</i> = .31 - regressed on suicide motivation</p>
<p>Guimarães, Fleming, and Cardoso (2013)</p>	<p>Outpatients of Portuguese addiction treatment and other therapy centres</p> <p>Age <i>M</i> = 35.3 <i>SD</i> = 8.4</p> <p><i>N</i> = 403 88.8% males</p>	<p>OMMP (Portuguese translation)</p>	<p>-</p>	<ul style="list-style-type: none"> <li>• Depression Anxiety Stress Scales (DASS 21)</li> <li>• World Health Organization's Quality of Life instrument (WHOQOL-BREF)</li> </ul>	<p>Correlations of OMMP significant at <i>p</i> &lt; .001: <i>r</i> = .57 - depression <i>r</i> = .52 - stress <i>r</i> = .49 - anxiety</p> <p>Correlations of OMMP with WHOQOL-BREF domains (<i>p</i> &lt; .001): <i>r</i> = -.46 - global <i>r</i> = -.51 - physical <i>r</i> = -.61 - psychological <i>r</i> = -.41 - social relations <i>r</i> = -.40 - environmental</p>

<p><i>Table B1 cont'd</i></p> <p>Gvion et al. (2014)</p>	<p>Psychiatric hospital patients and non-clinical community volunteers</p> <p>Age 16 -71 years old</p> <p><i>N</i> = 196 63.3% males</p>	<p>OMMP</p>	<p>Lethality Rating Scale (LRS), Medical Damage Rating Scale (MDRS), Suicide Intent Scale (SIS)</p>	<ul style="list-style-type: none"> <li>• State-Trait Anger Expression Inventory (STAXI)</li> <li>• Past Feelings and Acts of Violence (PFAV)</li> <li>• Impulse Control Scale</li> <li>• Beck Depression Inventory</li> <li>• Beck Hopelessness Scale</li> <li>• Jourard Self-Disclosure Questionnaire (JSDQ)</li> <li>• UCLA Loneliness Scale</li> </ul>	<ul style="list-style-type: none"> <li>• All measures statistically significantly differentiated between medically-serious, medically-non serious suicide attempters, and psychiatric and healthy controls (<math>Eta^2</math> between .04 for JSDQ and .50 for BDI; OMPP <math>Eta^2 = .33</math>, with <math>p</math> between .05 and .001)</li> </ul> <p>Correlations of OMMP significant at <math>p &lt; .001</math>:</p> <p><math>r = .56</math> - loneliness  <math>r = .53</math> - impulse control  <math>r = .48</math> - hopelessness  <math>r = .39</math> - inward anger  <math>r = .35</math> - depression  <math>r = .31</math> - outward anger  <math>r = .31</math> - past violence</p> <p>Correlations of OMMP significant at <math>p &lt; .05</math>  <math>r = -.17</math> - schizoid trait</p> <p>Correlations of OMMP with JSDQ, lethality, and objective suicide planning - <i>ns</i></p>
<p>Nahaliel et al. (2014)</p>	<p>Psychiatric patients) and non-suicidal and non-clinical community volunteers</p> <p>Age <i>M</i> = 42.5 <i>SD</i> = 15.3</p>	<p>OMMP</p>	<p>Multi-Attitude Suicide Tendency Scale (MAST)</p>	<ul style="list-style-type: none"> <li>• Loss Questionnaire</li> <li>• Self-critical Cognition Scale</li> <li>• Self-defeating Personality Questionnaire (SDPQ)</li> <li>• Self-derogation Scale (subscale of</li> </ul>	<p>Correlations of OMMP significant at <math>p &lt; .001</math></p> <p><math>r = .82</math> - depression  <math>r = .78</math> - self-destruction (self-critical cognitions, self-defeating, self-derogation, and guilt)  <math>r = .71</math> - number of losses  <math>r = .70</math> – suicidal tendency</p> <p>The scores of all indices were the highest for suicide attempters, and the lowest for healthy non-suicidal controls</p>

<i>Table B1 cont'd</i>	<i>N</i> = 150 30.7% males			Rosenberg Self Esteem Scale) • The Guilt Inventory • Beck Depression Inventory	
Ohana et al. (2014)	Holocaust survivors and matched community members  Age <i>M</i> = 80.7 <i>SD</i> = 4.7  <i>N</i> = 214 52.8% males	OMMP	-	• Resilience Scale • Geriatric Depression Scale	<ul style="list-style-type: none"> <li>• Resilience scores similarly high for both groups and <i>ns</i></li> <li>• OMMP scores higher and resilience scores lower for those living alone compared to those living with wife or partner (<math>p &lt; 0.04</math>)</li> <li>• Depression scores higher for Holocaust survivors (<math>p = 0.03</math>)</li> <li>• Depression accounted for only 3% of between-groups variance</li> </ul>
Shelef, Fruchter, Hassidim, and Zalsman (2015)	Israel Defense Forces soldiers  Age <i>M</i> = 19.7 <i>SD</i> = 1.0  <i>N</i> = 168 59.5% males	OMMP	Scale for Suicide Ideation (SSI)	• Affect Regulation of Mental Pain	All indices differentiated between suicide attempters, non-attempters and healthy controls ( $p < .001$ )  Correlations significant at $p < .001$ $r = .61$ - OMMP and SI $r = -.55$ - OMMP and emotional regulation $r = -.39$ - SI and emotional regulation
R. C. Campos and Holden (2015)	Community volunteers (various Portugal regions)  Age	PS	Suicidal Behaviour Questionnaire-Revised	<ul style="list-style-type: none"> <li>• Inventory for Assessing Memories of Parental Rearing Behaviour</li> <li>• The Center for the Epidemiological</li> </ul>	Correlations of PS significant at $p < .001$ $r = .76$ - depression $r = .62$ - recent SI $r = .58$ - future possibility of suicide $r = .53$ - perceived burdensomeness $r = .51$ - communication of suicidal wish

<p><i>Table B1 cont'd</i></p>	<p><i>M</i> = 37.9 <i>SD</i> = 11.7  <i>N</i> = 203 49.3% males</p>			<p>Studies of Depression Scale</p> <ul style="list-style-type: none"> <li>• Interpersonal Needs Questionnaire</li> </ul>	<p><i>r</i> = .51 - thwarted belongingness <i>r</i> = .49 - SI and attempt <i>r</i> = .29 - rejection by father <i>r</i> = .26 - rejection by mother</p>
<p>Troister, D'Agata, and Holden (2015)</p>	<p>Undergraduates  Age <i>M</i> = 18.2 <i>SD</i> = 1.9  <i>N</i> = 7,522 % males - unknown</p>	<p>PAS (PS)</p>	<p>Beck Scale for Suicide Ideation</p>	<ul style="list-style-type: none"> <li>• Beck Depression Inventory II</li> <li>• Beck Hopelessness Scale</li> </ul>	<p>Correlations of PS (<i>p</i> not provided) <i>r</i> = .65 - depression <i>r</i> = .49 – hopelessness</p> <ul style="list-style-type: none"> <li>• Both measures significantly accurately differentiated between individuals in various suicide-risk groups</li> <li>• PAS (PS) superior in detecting single time suicide attempters and those with prior heightened suicide risk</li> </ul>

*Note.* The findings presented here are not -inclusive, but for the major results only. Studies are presented in order of the year of publication. PS = Psychache Scale; OMMP = Orbach and Mikulincer Mental Pain scale; PPAS = Psychological Pain Assessment Scale; IPBR = Internal Perturbation-Based Reasons (items describe a state of confusion, feelings of failure, and desire to escape an impossible situation); MLMS = Multidimensional Life Meaning Scale; MPS = Mental Pain Scale (Greek version of OMMP); TMPS = Tolerance of Mental Pain Scale; STAXI = State-Trait Anger Expression Inventory; PFAV = Past Feelings and Acts of Violence; BDI = Beck Depression Inventory; JSDQ = Jourard Self-Disclosure Questionnaire; ULS = UCLA Loneliness Scale; SLE = Schedule of Life Events; TAS-20 = Toronto Alexithymia Scale; SRS = Suicide Risk Scale

<sup>a</sup>SI = suicide ideation  
<sup>b</sup>SA = suicide attempt

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## APPENDIX C: Proposed Future Study Interview

### Semi-structured Interview Script

#### Emotions and Self-destructive Acts

The opening statement: *I believe that what led up to your decision to risk your life must have been very challenging. People experience different emotions and thoughts in difficult times. I would like to talk with you about you and your life, and your thoughts and feelings you had before and at the very time of you risking your life, and now.*

Once the participant relaxes into the conversation, more specific questions about the self and private experiences could be asked. The interview could continue for up to one hour.

The outline of questions below is a tentative guideline only; the researcher would create a dialogue, and follow the participants' leads (though directing the talk to the research items of interest).

#### Guiding Questions:

##### CHILDHOOD RELATIONSHIPS:

1. What was your childhood like? What made it good or 'not-so-good'? What was your relationships with your parents and others like? Any other close relations?
2. What did you think and feel about yourself when you were a child, from your early perspective as a child?

3. Were you an 'emotional'/easily excited or upset child? How did you feel most of the time, and how did you show your emotions? Did you talk about your emotions with your parents? How did your parents respond to your emotional needs?

4. *If any issues with the parental response:* How did you cope with their approach? How did you cope with your emotions? (*signs of dissociation, numbness of feelings, sudden resurges of energy/positive affect, early suicidal ideation, death lure?*)

5. Was there any incident that stood out from your early life experiences? What was it like for you then? How do you see this now?

#### ADULTHOOD:

##### MOTIVATIONS FOR RISKING LIFE:

6. What happened to you? How did it get to the point of trying to 'opt out'?

7. How do you explain what happened to you? What made you able to harm yourself?

8. What did you think would happen when you decided to harm yourself? Did you hope for anything specific to happen? (*if not theme of death of lure emerges, a more direct question may be asked in respect to feeling drawn to death*)

##### EMOTIONS

9. How would you describe the feelings you've experienced in that difficult time (before, during and after the self-harming act)? What have you felt towards yourself? How did you feel towards others, those close to you ...? How was that feeling the same or different from how you usually feel about yourself or those close to you? How did you feel about death?

*If no positive affect mentioned:* Did you have any positive feeling towards yourself or the 'others' at the time/before/during/after the event? Can you tell me more about this?

## RELATIONSHIPS

10. *If not described earlier:* What were your relationships like prior to the self-harming attempt? What were your feelings for these people during the self-harming? *If the feelings were positive:* How did you justify in your mind your desire and action to self-harm?

## BODILY AND MENTAL EXPERIENCES

11. How would you describe your overall physical and mental sensations before and during the event of self-harming? (*anxiety, confusion, psychache, or sudden influx of energy, etc.*)

12. *If not indicated:* Some people experience a sensation of getting detached or disconnected from their own body or mind..... Have you ever felt anything like that? Can you tell me more about that? (*signs of emotional and/or physical disconnection?*)

## THOUGHTS/COGNITION

13. Have you had any moments of hesitation? *If yes:* Why do you think that was happening/what did that mean to you? How did you respond to those thoughts?

14. How would you evaluate your memory and thinking during and after the act, in comparison how you usually think and what you remember/pay attention to?

*E.g., thinking ease, imagination, vivid fantasy, reliving the past, being absorbed by thoughts, bias for negative or positive thoughts, remembering the events, facts, people .....?*

## LIFE MEANING/VALUES/PRIORITIES

15. What's most important for you in your life? Have you thought of those things when planning and attempting to end your life?

16. *If not mentioned yet:* What were your priorities at the very moment of self-harming?

17. *If the desire was to die or kill 'something'*: What was it exactly that you wanted to die or 'kill'? What do you think the death would achieve (*if not stated earlier*)?

#### FUTURE PLANS

18. How likely are you to make another attempt? What would make a difference / what would help you change your mind?

*If not likely* – what caused the change in the desire/intention to die/escape/stop suffering (*using the patient's expression of the intent*)?

#### Conclusion:

Is there anything that I haven't asked you about your experience of trying to die/kill yourself (*use clients' words*), that you would find important for me to know?

Have you got any questions about the study or about today's interview?

The end and final 'Thank You' for time and contribution to this research....

**APPENDIX D: Proposed Future Study Survey**

[NOMINATED] HOSPITAL/CLINIC/LOCATION

Code: \_\_\_\_\_

**PARTICIPANTS' SURVEY:**

**Emotions and Self-destructive Acts**

**Part A. Demographic information;** please, circle:

Age:            18 – 35            36 – 50            51 – 65            66+

Sex:            Male            Female

Marital status:            Single    Married/De facto    Separated    Divorced    Widowed

Mental health diagnoses (past and/or current):

Depression    Anxiety    Eating Disorder    Schizophrenia            Bipolar Disorder

Other (specify): \_\_\_\_\_

Chronic physical illness or disability (specify if any): \_\_\_\_\_

**Social relations:**

Indicate the number of people, with whom you have fairly regular and frequent contact, who:

- |                                                  |   |   |   |   |   |    |
|--------------------------------------------------|---|---|---|---|---|----|
| 1) Show appreciation of you                      | 0 | 1 | 2 | 3 | 4 | 5+ |
| 2) Make you feel that they admire you very much  | 0 | 1 | 2 | 3 | 4 | 5+ |
| 3) Show understanding and acceptance of you      | 0 | 1 | 2 | 3 | 4 | 5+ |
| 4) Act in ways that show they sincerely like you | 0 | 1 | 2 | 3 | 4 | 5+ |
| 5) Seem to really care about you                 | 0 | 1 | 2 | 3 | 4 | 5+ |
| 6) Seem to really love you                       | 0 | 1 | 2 | 3 | 4 | 5+ |

**Part B. Emotions:** Mark the boxes on the scale from 1-strongly disagree to 5-strongly agree:

Generally:	1 strongly disagree	2 disagree	3 neither agree nor disagree	4 agree	5 strongly agree
1. I am often confused about what emotions I am feeling.					
2. It is difficult for me to find the right words for my feelings.					
3. I have physical sensations that even doctors don't understand.					
4. I am able to describe my feelings easily.					
5. I prefer to analyse problems rather than just describe them.					
6. When I am upset I don't know if I am sad, frightened, or angry.					
7. I am often puzzled by sensations in my body.					
8. I prefer to just let things happen rather than to understand why they turned out that way.					
9. I have feelings that I can't quite identify.					
10. Being in touch with emotions is essential.					
11. I find it hard to describe how I feel about people.					
12. People tell me to describe my feelings more.					
13. I don't know what's going on inside me.					
14. I often don't know why I am angry.					
15. I prefer talking to people about their daily activities rather than their feelings.					
16. I prefer to watch "light" entertainment shows rather than psychological dramas.					
17. It is difficult for me to reveal my innermost feelings, even to close friends.					
18. I can feel close to someone, even in moments of silence.					
19. I find examination of my feelings useful in solving personal problems.					
20. Looking for hidden meanings in movies or plays distracts from their enjoyment.					

**Part C: Self-cohesion: The self.** Describe your **current beliefs about yourself** in respect to each of the descriptive lines below. Mark the point that best describes your answer:

Empty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Full				
Self-hating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Self-loving				
Unpleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Pleasant				
Incomplete	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Complete				
Boring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Interesting				
Worthless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Worthwhile				
Unlovable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Lovable				
Undesirable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Desirable				
Unpopular	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Popular				
Unattractive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Attractive				
Powerless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Powerful				
Lethargic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Energetic				
Not in control	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	In control				

Describe your **beliefs about your childhood** experiences. As a child, you felt that you:

Had a voice	<input type="radio"/>	Had no voice									
Were acknowledged	<input type="radio"/>	Not acknowledged									
Were heard	<input type="radio"/>	Not heard									
Were connected	<input type="radio"/>	Not connected									
Were treated loyally	<input type="radio"/>	Betrayed									

Read each item below and indicate **what you think** when you feel sad, down or depressed? Please indicate what you generally think, not what you believe you should think:

	Almost <b>never</b>										Almost <b>always</b>
What am I doing to deserve this?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do I always react this way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do I have problems other people don't have?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why can't I handle things better?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wish the situation had gone better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Psychological Pain**

The following statements refer to your psychological pain, NOT your physical pain. By circling the appropriate number, please indicate how frequently each of the following occur:

	Never	At times	Often	Very often	Always
1. I feel psychological pain.	1	2	3	4	5
2. I seem to ache inside.	1	2	3	4	5
3. My psychological pain seems worse than any physical pain.	1	2	3	4	5
4. My pain makes me want to scream.	1	2	3	4	5
5. My pain makes my life seem dark.	1	2	3	4	5
6. I can't understand why I suffer.	1	2	3	4	5
7. Psychologically, I feel terrible.	1	2	3	4	5
8. I hurt because I feel empty.	1	2	3	4	5
9. My soul aches.	1	2	3	4	5

Please continue the list, using the following scale:

	Strongly disagree	Disagree	Unsure	Agree	Strongly agree
10. I can't take my pain any more.	1	2	3	4	5
11. Because of my pain, my situation is impossible.	1	2	3	4	5
12. My pain is making me fall apart.	1	2	3	4	5
13. My psychological pain affects everything I do.	1	2	3	4	5

**Part D: SELF-EMPATHY SCALE** (Clark, 1999, permission to be obtained for reproduction)

30 items on a 5-point Likert scale

**Part E: Specific emotions: death lure, self-hate, and self-love**

On the spectrum below, mark the extent of the following emotions as you experience them now and as you experience them in times of psychological crisis:

As feeling **in this moment**:

Strongly drawn to death	<input type="radio"/>	Not drawn to death at all									
Loving myself deeply	<input type="radio"/>	Having no love for myself									
Hating myself deeply	<input type="radio"/>	Having no hate for myself									

As feeling **in times of deepest upset** or emotional struggle:

Strongly drawn to death	<input type="radio"/>	Not drawn to death at all									
Loving myself deeply	<input type="radio"/>	Having no love for myself									
Hating myself deeply	<input type="radio"/>	Having no hate for myself									

**Part F: ANXIETY and DEPRESSION SYMPTOMS SCALE**

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applies to you. There are no right or wrong answers. Do not spend too much time on any statement:

0 = Does not apply to me at all - NEVER

1 = Applies to me to some degree, or some of the time - SOMETIMES

2 = Applies to me to a considerable degree, or a good part of time - OFTEN

3 = Applies to me very much, or most of the time - ALMOST ALWAYS

	0	1	2	3
1. I am aware of dryness of my mouth				
2. I experience breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)				
3. I experience trembling (eg, in the hands)				
4. I am worried about situations in which I might panic and make a fool of myself				
5. I feel I am close to panic				
6. I am aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)				
7. I feel scared without any good reason				
8. I don't seem to experience any positive feeling at all				
9. I find it difficult to work up the initiative to do things				
10. I feel that I have nothing to look forward to				
11. I feel down-hearted and blue				
12. I am unable to become enthusiastic about anything				
13. I feel I'm not worth much as a person				
14. I feel that life is meaningless				

Part G: Current suicidality and history of suicide attempts:

**COLUMBIA-SUICIDE SEVERITY RATING SCALE**

*Screener/Recent – Self-Report*

Answer Questions 1 and 2	In The Past Month	
	YES	NO
1) <i>Have you wished you were dead or wished you could go to sleep and not wake up?</i>		
2) <i>Have you actually had any thoughts about killing yourself?</i>		
If YES to 2, answer questions 3, 4, 5, and 6. If NO to 2, go directly to question 6		
3) <i>Have you thought about how you might do this?</i>		
4) <i>Have you had any intention of acting on these thoughts of killing yourself, as opposed to you have the thoughts but you definitely would not act on them?</i>		
5) <i>Have you started to work out or worked out the details of how to kill yourself?</i>  <i>Do you intend to carry out this plan?</i>		
	In the Past 3 Months	
6) <i>Have you done anything, started to do anything, or prepared to do anything to end your life?</i>  Examples: Collected pills, obtained a gun, gave away valuables, wrote a will or suicide note, took out pills but didn't swallow any, held a gun but changed your mind or it was grabbed from your hand, went to the roof but didn't jump; or actually took pills, tried to shoot yourself, cut yourself, tried to hang yourself, etc.  <i>In your entire lifetime, how many times have you done any of these things?</i>		

If you have engaged in suicidal behaviour before, indicate below (circle) how many times you have made attempts on your life, and then place a mark to show the extent of your intention to die as the result of each of those attempts:

Number of attempts		Definitely did not want to die	Somewhat did not want to die	50/50 wished to die or live	Wanted to die	Intensely wanted to die	Cannot remember my intent
1	1st attempt						
2	2nd attempt						
3	3rd attempt						
4	4th attempt						
5	5th attempt						
6	6th attempt						
7 or more	7th attempt						

**Part H: Potential interview.** Circle one option, please:

I **CONSENT / DO NOT consent** to be contacted for a potential interview

If you consent, please, include the contact method (telephone number or email address) and your name or nickname (confidentiality, as described in the Participants' information sheet, is guaranteed)

Contact: \_\_\_\_\_

Name: \_\_\_\_\_

**The End**

Thank you for completing this survey. Next, we will proceed to an interview.

**APPENDIX E: Participant Information and Consent; adapted from the SA Health Research website (2016)**

**[NOMINATED] HOSPITAL/CLINIC/LOCATION**

**Participant Information Sheet**

**Title:** Emotions and Self-destructive Acts

**Protocol Number:** [XXXXXXXXXX]

**INVITATION TO PARTICIPATE**

My name is [...], and I am a researcher from the University of [...]. I am seeking volunteers to contribute their understandings to the study of motivations, feelings and actions of persons in distress, who, may or may not thought about or attempted to end their lives.

Suicide is a serious problem affecting individuals, families, communities and societies, therefore it is of crucial importance to find out what drives and what prevents suicide, to design appropriate suicide prevention strategies. To date, many studies have tried to understand the conditions under which individuals risk their own lives, however, there are still many unanswered questions, especially in respect to how the distressed individuals see themselves, what they feel, and how they relate to others. This study examines the role of a sense of own emotions, self-beliefs, and self-acceptance in a suicidal wish and behaviour. The findings of this study may assist, researchers, clinicians and affected individuals in early detection of self-harming risk, and possibly improve the provision of effective assistance to those at risk.

This Participant Information Sheet/Consent Form tells you about the research project. It explains the tests and research involved. Knowing what is involved will help you decide if you want to take part in the research.

Please read this information carefully. Ask questions about anything that you don't understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with a relative, friend or doctor.

Participation in this research is voluntary. This is a research project and you do not have to take part; Your medical care will not be affected in any way. If you decide to participate and then change your mind, you may withdraw from the project at any time, with no obligations. All you would need to do is to inform the researchers by email (xxxx@xxx.xx.xx) or telephone (XXX, (0X) XXXX XXXX). If you decide you want to take part in the research project, you will be asked to sign a consent section.

By signing the consent form you are telling us that you:

- Understand what you have read
- Consent to take part in the research project
- Consent to the tests and research that are described
- Consent to the use of your personal and health information as provided by you, but without any identifying information.

You will be given a copy of this Participant Information and Consent Form to keep.

### **PURPOSE OF THIS STUDY and METHOD**

The study aim is to investigate self-awareness, emotions, a sense of self-cohesion and self-acceptance, in individuals who engage in suicidal thinking or behaviour. This is especially important, given that those individual characteristics have not been given much attention in research. This study will extend an earlier PhD investigation conducted by the same researcher, dealing with psychological pain, self-cohesion, negative emotions and suicide. It is anticipated that the new findings will have the potential to advance psychological assessment and intervention strategies to those experiencing distress and risk of self-harming.

The most effective way to study psychological and emotional experiences is collecting first-hand information from participants' histories/personal disclosures in face-to-face interviews, therefore a selected group of participants will be approached if they wish to volunteer their input in an interview. The interview invites participants to describe in depth their own perspectives, understandings and emotions, as experienced in the context of their circumstances. The interview takes a form of a conversation between a researcher and volunteering participant.

### **WHAT THIS STUDY INVOLVES:**

#### **What you will be asked to do**

All participants will be asked to completing a survey; this should take 15 – 20 minutes and contains several items:

- Demographic information (e.g., age range, sex, education, social networks)
- Psychological pain items (13 items)
- Self-beliefs and experiences items (23 items)
- Depression and anxiety symptoms items (14 items)
- Knowing your emotions items (20 items)
- Self-empathy items (30 items)
- Specific emotions items (2 tables)
- Current suicidality scale (1 table)
- History of suicide attempts (1 table)

If you volunteer to participate in the interview, and with your consent, you will be contacted by the researcher (NAME) who will organise a suitable time for your interview. Once at the interview with (NAME), you will have the opportunity to ask relevant questions you might have about the study, as she/he gives you details of the procedures before you sign the consent form.

The interview with XX will be held at XXX. You will be reimbursed the travel cost to and from the interview. The interview will take form of conversation about your motives for wishing to die or attempt suicide, thoughts, emotions and body experiences, relationships with others and your life priorities and future plans. It is estimated to take 45-60 min. The interview will be voice-recorded only with your permission.

#### **How the information you provide will be used**

This research project has been designed to make sure the researchers collect and interpret your information in a confidential and fair way. That is, any information obtained in connection with this research project that can identify you will remain confidential. Your information will only be used for the purpose of this research project and it will be de-identified and disclosed only as, and if, required by law.

Your signed consent form will be securely stored at the XXXX. Your completed questionnaire will be coded (names will not appear on it) and kept separately from the consent form. The voice-recorded interview will be transcribed on paper by the interviewer, with names of people and places changed/coded. Once transcribed, the recording will be permanently destroyed.

The information you and other participants' provide will be analysed, to identify common ideas/patterns from the disclosures of all the participants. The analysis will compare the participants' responses to the theoretical conceptions and existing scientific evidence from the research on suicide. All the de-identified paper data, securely archived/stored as required by The National Statement on Ethical Conduct in Human Research (2007) will be destroyed after 5 years.

#### **Possible benefits of taking part**

The values and benefits of this investigation may not directly reach you and all the participants of this study, however, the potential for experiencing an emotionally soothing effect from the opportunity to reflect on your memories and feelings is likely. Similar prior studies demonstrated that some participants developed new insights about their approaches to difficulties and into the meaning of life, and about the benefits of connecting with others in times of emotional or psychological crisis. However, we accept that in some individual cases there will be no clear benefits from participation.

#### **Possible risks and disadvantages of taking part?**

Participation may potentially cause a sense of unease or discomfort resulting from discussing unpleasant memories, feelings, and events. It has been reported that a majority of participants are not generally distressed by questions relating to suicidality, and indeed for those who have experienced suicidality, the process of disclosing and having their experiences validated, can be therapeutic. An estimated 2.7% of participants in the earlier study by Whitlock, Pietrusza, and Purington (2013) reported feelings of unease. However, the participants also concluded that their discomfort was outweighed by satisfaction from gaining deeper self-awareness and insightfulness.

If you become upset or distressed as a result of your participation in the research, Dr XXX will be able to arrange for counselling or other appropriate support. Any counselling or

support will be provided by qualified staff who are not team members of this research project. This counselling will be provided free of charge.

### **STUDY PARTICIPANTS**

We are seeking Caucasian adults (18+), both female and male, with and without history of suicide attempts, with no cognitive impairment or brain injury. It is important that research participants are not pregnant, because there is no sufficient information to inform us about the effects of mothers' distress or the unborn yet children. Also, the exclusion of other ethnic groups is essential, because each cultural group may have different understandings and beliefs about suicide, therefore requiring a different research approach.

### **STUDY MONITORING**

The study is supervised by experienced researchers: XXX, XXX and XXX of XXX. Supervision, ongoing support and advice will be provided by Dr XXX. Additionally, the mental health team staff will be available at the interview site, providing assistance if need arises.

### **AFTER THE STUDY**

You may record your interest in receiving a brief report on the study findings. The report would be expected to be completed in XXX. Please note that the results will not contain any specific information about, or for, any individual participant. The results will gather all the participants' information into one overall conclusion.

It is anticipated that the results of this research project will be published and/or presented in a psychology journal. In any publication and/or presentation, information will be provided in such a way that you cannot be identified.

In accordance with relevant South Australian privacy and other relevant laws, you have the right to request access to the information collected and stored by the research team about you. You also have the right to request that any information with which you disagree be corrected. Please contact the research team member named at the end of this document if you would like to access your information.

### **COMPLAINTS AND COMPENSATION**

If you sustain any injury or complications as a result of this research project, you should contact the study team as soon as possible and you will be assisted with arranging appropriate medical or psychological treatment. If you are eligible for Medicare, you can receive any medical treatment required to treat the injury or complication, free of charge, as a public patient in any Australian public hospital. Your participation in this study shall not affect any other right to compensation you may have under common law. For more information, please contact XX.

Tel: (0X) XXXX XXXX

Fax: (0X) XXXX XXXX Email: xxx@xxx.xx.xx

**APPROVAL**

This study has been approved by the Human Research Ethics Committee (No. XXXXXXXX). Should you wish to speak to a person not directly involved in the study in relation to: matters concerning policies, information about the conduct of the study, your rights as a participant, or making a confidential complaint, you may contact The Executive Officer of this Committee on (0X) XXXX XXXX.

**DECLARATION OF THE RESEARCH TEAM**

No member of the research team will receive a personal financial benefit from your involvement in this research project (other than their ordinary wages or research grants).

**MORE INFORMATION**

For more information or questions about this study, please contact:

XXX XXX

Tel: (0X) XXXX XXXX

Fax: (0X) XXXX XXXX

Email: xxx@xxx.xx.xx

—Please retain this information document—

**[NOMINATED] HOSPITAL/CLINIC/LOCATION**

**Consent Form**

Title: **Emotions and Self-destructive Acts**

Protocol Number XXX

Principal Investigator XXX

Location: XXX

**Declaration by Participant**

- I have read the Participant Information Sheet or someone has read it to me in a language that I understand.
- I understand the purposes, procedures, time and risks of the research described in the project, and that my participation may bring no benefit to me.
- I have had an opportunity to ask questions and I am satisfied with the answers I have received.
- I had an opportunity to discuss my participation with a family member or friend.
- I freely agree to participate in this research project as described and understand that I am free to withdraw at any time during the project. The decision to participate or withdraw will not affect my future health care.
- I understand my identity will be kept confidential in data and published materials.
- I understand that I will be given a signed copy of this document to keep.
- I understand I do not have to agree to my interview being audio-taped.
- I agree to the interview being audio recorded. (*place a tick*) Yes  No

Name of Participant (please print) _____	
Signature _____	Date _____

**Declaration by Investigator**

I have given a verbal explanation of the research project, its procedures and risks and I believe that the participant has understood that explanation.

Name of Researcher (print) _____	
Signature _____	Date _____

Note: All parties signing the consent section must date their own signature.