THE BURDEN OF INTERNALISING PROBLEMS IN SOUTH AUSTRALIAN ADOLESCENTS: A TRIPLE-PRONGED APPROACH TO IMPROVING THE EVIDENCE BASE FOR SERVICE DELIVERY

Catherine Ann Papandrea

Bachelor of Psychology, Bachelor of Health Science (Hons)

Thesis submitted in fulfilment of the requirements for the degrees of

Doctor of Philosophy (PhD) / Master of Psychology (Clinical)

School of Psychology and Department of Psychiatry

Faculty of Health Sciences



February, 2012

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SUMMARY

The alarming prevelance and distressing impact of internalising problems in adolescents are both clinically and empircially well established. Despite enhanced prevention and intervention efforts, particularly within educational environments over the last decade, the global burden of internalising problems is mounting. Due to the complexity of the issues, no "one-way" approach exists to address them. Thus, the present research employed a triple-pronged approach that aimed to improve the evidence base for service delivery for South Australian adolescents with internalising problems. This dissertation is presented as a combination of Publication and Conventional Formats, comprised of two published studies and one study in preparation for publication.

Study One (*paper one*) aimed to improve access to mental health service use for adolescents experiencing internalising problems within educational contexts. A simultaneous mixed-methods research design examined 152 high school teachers' views on the existing disparity between referral rates for adolescents with externalising versus internalising disorders. Both quantitative and qualitative results highlighted that teachers perceive they face an expectation to identify the symptoms of internalising problems in their students; yet do not feel sufficiently capable to fulfil this expectation. This is particularly problematic as teacher referral is the most common pathway to treatment. Based on the present results a conceptual framework consisting of specific processes aimed at enhancing access to mental health services for adolescents experiencing internalising problems within an educational context is presented. Recommendations concerning pre-service teaching programs, current policy and government funding initiatives are provided.

Study two (*paper two*) aimed to improve the empirical evidence base for an under-researched, yet acknowledged high-risk rural adolescent population (*N* = 388; 13 to 15 years). The study cross-sectionally examined multiple domains of adolescent development including individual (self-esteem), family (parental acceptance), and community (social capital) determinants of internalising problems. It was anticipated that such knowledge would increase insight and assist in providing evidence-based guidelines for establishing priorities for newly appointed funds from the Federal government for youth services in rural South Australia. In light of the concerning rates of internalising problems demonstrated by the present study, coupled with the fact that young people from rural areas have not been considered in previous National Mental Health Surveys, this research emphasises the importance of including as many Australians as possible from rural and remote areas, in the approaching, subsequent national survey.

Study three aimed to improve the efficacy and effectiveness of intervention and prevention initiatives for young people with internalising problems by the addition of theoretically-derived family-level factors to conceptual frameworks. This was achieved by applying a novel empirical approach to a well known clinically-derived conceptualisation with a large sample of young South Australians (*N* = 904; 13 to 15 years). Four empirically-based parenting constructs (parental psychological control, parental acceptance, parental autonomy granting, and parental overprotection) were applied to Young's (1990) hypothesised "typical family origin" (TFO) conceptualisations. Young's posited corresponding Early Maladaptive Schemas (EMS) were simultaneously examined. The relationships between the parenting constructs, 11 EMS and internalising problems were also investigated. Further, in order to

enhance cognitive content-specificity, multivariate analyses investigated the unique contribution of adolescents' perceptions of the parenting constructs, anxiety and depression, and 11 EMS. As the efficacy and effectiveness of intervention and prevention initiatives relies heavily on a thorough evidence base, it is anticipated that the knowledge gained from the present study would reduce the high numbers of young people with internalising problems that terminate treatment prematurely and/or fail to respond to treatment efforts. In particular**,** the study highlights the importance of the addition of a parental component to traditional programs where appropriate.

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DECLARATION

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Papandrea, K., & Winefield, H. (2011). It's not only the squeaky wheels that need the oil: Examining teachers' views on the disparity between referral rates for students with internalising versus externalising problems. *School Mental Health, 3, 222-235*.

Papandrea, K., Winefield, W., & Livingstone, A. (2010*).* Oiling a neglected wheel: An investigation of adolescent internalising problems in rural South Australia. *Rural and Remote Health, 10*, 1524. Retrieved from http://www.rrh.org.au

Papandrea, K., & Winefield, H. (2012). The relationships between typical family origins, Early Maladaptive Schemas and internalising problems in adolescents: An empirical approach to a clinically-based conceptualisation. *Manuscript in preparation for publication.*

Kate Papandrea

Signed: ---------- Date: ----------

ACKNOWLEDGMENTS

I would like to acknowledge a number of people who have helped me over the course of this degree:

My principal supervisor, Professor Helen Winefield. Helen was a sound mentor and her consistency, promptness and experience were greatly appreciated. Helen also provided me with additional learning opportunities and it has been a privilege to learn from her.

My co-supervisor, Mr. Andrew Livingstone, for inspiring an awareness to pursue rural mental health issues. Andrew was very supportive in attending conferences and allowing opportunities to present my research at the rural and remote meetings.

My fellow PhD colleagues, in particular, Victoria, Peter, Diane, Laura, and Jeremy have offered much encouragement, advice, and fellowship.

I would like to acknowledge the hard work and support of the School of Psychology professional staff. In particular, Wanda, Carola, Deidre, Jess, Lynda and Bob.

Members of my family for their confidence that I could successfully complete this degree. I would also like to acknowledge my sister, Suzie who tragically passed away at the commencement of my postgraduate studies.

My special friends, Joe, Sonya, John, Cate, and Mike, for having complete belief in my ability to reach my full potential.

The principals, teachers, students, and parents who supported and participated in this research and made it all possible.

Last, but most importantly, I would like to acknowledge my children, Ben and Natalie. I will always cherish the time with you both throughout this degree – a period of challenge, growth, and empowerment for us all. I am so very grateful for your unconditional love and support. I feel honored to have such absolute treasures for children.

DEDICATIONS

To my *precious* Ben and Natalie, may you both always feel that…….

You are a child of the universe

no less than the trees and the stars;

you have a right to be here.

(Desiderata; Ehrmann, 1927)

KEY TO ABBREVIATIONS

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
APA	American Psychiatric Association
APS	Australian Psychological Society
CBT	Cognitive Behavioural Therapy
CCSH	Cognitive-Content Specificity Hypothesis
DSM IV	Diagnostic and Statistical Manual of Mental Disorders, Edition 4
DSM IV-TR	Diagnostic and Statistical Manual of Mental Disorders, Edition 4, Revised
EMS	Early Maladaptive Schema/s
GAD	Generalised Anxiety Disorder
MDD	Major Depressive Disorder
MDE	Major Depressive Episode
OCD	Obsessive Compulsive Disorder
PD	Panic Disorder
PDA	Panic Disorder with Agoraphobia
RCADS	Revised Child Anxiety and Depression Scale
SAD	Separation Anxiety Disorder
SP	Social Phobia
TFO	Typical Family Origin/s

OVERVIEW

Outline of candidature

The current dissertation was undertaken to fulfil the requirements for the degree of Doctor of Philosophy (PhD) with Master of Psychology (Clinical) at the University of Adelaide, South Australia, Australia. The program combines a full research program for a Doctor of Philosophy (equivalent to three and a half years fulltime) with a Clinical Masters coursework load and 1,000 hours of clinical internship (equivalent to two years fulltime). The program rules stipulate the research undertaken has to adopt a clinical psychology focus. All coursework and internship requirements of the Master of Psychology (Clinical) component of the program were completed successfully. The following thesis is submitted to fulfil the requirements of a Doctor of Philosophy (PhD).

Outline of thesis

The research program underlying this thesis was aimed at improving the evidence base for service delivery for South Australian adolescents experiencing internalising problems. The research program comprised of three independent but related studies. The studies are reported across two published papers and one in preparation for publication (presented as chapters in manuscript typeset in this thesis).

Chapter One describes the internalising problems investigated in the present thesis. The epidemiology and clinical presentation of each disorder are discussed. An overview of the comorbidity, course and impact of internalising problems is subsequently addressed.

Chapter Two provides an exegesis (explanation) of the research program. The purpose of this chapter is to provide the impetus for each study in the context of the broader research program. This chapter also presents the overall aim of this dissertation, followed by the rationale of why a triple-pronged approach was employed to achieve this aim. A range of information that was outside of the scope of the papers, including the justification for the enhanced scientific rigour follows. Chapter Three contains a discussion on the method employed throughout this research program. The format, measures, procedures and participants involved are included.

Chapters Four and Five contain the two papers (study one and study two respectively) that were produced and the statements outlying each author's respective contributions. The two published papers are presented in Appendices 19 (*paper one*) and 20 (*paper two*). Chapter Six contains study three which will be prepared for publication and pursued in post-doctoral work.

Chapter Seven provides a description of what the present results contribute to the extant literature, future directions of the additional data collected from the present research and general limitations of this research. Problems encountered within the research program are addressed and a final conclusion is subsequently presented. Figure 1 is a Tree Diagram of the overall structure of the present research program. *Note***:** The data collected from study two (N = 388) was

combined with the data collected from study three (n = 516), thus providing study three with a total sample size of (N = 904).

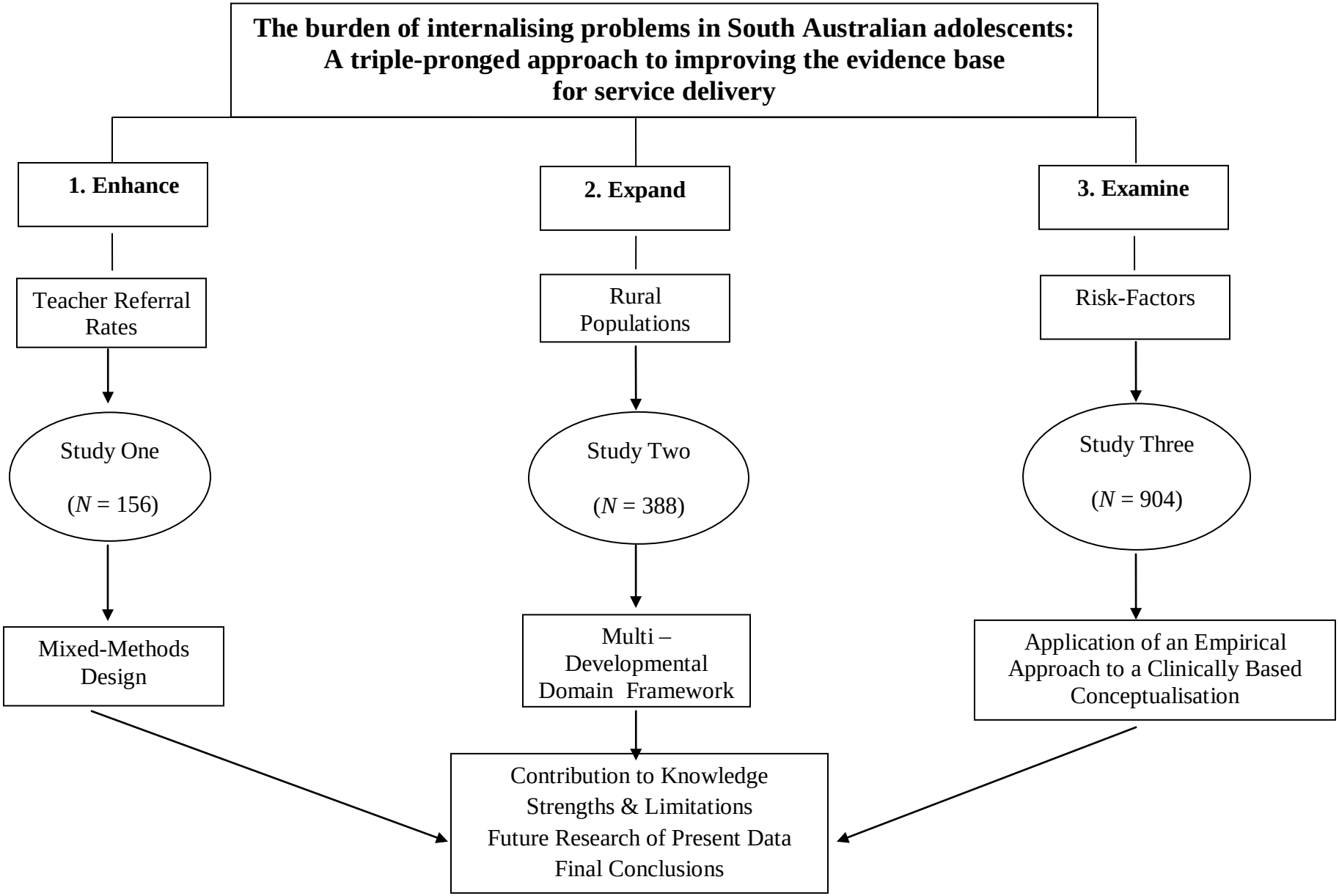

Figure 1. Tree Diagram of the overall structure of the research program.

Key concepts

Internalising disorders/problems

A well-known distinction in the field of developmental and clinical psychology is the distinction between "externalising" and "internalising" disorders (Achenbach, 1978). Although the conceptual and nosologic bases of these terms are debatable (Kovacs & Devlin, 1998), such labels are widely used within these fields.

The central feature of externalising or "under controlled" disorders is dysregulated behaviour, which consists of "acting out" behaviours that are disruptive, hyperactive and aggressive. Conduct disorder (CD) and attention deficit hyperactivity disorder (ADHD) are the two most common externalising disorders (Campbell, Shaw & Gilliom, 2000). In contrast to externalising disorders, and the focus of this research, are "internalising disorders". This term refers to a broad range of behavioural or emotional difficulties such as withdrawn, anxious, inhibited and depressed behaviours, or problems that more centrally affect the individual's internal psychological environment rather than the external world. Other terms for this group of problems include "neurotic" and "overcontrolled" (Campbell et al. 2000). Internalising disorders are among the most frequently diagnosed and chronic psychological disorders in adolescents (Egger & Angold, 2006). The two most common forms of internalising disorders are anxiety and depression.

The internalising problems investigated in study two (*paper two*) and study three (*paper three*) were those included in the Revised Child Anxiety and Depression Scale (RCADS, Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000). The RCADS' clinical cut-off scores have been shown to significantly differentiate adolescents who attend mental health clinics from nonreferred populations (Chorpita et al. 2000). However, such information is not sufficient for diagnostic purposes. Thus, the total symptom-scores obtained from the present research will not be used to generate a diagnosis of a specific disorder, but will be used as an index measure. Consequently, the term internalising "problem/s" was employed when specifically referring to the results obtained from the present research. However, throughout Chapter One (Literature Review), the term internalising "disorder/s" will be used.

Although a diagnosis will not be generated, young people with elevated internalising symptoms face similar challenges as those diagnosed with an internalising disorder, and may experience difficulties in the areas of school, social functioning and development (Grover et al. 2007). Similarly, the presence of subclinical anxiety and/or depressive symptoms could signal the development of an internalising disorder later in life (Kendall & Watson, 1989).

It should also be noted that the epidemiologic studies presented in Chapter One are composed of samples of adolescents who are primarily Anglo Saxon (i.e., white). Empirical knowledge regarding the manifestation and presentation of adolescent internalising disorders across racial and ethnic groups is scarce. Thus, possible cultural variations in presentations of the symptoms of internalising disorders need to be acknowledged.

Adolescence

Throughout industrialised countries, adolescence is viewed as the developmental period between childhood and emerging adulthood – a transitional stage which begins with the changes associated with puberty and culminates in the attainment of adult roles and responsibilities. During this complex transition, a dramatic number of biological, psychological, cognitive, and interpersonal changes occur over a relatively short period of time (Tram & Cole, 2006). A neurodevelopmental perspective of adolescence holds that most changes occur in three overlapping stages: Early, middle and late adolescence. Early adolescence (ages 10 to 14 years) marks the onset of puberty, middle adolescence (ages 14 to17 years) is characterised by peak growth and physical maturation and late adolescence (ages 17 to 21 years) marks the end of puberty and the integration of functional skills (Salkind, 2006).

In this thesis, the term "adolescents" refers to young people aged between 13 and 15 years. In western cultures, this stage commences during the mid-point of "early adolescence" and concludes at the mid-point of "middle adolescence". In Australia, a young person of this age group attends Year nine in school i.e., the second year of secondary school in South Australia. This age range was selected as early to middle adolescence is a critical time for the study of risk for internalising problems as it is the developmental period in which the first onset of symptoms occurs for many young people (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003). It is a time of significant physiological, psychosocial and biological changes, with the onset of puberty, academic and social demands in the transition to high school, and changing relationships with

family possibly contributing to the onset of associated symptoms (Anderson, Williams, McGee, & Silva, 1987).

Approximately 50% of all life-long psychiatric disorders start by 14 years of age (Angold & Rutter, 1992). Initial increases in depressive symptoms have been noted to be around 13 years of age, with rates of depression increasing throughout adolescence (Costello et al. 2003; Hankin et al. 1998). For instance, point prevalence estimates of 1 to 2% in childhood increase to 4 to 8% in adolescents over 13 years of age (Angold & Rutter, 1992; Costello et al. 2003).

Although youth within this developmental period do not have substantial experiential knowledge, the majority possess sufficient language and cognitive skills and an adequate level of psychosocial maturity to report an account of their thoughts and emotions (Pratt, 2005). Finally, on a practical basis, as the adolescent samples of study two and three were recruited through schools, Year nine is below the legal cut-off age for school-leaving (i.e., 17 years of age), thus maximising potential sample numbers (Rann, 2007).

CHAPTER ONE: INTERNALISING PROBLEMS IN ADOLESCENTS

Preamble

The present chapter describes the internalising problems investigated in the present thesis. The internalising problems were based on the Revised Child Anxiety and Depression Scale (RCADS, Chorpita et al. 2000), which comprises of major depression and five anxiety disorders: Separation anxiety disorder (SAD), social phobia (SP), generalised anxiety disorder (GAD), obsessive-compulsive disorder (OCD), and panic disorder (PD).

The diagnostic criteria for each disorder referred to in the present chapter are based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association [APA], 2000). In order to allow a clear comparison of diagnostic and symptom-level information (Chorpita et al. 2000), the specific child/adolescent features are also highlighted. The epidemiology and clinical presentation of each disorder are subsequently discussed. Finally, an overview of the comorbidity, course and impact of internalising problems is addressed. As this section focuses on the impact of internalising problems, identified risk factors are not addressed here. However, a comprehensive coverage can be found in Table 3 on p 51.

Anxiety disorders in adolescence

Definition

Anxiety is a universal phenomenon - a psychological and physiological state characterised by somatic (e.g., muscle tension), emotional (e.g., increased irritability), cognitive (e.g., difficulty concentrating), and behavioural components (e.g., social isolation or being

withdrawn; [Di Tomasso & Gosch, 2002]). Barlow and Cerny (1988) define anxiety as an unpleasant affective experience marked by a significant degree of apprehensiveness about the potential of future aversive or harmful events. Enhanced anxiety can serve a functional purpose of improved vigilance toward imminent threats of danger in the environment as well as an increased tendency to take purposeful actions regarding such possible threats (Beidel, 1991). Anxiety is also a marker for typical developmental patterns and can serve as an indicator that social and emotional development is progressing as expected. However, if the anxiety persists and becomes significantly out of proportion to the circumstance, such "affective experiences" can negatively impact on many areas of functioning in a young person's life (APA, 2000).

Epidemiology

Anxiety disorders are consistently cited as the most common type of disorders in adolescence (Costello, Egger & Angold, 2005; Essau, Conradt & Petermann, 2000; Kashani & Orvaschel, 1990; Messer & Beidel, 1994). The Australian National Survey of Mental Health and Wellbeing (Australian Bureau of Statistics [ABS], 2007) obtained prevalence rates from 4,500 young Australians aged 4 to 17 years (excluding adolescents from rural and remote areas of Australia). Results for young people aged 13 to 17 years demonstrated prevalence rates of 12.8% for internalising problems (anxiety and depression symptoms operationalised as feelings of loneliness, sadness, being unloved, and worthlessness, anxiety and general fears) and 12.9% for externalising problems.

Boyd, Kostanski, Gullone, Ollendick, and Shek (2000) investigated self-reported symptoms of anxiety from two separate studies of a large representative sample (N = 1229) of

adolescents (ages 11 to 18 years; 624 males) recruited from schools in Melbourne, Australia. The adolescents reported symptoms of anxiety at rates of 13.2%. Further research studies have reported prevalence rates between 5.7% to 15.4% in children ranging in age from 7 to 11 years old, and rates of 8.7% to 17.7% in adolescents aged 12 to 18 years old (Boyd et al. 2000; Essau et al. 2000; Tomb & Hunter, 2004). An apparent rise in adolescent mental health problems has been attributed to an increased proportion of young people exposed to early life stresses such as child abuse and neglect (Silburn, 1999) and cyber bullying (Campbell, 2005). However, it may also be that the perception of increased prevalence arises from greater awareness of disorders that have long been under diagnosed by health professionals (Costello, Egger & Angold, 2005).

As evident from the reports above, the prevalence of depression and anxiety disorders varies greatly between published epidemiologic reports. Such differences between reported prevalence rates are often due to methodological variations, including changes to diagnostic criteria over time, clinical cut-offs used, diagnostic measures, and sampling methods employed. Studies of depressive syndromes for instance, reported differential prevalence rates depending on the informants (Boyd & Gullone, 1997). Chorpita, Moffitt and Gray (2005) reported that sample sizes, response rates and the use of self-report methodology have been found to contribute to the heterogeneity of prevalence rates. It is also important to note that the typical age of onset varies between the different types of anxiety disorders. For instance, SAD often occurs at a younger age than PD and GAD (Kessler, Amminger, Aguilare-Gaxiola, Alonso, Lee, & Ustun, 2007).

It has been reported that girls are more likely to develop internalising disorders than boys (Rönnlund & Karlsson, 2006). In an adolescent (14 to 19 years) high school sample (N = 1709;

52% female), Lewinsohn, Gotlib, Lewinsohn, Seeley, and Allen (1998) also found a preponderance of female cases of anxiety disorders. The primary aim of the study was to explain this phenomenon by controlling for a range of psychosocial variables, such as differing social roles, stress and coping skills. The findings revealed that gender differences in the psychosocial variables did not account for the difference in anxiety symptoms diagnosis. This finding led the authors to conclude that female vulnerability to anxiety may be associated with some type of genetic, rather than purely environmentally determined gender differences.

However, rather than indicating a legitimate predisposition for internalising disorders in females, it has been suggested that such prevalence rates may reflect a differential reporting of symptoms by boys and girls (Lewinsohn et al. 1998). For instance, girls are more likely to report worries, fears and associated symptoms than boys (Muris, Meesters, Merckelbach, Sermon, & Zwakhalen, 1998; Silverman & Treffers, 2001), whereas boys report feelings of contempt and self-loathing and are more likely to engage in behaviours such as substance abuse, theft and running away.

Finally, it must be acknowledged that the variability associated with all anxiety disorders is considerably smaller than the variability associated with each individual disorder. See Table 1 for further epidemiological data concerning the anxiety disorders investigated in the present research. (The sources of data are listed at the bottom of Table 1).

Table 1

Epidemiological Data for Anxiety Disorders Among Children and Adolescents

Disorder	Prevalence		Gender		Age of onset
	Clinic	Community	Clinic	Community	
Separation anxiety disorder	4%	4 to 13%	Girls > boys	Girls = boys	>6 yrs; X = 7.5 yrs More common in children
Generalised anxiety disorder	14 to 58%	3 to 7%	Girls = boys (mixed findings)	Girls = boys	8.8 to 13.4 yrs More common in adolescents
Social phobia	15%	1 to 9%	Mixed findings	Girls > boys	X = 11 to 14 yrs More common in adolescents
Obsessive-compulsive disorder	0.8 to 4%	2.5%	Slightly more common in boys, although only in adolescence	Slightly more common in boys, although only in adolescence	Slightly more common in adolescents
Panic disorder	4.7 to 10%	0.5 to 1.5%	Slightly more common in girls	Girls > boys	13 to 15 yrs More common adolescents
All anxiety disorders	8.7% to 17.7%	6 to 18%	Girls > boys	Girls > boys	Half by age 11 yrs

Note: X = mean; Sources: Anderson et al. (1987); Beidal and Turner (1998); Beidal, Turner and Morris (1999); Boyd et al. (2000); Essau et al. (2000); Kashani and Orvaschel (1990); Kessler et al. (1994); Kessler, McGonadle, Zhao, Nelson, Hughes, and Eshleman (2007); Last, Perrin, Hersen, and Kazdin (1996); Lewinsohn et al. (1998); Muris and Field (2008); Ollindick and Pincus (2008); Pine, Cohen, Gurley, Brook, and Ma (1998); Toro, Cervera, Osejo, and Salamero (1992); Verhulst, van der Ende, Ferdinand and Kasius (1997).

A description of each of the five anxiety disorders and depression is now presented. The DSM-IV-TR (APA, 2000) diagnostic criteria of each internalising disorder is presented in Appendices one to seven.

Social phobia (SP): Diagnostic features

SP, also referred to as social anxiety disorder, is an anxiety disorder characterised by an intense fear of humiliation or embarrassment in social or performance situations, as well as the avoidance of social and performance situations. Once referred to as "the neglected anxiety disorder" (Liebowitz, Gorman, Flyer, & Klein, 1985), SP is presently considered the most widespread of the anxiety disorders reported by young Australians (Kessler et al. 1994). More specifically, SP has been the eighth leading disease or illness for males and fifth for females aged between 15 to 24 years since 2003 (Australian Senate Select Committee on Mental Health, 2006).

There are several exceptions in the DSM-IV-TR criteria for SP in children and adolescents compared with adults. For instance, young people with SP must demonstrate the capacity for normal peer relationships; anxiety must occur in settings with peers as well as with adults; and anxiety symptoms may take the form of crying, tantrums, freezing, or avoidance of social situations (DSM-IV-TR; APA, 2000; see Appendix one).

Clinical presentation

Beidel et al. (1999) evaluated a clinical sample of 50 children with SP (aged 7 to 13 years). Results indicated that children with SP demonstrated poorer social skills and used maladaptive coping behaviours (e.g., avoidance) in social or performance situations more frequently than children without SP. Children with SP also had difficulty with peer relationships with 75% reporting few or no friends, and 50% did not participate in extracurricular activities.

In a nonclinical sample of 7 to 11 year olds, children with SP (n = 45) were compared with anxious children without SP (n = 56) to identify characteristics unique to SP (Beidel & Turner, 1998). Children with SP feared and avoided a significantly greater number of social situations than anxious children without SP. In addition, significantly more children with SP compared with anxious children without SP described difficulty making friends (49% versus 24%, respectively). A greater number of young people with SP also significantly preferred to be alone rather than with peers (24% versus 7%, respectively).

Young people with SP have also been judged by independent observers to have slightly poorer social skills both in social interactions and when reading in front of a small audience than do age-matched, nonanxious peers (Beidel, 1991). Young people with SP tend to have negative cognitions in social situations, viewing themselves as less socially skilled than their peers (Alfano, Beidel & Turner, 2006; Rapee & Lim, 1992) and expect poorer outcomes in social settings. Many adolescents with SP generally report negative peer interactions (Spence, Donovan & Brechman-Toussaint, 1999) and compared with adolescents who are not anxious, are more likely to be ignored, excluded and rejected by classmates (Beidel et al. 1999). Due to avoidance

of social situations, children and adolescents with SP often do not develop adept social skills, reconfirming their negative self-perceptions (Alfano et al. 2006).

Panic disorder (PD): Diagnostic features

According to the current DSM-IV-TR diagnostic definition of PD, this disorder is diagnosed when: (1) recurrent unexpected panic attacks (PA) are experienced and: (2) at least one of the PA is followed by persistent worry about future attacks, implications of an attack and a change in behaviour due to the attack (i.e., impaired interpersonal functioning). A PA is a discrete period in which there is the sudden onset of intense apprehension, fearfulness, or terror, often associated with feelings of impending doom. During these attacks, symptoms such as shortness of breath, palpitations, chest pain or discomfort, choking or smothering sensations, and fear of "going crazy" or losing control are present (APA, 2000; see Appendix two).

PD, (characterised by regularly occurring PA or a persistent fear of future PA) has two subtypes: PD with or without agoraphobia. Agoraphobia exists when the individual experiences anxiety regarding being in situations in which help is not available or escape is difficult in the event that a panic attack occurs, which results in avoidance of certain situations (e.g., crowded places, traveling alone). Although the present study did not examine agoraphobia, the DSM-IV-TR diagnostic criteria for PD with agoraphobia (PDA) has been included in Appendix three in order to highlight the additional problems young people with PD may experience.

Clinical presentation

The first report of panic symptoms in adolescents was published in 1984 (APA, 2000), thus comparatively less research on Panic Disorder (PD) in children and adolescents is available. However, the research literature is mounting with studies reporting consistent differences of PA symptoms across the developmental lifespan (Doerfler, Connor, Volungis, & Toscano, 2007). For instance, younger children report palpitations, shortness of breath, sweating, faintness, and weakness as the most common symptoms during a PA. In contrast, adolescents report chest pain, trembling, headaches, and dizziness as the most frequent symptoms. Similarly, the occurrence of cognitive symptoms associated with PA seems to be related to age, which tends to occur after the development of physical symptoms (Ollendick & Pincus, 2008). For instance Last and Strauss (1989) note that early adolescents typically report fear of dying as the initial cognitive symptom, whereas later onset cognitive symptoms are usually a fear of going crazy or losing control. Thoughts regarding depersonalisation, which refers to a change in an individual's self-awareness and/or derealisation, which refers to a change in an individual's experience of the environment can also occur (e.g., "I do not know who I am" or "I do not know where I am" respectively; Last & Strauss, 1989).

Generalised anxiety disorder (GAD): Diagnostic features

Generalised anxiety disorder (GAD) was introduced in the DSM-IV (2000), replacing overanxious disorder of childhood (OAD). The diagnostic features of GAD include persistent, excessive anxiety and worry that is not focused on a specific object or situation. Young people

with this disorder worry excessively about a number of issues, including past conversations or actions, upcoming events, school, family health, their own health, competence in sports or academics, and world events. The exception in the DSM-IV-TR criteria for a diagnosis of GAD in children and adolescents compared with adults includes the presence of only one out of the six associated somatic symptoms, for example being easily fatigued. (For additional associated symptoms, refer to Appendix four).

Clinical presentation

Some authors have argued that as the diagnostic criteria for GAD is slightly different from those for the DSM-III-R OAD, and given the paucity of research on childhood worry, the current state of knowledge in this area should be considered formative and incomplete (Flannery-Schroeder & Kendall, 2000). However, other researchers indicate no significant difference between the two diagnoses (Tracey, Chorpita, Douban, & Barlow, 1997), so it appears that past research on OAD can be generalised to current and future research on GAD in children and adolescents.

Pina, Silverman, Alfano, and Saavedra (2002) investigated whether a particular worry domain was more predictive of a diagnosis of GAD in a clinical sample of young people (N = 111; 6 to 17 years old). Results demonstrated that uncontrollable excessive anxiety regarding one's own health was most predictive of the youth meeting diagnostic criteria for GAD compared with other domains of uncontrollable anxiety (e.g., school, perfectionism and health of others). Vallance and Garralda (2008) interviewed young people (N = 58) ranging in age from 7

to 18 years with GAD. Results showed that the majority of participants reported feelings of tension (98%), apprehensive expectations (95%), need for reassurance (83%), irritability (81%), negative self-image (74%), and physical complaints (72%).

A noteworthy phenomenon surrounding young people experiencing GAD is referred to as the "illusion of maturity". Children with GAD have been labelled "hypermature" and like "little adults" (Kendall, Krain & Treadwell, 1999). As stated by Kendall et al. (1999), children's "anxieties about needing to meet deadlines, keeping appointments and adhering to rules, coupled with frequent inquires about the dangers of situations, often create this "illusion of maturity" (Kendall et al. 1999, p.155). As adults (both teachers and parents) may perceive these perfectionistic, eager-to-please, rule-abiding behaviours as both desirable and valuable, the issue of identifying the maladaptive aspects of GAD becomes more challenging. It is possible that such perceptions may result in fewer young people being referred to and receiving the assistance required.

Separation anxiety disorder (SAD): Diagnostic features

Separation anxiety is a normal developmental process that results in appropriate distress after separation from attachment figures (Silverman & Dick-Niederhauser, 2004). Separation anxiety is considered clinically significant when it exceeds developmental norms and is associated with impaired functioning, for instance not attending school excursions. According to the DSM-IV-TR the diagnostic features of SAD include excessive and persistent anxiety about being away from home or an attachment figure (i.e., parents, grandparents, other primary

caregivers, or siblings). Repeated complaints of physical symptoms, such as headaches and vomiting are also frequently demonstrated in young people with SAD (see Appendix five).

Clinical presentation

The onset of SAD is often acute and precipitated by a stressful life event, such as a death of a family member, or a change in school. It can also correspond to developmental transitions, such as entering school for the first time, or beginning high school (Albano & Chorpita, 1995). A child can have periods of exacerbation and remission of the symptoms over several years. Recurrence appears to be tied to such events as prolonged illness, school holidays, or periods of increased demand and stress (Velting & Albano, 2001).

Francis, Last and Strauss (1987) observed age differences in the symptom expression of SAD among three age groups of children and adolescents (N = 45). Over one-half of young children (5 to 8 years) reported nightmares involving separation from caregiver/s compared with less than one-fourth of older prepubertal children (9 to12 years) and adolescents (13 to16 years). All the adolescents with SAD presented with physical complaints on school days; whereas only about two-thirds of the young and older children reported somatic symptoms.

Obsessive compulsive disorder (OCD): Diagnostic features

The diagnostic and essential features of obsessive compulsive disorder (OCD) include recurrent obsessions or compulsions. In the DSM-IV-TR (2000), either obsessions or compulsions with the associated characteristics are needed to qualify for a diagnosis of OCD.

Obsessions relate to persistent ideas, thoughts, impulses, or images that are experienced as intrusive or inappropriate and cause marked distress or anxiety (APA, 2000). Common obsessions include thoughts about contamination, repeated doubts, a need to have things in a particular order, aggressive or horrific impulses and sexual imagery. As a result of the obsessions, the individual may feel compelled to ignore, suppress or neutralise them in order to reduce the associated anxiety and distress.

Compulsions refer to the repetitive behaviours or mental acts that an individual feels compelled to perform to prevent or reduce anxiety or distress. Such acts are not completed to provide pleasure or gratification (APA, 2000). The exception included for a diagnosis of OCD in children and adolescents is that unlike adults, young people do not have to recognise that the obsessions or compulsions are excessive or unreasonable (see Appendix six).

Clinical presentation

OCD characterised by both obsessions and compulsions is the most common presentation in youth, and it is rare that young people experience obsessions without compulsions (March & Muelle, 1998). In a study of children and adolescents (N = 70) experiencing OCD, the most commonly reported obsessions focused on dirt or germs, danger to self or relatives, and symmetry (Toro et al. 1992). Unlike everyday worries, obsessions are experienced as disturbing, bizarre, senseless and counter to the child's sense of himself (a devout child has thoughts about cursing at God; a loving child pictures stabbing his parents) and evoke dread, guilt, and discomfort.

Compulsive symptoms suggestive of OCD include excessive cleaning rituals (e.g., hand washing), counting rituals and ordering behaviours. Parents may become aware of the problem when children become dysfunctional because of the frequency and complexity of the rituals (e.g., children who are late to school because of repeated hand washing and checking behaviours before leaving the house). Long periods of time spent on homework, including frequent erasures, redoing parts of assignments multiple times, can also be indicative of OCD (Presta et al. 2003). Additional OCD symptoms evident in young people include excessive need for reassurance, preoccupation with germs, hoarding of useless objects, and requesting family members to repeat phrases or engage in other repetitive actions (Toro et al. 1992).

Additional anxiety disorders

Additional anxiety disorders evident during adolescence yet not included in the present research are: Specific phobias e.g., animal or blood-injection-injury type, acute stress disorder, posttraumatic stress disorder, and substance-induced anxiety disorder.

Depression

Major depressive episode (MDE): Diagnostic features

The disorders in this category include those where the primary symptom is a disturbance in mood and are thus referred to as mood disorders. Depression is one of the most prevalent internalising disorders, affecting 2.3% of Australian children and adolescents (Sawyer, Kosky,

Graetz, Arney, Zubrick, & Baghurst, 2000). By the year 2020, the World Health Organisation (WHO, 2001) estimates that depression will be one of the leading causes of disease worldwide.

The diagnostic criteria for Major Depressive Episode (MDE; see Appendix seven) are based on typical symptom expression in adults; however, some provisions have been made for diagnoses in childhood and adolescence. Notably, the DSM-IV-TR recognises that irritability may be a prominent feature of child and adolescent depression, and that irritable mood may be substituted for depressed mood (Hammen & Rudolph, 2003). Depressed mood is typically experienced most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful).

Depression in adolescents may also include anhedonia and other neurovegetative symptoms (e.g., insomnia, decreased concentration, low energy, etc), social withdrawal and somatic complaints (Curry, 2001). Whilst there has been some criticism of the use of adult criteria in the classification of childhood disorders, in that it may overlook important development considerations (Hazler & Mellin, 2004), research suggests that the essential features of child and adolescent depression are consistent with those of adults (Parker, Roy, Hadzi-Pavlovic, Wilhelm, & Mitchell, 2001).

Clinical presentation

Until relatively recent years, depression was not considered a major problem in adolescents. However, the growing awareness of depression in children younger than 18 years is reflected in the 80% increase of antidepressant prescriptions for young people from 1994 to 1996

(Babyak et al. 2000). It is often difficult to recognise depression in young people as among the components of depression are guilt, self-blame, feelings of rejection, lethargy, low self-esteem, and negative self-image. Forty percent of adolescents report an occasional depressed mood; however, 2% of children and 4 to 8% of adolescents will develop clinical depression. Episodes of depression persist on average eight to nine months and 90% remit within one to two years (Birmaher et al. 2004). Young people experience more somatic symptoms than adults, stomach-ache and headache being the most common. Sleep and appetite disturbances are more common in adolescence, as is the sense of hopelessness, irritability and anger. Where guilt, self-reproach, restlessness, immobility and weight fluctuations occur, a more severe depression is predicted (Hankin et al. 1998).

Comorbidity of internalising disorders in adolescents

Comorbidity refers to the coexistence of two or more disorders in the same individual (Brown & Barlow, 1992). Many young people with mental health problems meet the criteria for more than one diagnosis. For instance, of the young people with a depressive disorder who participated in the 1997 Australian National Survey of Mental Health and Wellbeing (Sawyer et al. 2000), 23% also had symptoms that met the criteria for a second disorder.

Anxiety disorders are commonly comorbid with each other during adolescence. Last et al. (1992) reported that the lifetime rate of a specific anxiety disorder occurring with any other anxiety disorder was between 65 to 95%. This was two to three times more likely than their association with depression (22 to 44%) or disruptive behaviour disorders (8 to 27%). However, anxiety disorders are more often concurrently comorbid with depressive disorders than with

either attention-deficit hyperactivity disorder (ADHD), conduct disorder (CD), oppositional defiant disorder (ODD), or substance abuse disorders (Costello et al. 2003).

In child and adolescent clinic-referred samples in particular, anxiety disorders and depression repeatedly co-occur, with rates ranging widely from 32% (Kovacs, Gatsonis, Paulaukas, & Richards, 1989) to 62% (Angold et al. 1999). Using latent class analysis Van Lang et al. (2006) reported that very few children experienced only anxiety or depression and almost all (99%) had comorbid symptoms. Further, young people with clinical anxiety have demonstrated to be 8.2 times more likely to meet criteria for a depressive disorder than children without clinical anxiety (Angold, Costello & Erkanli, 1999; Costello et al. 2005; Hankin et al. 1998).

However, the comorbidity of anxiety and depressive disorders is not always concurrent; a temporal relationship between anxiety and depression has been found for both clinical and community populations (Boyd & Gullone, 1997; Brady & Kendall, 1992; Seligman & Ollendick, 1998). There appears to be a successive pattern of comorbidity between the two disorders, whereby anxiety disorders in children may longitudinally predict the development of depressive disorders in adolescence and at later stages of the developmental life course (Angold, Costello, & Worthman, 1998; McGee, Feehan, Williams, & Anderson, 1992; Silberg, Rutter & Eaves, 2001).

A longitudinal study by Kovacs et al. (1989) reported that in children with comorbid depression and anxiety, the latter preceded depression in two-thirds of cases. The reported results included that 64% of adolescents with diagnosable anxiety went on to develop a secondary

diagnosis of MDD. This high overlap of symptoms has prompted some scholars to suggest that depression and anxiety disorder may not be separate entities and/or heterogeneous disorders, but rather underlying symptoms common to many disorders (Brown & Barlow, 1992).

The comorbidity of anxiety disorders with other psychiatric disorders is also significant (Brady & Kendall, 1999; Schroeder & Gordan, 2003), with reported comorbidity rates for child and adolescent anxiety disorders in community samples of up to 39% (Kashani & Orvaschel, 1990). For instance, Lewinsohn, Hops, Seeley, and Andrews (1993) found a significant degree of lifetime comorbidity of depression and disruptive behaviour disorders in a community sample of adolescents. Of the young people in the sample who had disruptive behaviour disorders, 34.4% of them also had depression. Conversely, 12.4% who had depression also had disruptive behaviour problems.

Course and impact of internalising disorders in adolescents

The course of internalising disorders typically follows a chronic and unrelenting path (Juster, Heimberg & Engelberg, 1995). In many cases, experiencing an internalising disorder during adolescence is a precursor for long-term clinical presentations well into adulthood (Cartwright-Hatton, McNicol & Doubleday, 2006) as if left untreated; internalising disorders rarely remit without intervention (Costello et al. 2004). For example, Keller, Lavori, Wunder, Beardslee, Schwartz, and Roth (1992) reported that in a group of children aged from 6 to 19 years, those with untreated anxiety had experienced clinical difficulties for four years, with 30% of those who had recovered experiencing a recurrence of anxiety. Even when treatment has

occurred, between 30% and 40% of children may continue to meet diagnostic criteria for an anxiety disorder post-intervention (Barrett, Rapee, Dadds, & Ryan, 1996).

Both prospective and retrospective studies have demonstrated that childhood anxiety often precedes anxiety disorders in adulthood (Lipsitz et al. 1994; Otto, Pollock, Rosenbaum, Sachs, & Asher, 1994; Pine et al. 1998). Similarly, adolescent depression is strongly associated with depression throughout the lifespan, and is highly recurrent (Kovacs, Feinberg, Crouse-Novak, Paulauskas, & Finkelstein, 1984) with a four-fold increase in the likelihood of suffering recurrent, severe depression in adulthood (Harrington, Fudge, Rutter, Pickles, & Hill, 1990).

The impact of adolescent internalising disorders is extensive, resulting in significant impairments in functioning across a range of psychosocial domains, including social, academic, interpersonal relationships and extracurricular functioning (Costello et al. 2005). Further, internalising disorders have been associated with school refusal behaviour (Ginsburg, La Greca, & Silverman, 1998; Strauss & Last, 1993) and higher incidence of early school dropout (Hazler & Mellin, 2004).

Childhood and adolescent anxiety has been identified as a risk-factor for substance abuse (Costello et al. 2003; Woodward & Fergusson, 2001), personality psychopathology (Rudd, Joiner & Rumzek, 2004), and as previously discussed, confers a significant risk for both concurrent and successive comorbidity with a range of other disorders, both in community and clinical populations. Additional noteworthy issues frequently exhibited by depressed adolescents

include not caring about their physical appearance and/or engaging in self-destructive behaviours such as unsafe sexual practices (McGrath & Repetti, 2002).

The Australian Institute of Health and Welfare (AIHW, 2000) indicates that depression is associated with the loss of at least 135,000 person years of economic production annually, or about 2% of production. For every dollar spent on medical and social support for mental illness, four additional dollars are lost through poor achievement in education and training, reduced workplace productivity, lost tax earnings, and reduced participation by carers in the wider community. It should be noted that the stability of the disorder increases substantially with the severity of the disorder (Lewinsohn Steinmetz, Larson, & Franklin, 2000). Adults with anxiety disorders who had previously experienced childhood anxiety may experience more severe difficulties than anxious adults without a history of anxiety through their youth (Otto et al. 1994). Similarly, individuals with comorbid anxiety and depression have higher levels of functional impairment and severity of anxiety of symptoms, than those with anxiety alone.

The most significant impact of internalising disorders in young people is suicide. In fact, the strongest risk-factors for suicide are mental health disorders, particularly depression (Bhatia & Bhatia, 2007; Hirsch, 2006). MDD is a leading cause of youth suicidal behaviour and suicide (Bridge, Goldstein & Brent, 2006). Twenty percent of young people with depression seriously contemplate suicide (Grunbaum, Kann, Kinchen, Williams, Ross, & Lowry, 2002) and 8% attempt it (Anderson, Tiro, Webb Price, Bender, & Kaslow, 2002). Additionally, research demonstrates that up to 84% of children and adolescents who committed suicide may suffer from

comorbid mental disorders (Cole, Peeke, Martin, Truglio, & Seroczynski, 1998), given that anxiety and depression are risk-factors for suicide in their own right.

A recent Australian Commission for Children and Young People and Child Guardian (2011) report revealed that in Brisbane, Australia, suicide was the leading cause of death in 15 to 17 year olds in 2009 to 2011 and among 10 to 14 year-olds between 2004 and 2006. Moreover, the number and rates of youth suicide has increased since 2004 (Chilcott, 2011). The Coroner's Court revealed that in 2010, a 13 year-old Brisbane boy who, when attempting suicide, turned the knife on and killed a 12 year-old schoolmate who was trying to intervene was suffering severe depression in the lead-up to the tragedy. Such revelations have prompted calls for further research on prevention and risk-factors for youth depression (as cited in Chilcott, 2011).

Summary

It is unquestionable that internalising disorders are significant mental health problems in adolescence, both in terms of direct morbidity, and the associated impact such problems presents to psychosocial functioning across the life course. This chapter has provided an overview of major depression and the five anxiety disorders investigated in the present research. The review of the literature revealed that anxiety disorders and depression are the most common category of psychiatric disorders in young people, with a chronic and unrelenting course that typically extends well into adulthood. Finally, issues associated with comorbidity were discussed. The following chapter (Chapter Two) includes the exegesis (explanation) and the subsequent aims of the present thesis.

CHAPTER TWO: EXEGESIS AND AIM OF THESIS

Preamble

This chapter will present an exegesis (explanation) of the impetus behind this research program. The subsequent overall aim of this dissertation will be provided, and the rationale of why a triple-pronged approach was employed to achieve this aim. In addition to contributing new empirical knowledge to the field, an endeavour to enhance the scientific rigour of each study was implemented. An explanation for this rigour is also presented.

As the majority of the conceptual and methodological limitations of previous research identified are addressed in the published papers (*paper one* and *paper two*) and study three, only aspects beyond the scope of the papers will be covered here.

Initial impetus behind aim of present thesis and study one (*paper one*)

The initial impetus for this thesis came from observations I made assisting teachers in primary schools throughout a ten-year period. This experience created an awareness that not only do school teachers operate as educators, but also are required to deal with greater diversity of ability in the classroom due to mainstreaming of students with disabilities, continuous challenges to master new technology and increased emphasis on academic standard performance and testing accountability measures. My experience as a teaching assistant provided an insight into the

dynamics of classrooms that due to such challenges mentioned above, most teachers rarely have the opportunity to witness.

Throughout this period, it became increasingly apparent that the "squeaky wheels get the oil" i.e., referrals to mental health services tended to be made more frequently by teachers for students with externalising disorders that were more disruptive to others, relative to referrals made for internalising disorders that were less troublesome to others. This phenomenon led me to question: *What about the students with internalising disorders - surely being less disruptive does not equate to the associated symptoms being less distressing, or result in less impairment in functioning for these young people?*

An avid interest in researching internalising disorders in young people emerged and investigations addressing this research area flourished. I discovered early that the discrepancy between the attention received by young people with externalising versus internalising disorders was not only evident in classrooms, but was also reflected in the literature. For example, despite the high prevalence and associated detrimental effects of internalising disorders, research in the area of internalising disorders has lagged behind in comparison to research in the area of externalising disorders (Compton, Burns, Egger, & Robertson, 2002; Rapee & Coplan, 2010). This lag is especially evident with respect to the child and adolescent population (Comptom et al. 2002).

In particular, I was interested in learning more about the available options for treatment services for young people and identifying some barriers which may prevent or hinder access to

services. I learned that despite the prevalence of mental health problems, an alarming number of children and adolescents in need of psychological services go undiagnosed, untreated or both, with only 25% of people needing assistance actually receiving it (Australian Bureau of Statistics [ABS], 2007; McGorry, 2010). I also discovered that the most common pathway to services for mental health problems for young people was through the education sector and the most frequent method of accessing such services was the external referral method assumed by teachers (Farmer, Burns, Phillips, Angold, & Costello, 2003). This method involves teachers and relevant student support staff seeking services from external health professionals, agencies and/or organisations, and primarily relies on the identification by teachers and other school personnel of behaviours and symptoms that are indicative of a mental health problem.

The literature confirmed my observations regarding the disparity between teacher referrals for externalising versus internalising disorders. A further disparity reported in schools throughout the United Kingdom (UK) and the United States of America (USA) was identified: The *expectations* placed on teachers to identify internalising disorders in their students and refer them to mental health services, and teachers' *capacity* to put such expectations into practice. Considering the typically unobtrusive nature of internalising disorders, this disparity is particularly problematic as teacher referral is the most common pathway to treatment.

Rationale for enhanced rigour of study one

In order to enhance the scientific rigour of study one, a mixed-methods research design was employed. Traditionally, qualitative and quantitative methods belonged to different paradigms that guided research and the relationships between the two have even been referred to

as a “battlefield of wars” (Tashakkori & Teddlie, 1998). The majority of researchers now take the more moderate view that quantitative and qualitative methods can act as partial correctives to each other. Although there is a lack of consensus regarding the definition of a mixed-methods research design, Liehr and Marcus (2002) define this design as “the expansion of research methods in a single study or multiple studies to enhance diversity, enrich understanding and accomplish specific goals”, whereas Porter and Carter (2000) suggest this design encompasses multifaceted procedures that combine and synthesise, or triangulate methods. The defining characteristic of mixed-method research is that it involves a primary or core method combined with one or more strategies drawn from a second, different method for addressing the research question by either collecting or analysing data. The goal of mixed-methods research is not to replace either of these approaches but rather to draw from the strengths and minimise the weaknesses of both in single research studies and across studies.

Study one employed a simultaneous mixed-methods [QUAN + qual] research design. This design comprises of a quantitatively driven core component (deductive theory driven) and a qualitative supplementary component, for example, the use of a questionnaire during data collection that includes both closed-ended (i.e., quantitative) questions and open-ended (i.e., qualitative) questions (Cresswell, 2003; Mendlinger & Cwikel, 2008). The core and supplemental component are conducted simultaneously. A common method utilised in this approach is triangulation, which compares the results of two or more methods of data collection (or data sources) while examining the same phenomena (Hek, Judd & Moule, 2000; Pope & Mays, 2006). Triangulation has also been referred to in relation to the use of multiple methods within one study (Plano Clark, Creswell, O’Neil Green, & Shope, 2008; Tashakkori & Teddlie,

1998). Figure 2 illustrates the triangulation design employed in study one (Tashakkori & Teddlie, 1998).

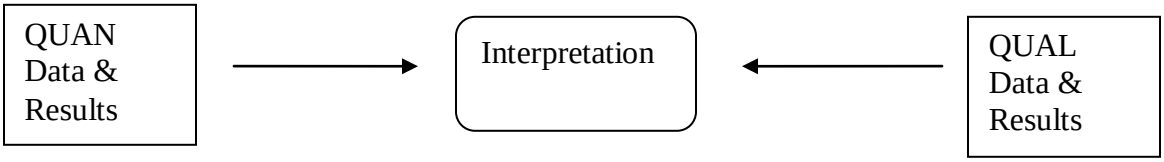

Figure 2. Simultaneous mixed-methods design: Triangulation design (Tashakkori & Teddlie, 1998).

Content analysis was used to analyse the text-data within the open-ended survey question in study one. As noted by Burns (2000), while it is widely used, there is no clear agreement about what content analysis is and how you go about doing it. Broadly speaking, however, content analysis describes a family of analytic approaches ranging from impressionistic, intuitive, interpretive analyses to systematic, strict textual analyses (Cresswell, 2003). Content analysis goes beyond merely counting words to examining language intensely for the purpose of classifying large amounts of text into a well-organised number of categories that represent similar meanings (Liehr & Marcus, 2002). In a conventional content analysis, categories are derived from data during data analysis. For the purposes of this study, content analysis was defined as a research method for the subjective interpretation of the content of text data through

the systematic classification process of coding and identifying themes or patterns (Hsieh & Shannon, 2005).

It was anticipated that by employing a simultaneous mixed-method research design, the combination of quantitative and qualitative methods would provide a richness and detail that one method alone would not yield. More specifically, the qualitative addition may enable a narrative description from the teachers concerning the disparity between teacher referrals for students with internalising problems versus externalising problems that could not be measured by the inclusion of purely quantitative methods, for example, forced choice option responses using survey methodology. Figure 3 illustrates the point of interface where two data sets meet in a simultaneous quantitatively driven mixed-method design. The circle shows the position where the two data sets meet, referred to as the point of interface in the analytic core (Morse & Niehaus, 2009, p. 56).

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Figure 3. Point of interface where the two data sets meet in mixed-methods research design (Morse & Niehaus, 2009).

Impetus behind study two (*paper two*)

The impetus for study two (*paper two*) was triggered during a Master in Psychology (Clinical) workshop on Mental Health Issues in Rural and Remote Australia. In particular, I learned that a number of major mental health-related issues for young people living in rural and remote areas of Australia have been identified. For instance, research from Australia's Victorian Health Promotion Foundation in 1999 indicated that people living in rural and remote Australia are more vulnerable to mental health and illness problems as they are exposed to higher levels of poverty, unemployment, substance misuse, child abuse, domestic violence, and social isolation. Further, the social and economic fabric of rural communities is largely reliant on uncontrollable elements such as weather and global economics, which increase levels of stress and a sense of helplessness (Eckert et al. 2006).

Australia is an island continent and the sixth largest country in the world (approximately eight million square kilometres), yet has a very low population density. Approximately 70% of 20 million people are concentrated in capital cities and major metropolitan areas, mainly in urban coastal regions (ABS, 2004). This is in contrast to countries with vast rural populations such as India and China. The remaining six million (30%) people are scattered inland in areas referred to as rural and remote, the bush and the outback (Rajkumar & Hoolahan, 2004). Figure 4 (ABS, 2004) illustrates the distribution of Australia's population and highlights that rural and remote Australia has a relatively small population living over a large area.

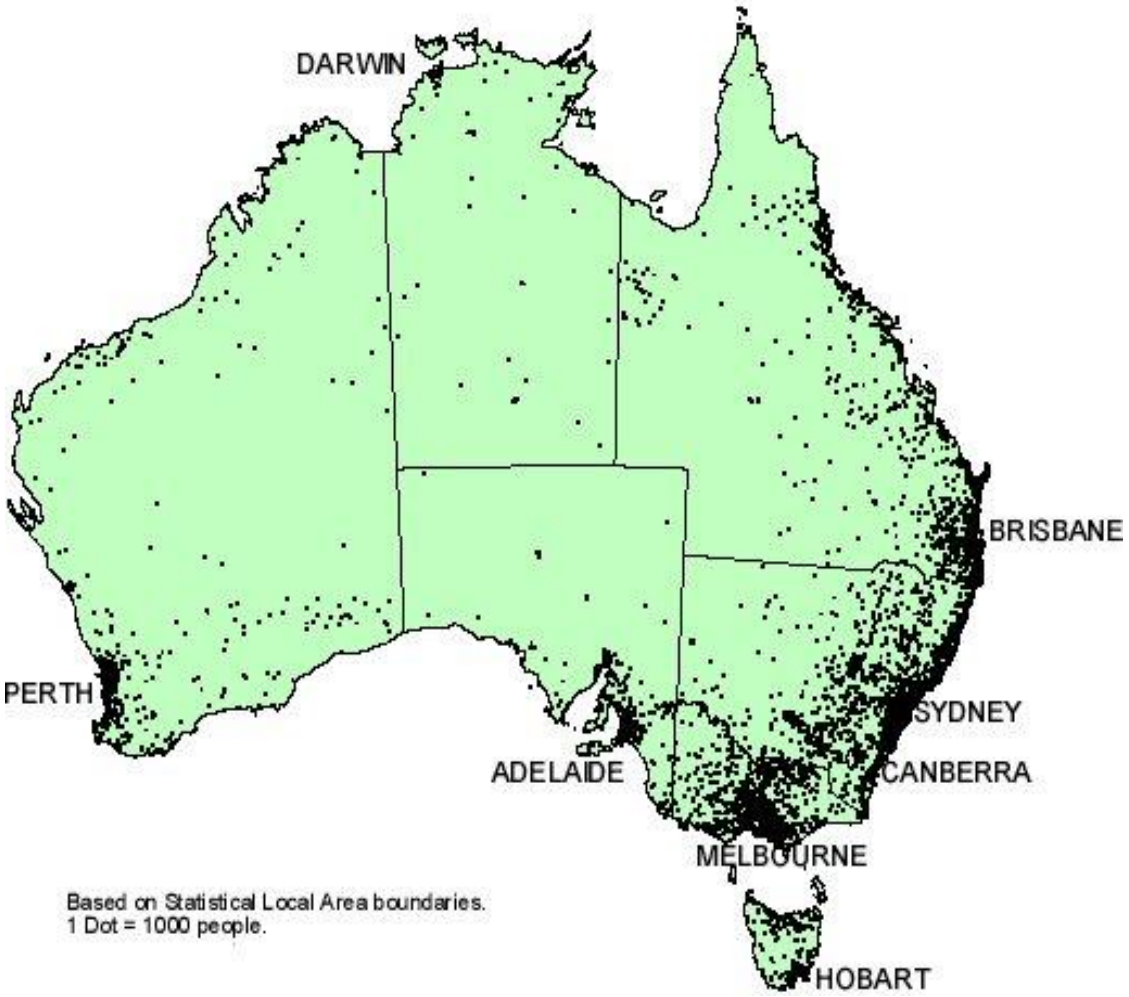

Figure 4. Distribution of Australia's population; the capital of South Australia is Adelaide and is the location of where the research of this dissertation was conducted.

In Australia, mental health services are not evenly distributed across the continent. This is largely because a population model of resource management and service development has been implemented i.e., services are provided in relation to the number of people in a specified area. This significantly disadvantages individuals outside metropolitan areas. Without local services individuals requiring access to mental health care may have to travel great distances, resulting in

delayed treatment, financial costs, loss of employment opportunities, and disruption of family and community (Harris, 2005). Further, it is difficult for remote communities to recruit and retain health practitioners, leading to issues associated with continuity of care. These difficulties are compounded by limited access to specialised assessment, treatment and recovery focused services. Such problems have led to statements concerning inequities in health provision to rural and remote Australians (Rajkumar & Hoolahan, 2004).

However, the most startling detail I discovered was that the suicide rates are consistently higher in rural towns than in metropolitan areas. For example, the suicide rate of males aged 15 to 24 years from rural towns has been reported as approximately twice that of their city counterparts. These rates markedly increase with increasing geographical remoteness. For young Indigenous males, the suicide rate is up to 40% higher than the national Australian average (Australian Institute of Health & Welfare, [AIHW], 2008).

Such descriptions of "country living" are in stark contrast to the social construct of the "rural idyll" notion (Watkins & Jacoby, 2007). This term refers to the underlying discourse that rural areas promote a peaceful and harmonious lifestyle, whereas cities are generally associated with chaos, noise, stress, and challenging living conditions typical of large metropolitan areas. Accordingly, one common expectation is that exposure to peaceful rural environments should positively impact people's mental health (Magi et al. 2010).

It appears that perspectives such as the rural idyll (Watkins & Jacoby, 2007) have contributed to an out-of-sight-out-of-mind mindset. To illustrate, Rajkumar and Hoolahan (2004)

emphasise that the Australian National Mental Health Surveys have failed to include "important groups in the Australian population (i.e. rural, remote and Indigenous)". I began researching the prevalence rates of depression in the adolescent rural population. To my surprise, the only relevant information I could locate was that adolescents living in rural areas *appear* to be at a heightened risk for developing a mental health problem, compared with their urban counterparts (Eckert et al. 2006). Consequently, current empirically-based prevalence rates and determinants of mental health problems, in particular internalising disorders such as anxiety and depressive disorders, of adolescents from rural Australia, are not known. Considering the fact that young people living in rural and remote areas comprise approximately 29% of the total Australian population of 15 to 24 year olds, coupled with the empirical connection between depression and suicide (Bhatia & Bhatia, 2007), such an omission is a serious oversight.

Although an empirical evidence base was nonexistent, rural communities and mental health advocates have tirelessly lobbied for several years to highlight mental health issues in rural communities and the desperate need for associated services. Such efforts were rewarded when the national Government announced a strategy in 2009 to transform national rural youth mental health services. However, based on the absence of empirically-based prevalence and determinants of mental health problems, certain rural commentators have suggested, that "rural communities remain without vision or direction as to how this [transformation of national rural youth mental health services] might be achieved" (Boyd et al. 2008). It seems plausible to assume that the risk of suicide may be reduced when the symptoms of depression are either managed effectively or even more preferably, prevented in the first instance. Thus, identifying the determinants of depression in rural adolescents may provide the evidence-based "direction"

necessary to inform intervention and prevention programs and enhance understanding regarding how to most effectively decrease such connections from establishing in the first instance.

Rationale for enhanced rigour of study two

One possible way to achieve empirically-based direction to inform potential mental health services for adolescents from rural communities is to employ a theory-driven multi-domain framework to examine the determinants of internalising disorders. Thus, study two (*paper two*) was based on a conceptual framework, referred to as the Process Model (Papandrea, 2005; see Figure 5). This model was selected to enhance the scientific rigour of study two. Employing a theoretically-derived framework for the basis of empirical research is essential, as the data generated is evidence-based and is more likely to effectively inform policy and interventions and/or preventative efforts.

This framework is comprised of multiple developmental domains (i.e., individual, family and community) which include specific risk-factors identified to be involved in the development of internalising disorders. The model was inspired by a heuristic framework (Friedman & Chase-Landale, 2002) which has drawn upon a number of theoretical paradigms and empirical research, with the intention to promote a more theory-based, process-oriented understanding of the ways in which multiple areas of development influence young people's development, trajectories and outcomes. Examples of theoretical frameworks drawn upon include: Baumrind's parenting typology (Baumrind, 1968; 1996); ethological models such as Bowlby's attachment theory (Bowlby, 1969; 1988); and social learning theory (Bandura, 1998). Additional risk factors

identified in a number of empirical studies have also been included in the Process Model (refer to Table 3).

The Process Model suggests that the development of internalising disorders occur through the following series of mechanisms: First, a child living in an environment that is characterised by low parental acceptance and autonomy granting, and high levels of psychological control and overprotection disrupts the normative development of a number of "intrapersonal processes", such as emotion regulation and/or self-appraisals, (e.g., emotional security). For instance, if the development of a child's emotion regulation is affected, the ability for a child to regulate emotional and behavioural reactions to arousing events may be diminished, resulting in a greater likelihood of negative developmental outcomes. The model emphasises the importance of the contribution and interaction between internal characteristics of the child and external factors (e.g., parental and community factors) in the development of internalising problems in young people. Thus, it is proposed that the negative characteristics associated with maladaptive parenting styles and practices influence poor developmental outcomes through undermining the development of these core intrapersonal processes. (See study two (*paper two*) for further details on the Process Model).

Note: This model is currently being used by the Healthy Minds/Healthy Futures Child Resilience Project. This is a longitudinal South Australian study examining the individual, family and community predictors and processes of positive outcomes in young children despite living in adverse living conditions.

It was anticipated that such knowledge generated from a theoretically-derived framework would assist in providing empirical guidelines and "direction" (Boyd et al. 2008) for establishing priorities for newly appointed funds from the Federal government for youth services in rural South Australia. This study also aimed to draw attention to an overlooked population and emphasise the importance of including as many Australians as possible from rural and remote areas, in the approaching, subsequent National Mental Health Survey.

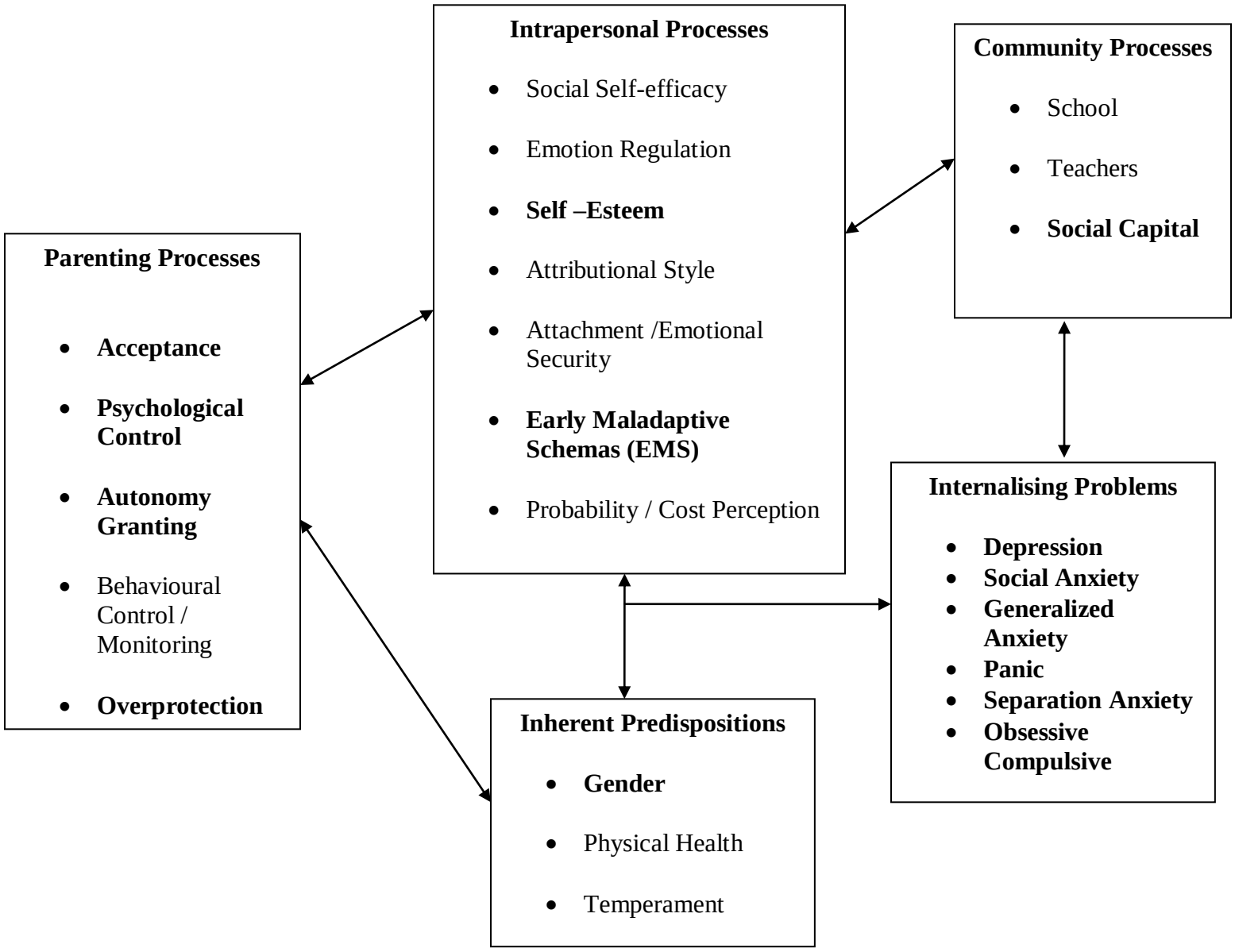

Figure 5. Process Model (Papandrea, 2005). Framework for the Processes Underlying the Development of Internalising Problems in Adolescence used in Studies Two and Three. Factors in bold indicate those presented in this thesis.

Impetus behind study three

Early on in my research, I discovered an article by Farrell and Barrett (2007), which reviewed current practices in prevention research for young people with anxiety and depression. The article includes the following extract (p. 58):

" Despite the advances in psychological treatments for childhood anxiety and depression, research indicates that most sufferers will not actually receive clinical intervention (Esser, Schmidt & Woerner, 1990; Hirschfeld et al. 1997; Olfson, Gameroff, Marcus, & Waslick, 2003), *and of the minority who do, many will terminate prematurely* (Kazdin, 1996), *fail to respond* (Barrett, Dadds & Rapee, 1996; Donovan & Spence, 2000; Weisz, Thurber, Sweeney, Proffitt, & LeGagnoux, 1997), *or experience recurrent difficulties despite treatment* (Last, Perrin, Hersen, & Kazdin, 1996)".

It was my view that this extract was the central feature of the article as it highlights the current complexities and challenges concerning internalising disorders in young people and thus directs awareness to the areas of research requiring essential attention. Also, by chance I had already addressed the first segment of the extract with study one (*paper one*), as it mirrored my observations in the classroom: i.e., "…. *research indicates that most sufferers* [of internalising disorders] *will not actually receive clinical intervention"* (Esser et al. 1990; Hirschfeld et al. 1997; Olfson et al. 2003; as cited in Farrell & Barrett, 2007).

The extract continues:

"...of the minority who do, [receive clinical intervention] *many will terminate prematurely* (Kazdin, 1996) [and] *fail to respond* [to clinical intervention]" (Barrett et al. 1996; Donovan & Spence, 2000; Weisz et al. 1997).

Additional researchers have reported similar statements. For example Barrett et al. (1996) and Kendall (1994) suggest, that even when treatment has occurred, between 30% and 40% of young people may continue to meet diagnostic criteria for an anxiety disorder post-intervention. Such statements contributed to the impetus for study three and thus prompted me to research prevention and intervention initiatives and to examine *why* such programs generally are not efficacious or effective, despite significant funds being allocated to them (Spence & Shortt, 2007). Due to the increased opportunities to assist greater numbers of young people, and the increasing clinical and research focus directed to school-based programs, this area was the focus of this specific literature review.

The literature review revealed that the majority of school-based programs are based on cognitive-behavioural approaches (Merry, 2007). Such programs may be *universal*, in which the intervention is delivered to the population regardless of risk, or *selective* (also referred to as *targeted*) on a population which is selected because of a known risk-factor, such as having a parent with a mental illness, or in which the intervention is *indicated* because the young person has elevated symptoms of a mental health problem. (See Table 2 for strengths and weakness of

indicated, selected and universal approaches to school-based prevention; the sources are indicated at the bottom of Table 2).

Table 2

Strengths and Weaknesses of Indicated, Selective and Universal Approaches to School-Based Prevention

	Strengths	Weaknesses
Indicated School-Based Prevention	Larger effect sizes	Screening process involved
	Cheaper to implement – less materials required	Risk of stigmatisation and labelling of participants
and	Smaller numbers of group facilitators to train	Potential for children to miss class
	More likely to attract funding	External group facilitators may be required
Selective School-Based Prevention	Smaller participant groups – higher intervention "dosage"	
	Lower ratio of children to group leader	
	More personalised – children receive more individual attention	
Universal School-Based Prevention	All children have the opportunity to develop positive coping skills, regardless of risk or diagnostic status	More training required for greater number of facilitators
	Overcomes barriers to accessing mental health services for all families	More expensive to deliver – more materials required
	Avoids the possibility of stigmatisation	Smaller effect sizes due to higher numbers
	Normalises anxiety	Larger groups – higher ratio of children to group leader
	Can be implemented as part of the curriculum	

Sources: Merry (2007); Sawyer et al. (2007); Reivich, Gillham, Chaplin and Seligman (2005) Sheffield et al. (2006); Spence et al. (2005); Spence and Shortt (2007).

Certain school based-programs have shown some promising evaluative outcomes, such as the FRIENDS program, which aims to prevent anxiety and depression through the building of emotional resilience (Barrett, Lock & Farrell 2005). However, Spence and Shortt's (2007) review addressing the efficacy and effectiveness of universal school-based interventions designed to prevent the development of depression in children and adolescents, reached a similar conclusion to Farrell and Barrett (2007). The authors state that the majority of such short-term school-based interventions are not efficacious or effective. A number of factors have been put forward to account for this view including that the delivery of the interventions was too brief and that school personnel did not have sufficient training and supervision to ensure high levels of program fidelity.

Merry's (2007) review of programs designed to prevent depression concluded that despite early promise, there is modest evidence to demonstrate that prevention of depression is a practical possibility at this stage. Further, Merry (2007) suggests that there is presently more evidence to support *selective/targeted* than *universal* interventions, with more evidence for short-term than long-term effects. However, due to the considerable potential cost-savings associated with such programs, it is imperative that the search continues for effective interventions for internalising problems in young people. Thus, "there is a compelling need for further research in this area" (Merry, 2007, p. 325).

Giesen, Searle and Sawyer (2007) provide guidance to service providers for selecting programs designed to reduce mental health problems. Giesen et al. (2007) emphasises the importance of developing and/or selecting programs that are empirically supported. Most

importantly however, the review emphasises that the key feature of effective programs is the use of empirically-based risk and protective factor frameworks. This requires programs to have a strong conceptual framework built on a solid empirical base which describes the relationship between risk and/or protective factors, and the relevant mental health problem being addressed.

The *beyondblue* schools universal intervention program was a three-year (2003 to 2005) intervention involving 50 schools in Australia. On examination of this program and as Giesen et al. (2007) recommended, the *beyondblue* program was based on a conceptual framework (Spence et al. 2005). Sawyer et al. (2009) stated that the *beyondblue* framework "was based on the best evidence to increase protective factors and reduce risk-factors at the individual and school levels." However, an evaluation of the intervention revealed a slight *deterioration* in mental health outcomes (including internalising symptoms) for all adolescents in the intervention groups compared with the comparison groups (Sawyer, 2007. p.31).

This prompted me to review the literature examining "best evidence risk and protective factors at the individual and school levels" that contribute to the development and maintenance of internalising disorders in childhood and adolescence (see Table 3 for a summary of risk-factors associated with internalising disorders in adolescence. *Note*: Sources are indicated at the bottom of Table 3; for ease of presentation, individual risk factors have not been referenced with each study as many studies included multiple risk factors; protective factors are not included as this thesis focused on risk-factors only).

Table 3

Risk-Factors Associated with Internalising Disorders in Childhood and Adolescence

Adolescent Factors	Family Factors	School Context	Community & Cultural Factors	Life Events
Low self-esteem	***Family environment:***	Low teacher expectancies	Ineffective social policies	Stress
Poor social skills	Father absence	Lack of praise and recognition	Population density and housing conditions	Illness of a family member
Insecure attachment	Indirect learning experiences	Peer victimisation	Socioeconomic disadvantage	War or natural disasters
Prematurity	Social isolation	Negative school climate	Indigenous, immigrant or minority status	Parental separation or divorce
Low intelligence	Conditioning	Peer rejection	Lack of employment	Death of family member
Difficult temperament	Marital discord	Poor attachment to school	Social or cultural discrimination	Life transitions e.g., change of school or home
Poor problem solving	Family conflict, violence	Large class sizes	Neighbourhood violence and crime	Traumatic incidents
Low birth weight	Low socioeconomic status	Few parent-teacher meetings	Media portrayal of violence	
Disability	Long-term parental unemployment	Poor relationships with teachers	Lack of access to support services	
Cognitive style	***Parental characteristics:***	Unavailability of teachers to deal with issues		
Low self-efficacy	Single parents			
Predisposition to shyness/behavioural inhibition	Step-parents			
Chronic illness/ill-health	Substance abuse			

Learning and language problems	Poor health
Gender	Low parental education
Genetics	Teenage mothers
Information processing biases	Personality e.g., neuroticism
Shyness	Parental psychopathology, e.g., depression
	Parenting practices & styles
	Rejection
	Neglect
	Overprotection
	Over-control
	Abuse
	Inconsistency
	Harsh discipline
	Poor monitoring of child
	Lack of warmth or affection
	Low involvement in child's activities
	Autonomy granting

	Psychological control
	Anxious rearing style

Sources: Barber (1994, 1996); Bruch, Heimberg, Berger and Collins (1989). Coplan, Arbeau and Armer (2008); Coplan, Reichel, and Rowan (2009); Gar, Hudson and Rapee (2005); Heider (2008); Lewinsohn et al. (1993); Rapee (1997); Rapee and Coplan (2010); Rapee, Schniering and Hudson (2009); Rapee and Spence (2004); Silk, Morris, Kanaya, and Steinberg (2003); Siqueland, Kendall and Steinberg (1996); Soenens, Vansteenkiste, Luyten, Duriez, and Goossens (2005); Spence, Sheffield and Donovan (2003); Taylor and Alden (2006); van der Bruggen, Stams and Bogels (2008); Warren et al. (1997); Waters and Barrett (2000); Weissman, Leckman, Merikangas, Gammon, and Prusoff (1986); Wood et al. (2003); Young (1990, 2003).

On examination of the conceptual framework of the *beyondblue* intervention (Spence et al, 2005) however, it appeared that the framework did in fact include a number of key risk and protective factors at the individual and school (or community/environment) levels that research has indicated do have a causal relationship with internalising disorders. (See Figure 6 for the conceptual framework employed for the *beyondblue* intervention program).

However, a noticeable gap in the conceptual framework of the *beyondblue* intervention was that the framework did not include risk and/or protective factors at the *family level*, for example, parental factors. My interest and previous research experience concerning the role of parenting on developmental outcomes led me to reflect that, considering the significant relationship apparent between parent-child/adolescent relations and mental health problems (including child/adolescent perceptions of their relationships with their parents), failing to include this component in a framework may contribute to the ineffective outcomes in which the *beyondblue* and similarly based interventions have experienced.

Other similarly based programs that have been utilised in South Australia and do not include a component within the conceptual framework which addresses the child/adolescent-parent relationship, include the Aussie Optimism Program, which is an Australian adaptation of the Penn Prevention Program (Jaycox, Reivich, Gillham, & Seligman, 1994) and the Problem Solving for Life program (Spence et al. 2003). The Aussie Optimism Program is a mental health promotion strategy designed to prevent internalising problems in children and adolescents, whereas the Problem Solving for Life program is designed to prevent depression in adolescents.

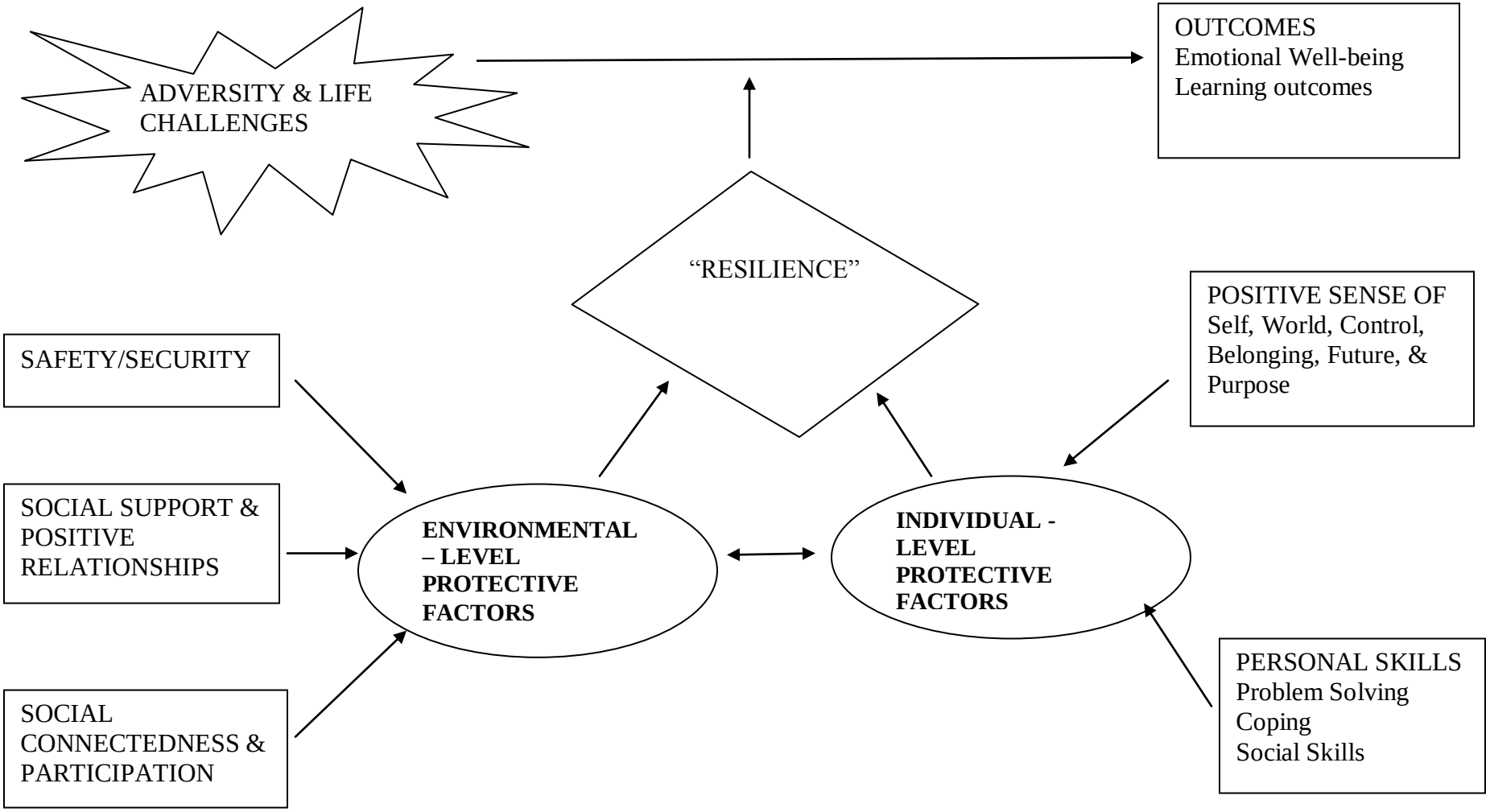

Figure 6. Conceptual framework used for the beyondblue school-based intervention program (Spence et al. 2005)

Clearly, the addition of yet another component to an existing framework presents multiple challenges. However, it may be argued that the mere absence of a family-level component within such frameworks prevents the acknowledgement of perhaps the most influential domain of a young person's psychological development: Child/adolescent-parent relations. For instance, there may be challenges attempting to instil or teach a "positive sense of the self, the world, control, belonging, future and purpose" (the individual-level protective factors included in the *beyondblue* framework) when the young person inherently accepts something entirely contradictory regarding him/herself due to experiences within the family environment. For example, a young person being informed during an intervention that s/he can accomplish anything if s/he works hard towards her/his goals, whereas her/his parent/caregiver regularly refers to the young person as "useless" or "will never account for anything positive in the future".

Throughout researching parenting factors, one issue continued to emerge: A conceptual framework built on a solid empirical base that describes the relationship between multiple parental risk-factors and internalising problems is currently lacking (Chorpita et al. 1996). However, I discovered Young's (1990) "typical family origins" (TFO) conceptualisations, which describes the impact of early family environments on psychopathology. These clinically-based concepts comprise of five TFO, each proposed to place children at a greater risk of developing psychopathology and Early Maladaptive Schemas (EMS). EMS are defined as "broad, pervasive themes or patterns, comprised of memories, emotions, cognitions, and bodily sensations, regarding oneself and one's relationships with others" (Young, Klosko & Weishaar, 2003, p.7). For example, Young suggests that a TFO which is enmeshed, undermining of a child's

confidence, overprotective, or failing to reinforce a child for performing competently outside the family, will lead a child to develop expectations about oneself and the environment that interfere with one's perceived ability to separate, survive, function independently, or perform successfully. Young suggests that each TFO promotes corresponding EMS. For instance, the TFO described above, may foster an EMS whereby an individual believes that they need other people to help them get by (further details are included in study three).

Rationale for enhanced rigour of study three

Although such hypothesised conceptualisations have been referred to in the literature since 1990, an empirical examination has not been conducted. Thus, it was deemed of both theoretical interest and clinical relevance to apply theory-derived parenting constructs from the Process Model (Papandrea, 2005) to Young's TFO conceptualisations and examine whether and if so, to what extent, each parenting construct is associated with the corresponding posited EMS in young people. (See Table 4 for a brief conceptual outline employed for study three. A more detailed explanation of the application of the parenting constructs to Young's TFO is provided in Chapter Six [study three]).

Additionally, and as Creveling et al. (2010) states, the role EMS may play in the relation between parenting and internalising problems is not known. Thus, study three also examined the relationships between the parenting constructs, EMS and internalising problems in the adolescents.

Table 4

Applied Parenting Construct to Young's Typical Family Origin

Young's Typical Family Origin (TFO) Conceptualisation	**Applied Parenting Construct**
Detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive	**Lower Parental Acceptance**
Enmeshed, undermining of child's confidence, overprotective or failing to reinforce child for performing competently outside the family	**Higher Parental Overprotection**
Based on conditional acceptance: Children must suppress important aspects of themselves in order to gain love, attention & approval. In many such families, the parents' emotional needs and desires -or social acceptance and status -are valued more than the unique needs & feelings of each child	**Lower Parental Autonomy Granting**
Grim, demanding & sometimes punitive: Performance, duty, perfectionism, following rules, hiding emotions, & avoiding mistakes predominates over joy, pleasure & relaxation. Undercurrents of pessimisms & worry that things could fall apart if one fails to be vigilant & careful at all times	**Higher Parental Psychological Control**

Summary

In summary, the initial impetus for the overall thesis, and the focus of study one (*paper one*) came from personal observations in school classrooms, yet was subsequently confirmed in the research literature. The motivation behind study two (*paper two*) came from information learned during a Master in Psychology (Clinical) workshop on Mental Health Issues in Rural and Remote Australia. The catalyst for study three was an extract in an article by Farrell and Barrett (2007). The overall aim of this dissertation will now be presented, followed by the rationale for employing a triple-pronged approach in an attempt to achieve this aim.

Overall aim of the present thesis

The overall aim of this thesis was to improve the evidence base for service delivery for South Australian adolescents experiencing internalising problems. Clearly, no "one-way" approach exists to address such complex issues. Thus a triple-pronged approach was employed in an attempt to achieve the overall aim of this thesis.

First "prong"

The first "prong" aimed to improve access to mental health services for adolescents with internalising problems within an educational context. This was achieved by examining factors which may contribute to the current lower referral rates by teachers for young people with internalising problems to mental health services, compared to students with externalising

problems. It was anticipated that such evidence-based knowledge based on teachers' responses may assist in formulating approaches to enhance access to mental health services for more young people with internalising problems within an educational context. A simultaneous mixed-method research design was employed to enhance the scientific rigour of study one.

Second "prong"

The second "prong" aimed to improve the evidence base regarding individual, family and community determinants of internalising problems of adolescents from rural South Australia (ages 13 to 15 years). This study also endeavoured to draw attention to the under-researched, yet high-risk rural adolescent population. A multi-developmental Process framework was employed to enhance the scientific rigour of study two. It was anticipated that such knowledge generated from a theoretically-derived framework would assist in providing empirical guidelines and "direction" (Boyd et al. 2008) for establishing priorities for newly appointed funds from the Federal government for youth services in rural South Australia. This study also aimed to emphasise the importance of including as many Australians as possible from rural and remote areas, in the approaching, subsequent National Mental Health Survey.

Third "prong"

The third "prong" aimed to improve the efficacy and effectiveness of intervention and prevention initiatives by examining the relationships between multiple parental risk-factors and internalising problems to create an exploratory evidence-based parent-level framework. A novel empirical approach to a well known clinically-derived conceptualisation was employed to

enhance the scientific rigour of study three. It was anticipated that such knowledge could be integrated into existing prevention and intervention frameworks. A more comprehensive developmental approach may assist in reducing the numbers of young people with internalising problems that terminate treatment prematurely and/or fail to respond to prevention and treatment efforts.

The following chapter (Chapter Three) comprises of a discussion on the method employed throughout this research program. The format, measures, data collection procedures, sample characteristics, and the design and content of the surveys are addressed.

CHAPTER THREE: METHOD

Preamble

This chapter presents a discussion of and rationale for the methods employed during this research program. The adolescent and parental risk-factors included in the Year nine student survey, data collection procedures, sample characteristics, and the design and content of surveys employed follows. Finally, the form and content of the thesis is described.

Rationale of selection and creation of online methodology

As this research was independently conducted and not part of a larger, pre-existing study, limited funding was available to support this research. Thus, selecting a method which would minimise associated costs, yet would maximise participant numbers was required. Considering the geographical logistics of rural populations also required careful planning. It was decided to create and conduct a survey online. The decision to conduct the research online over traditional survey methods was for a number of reasons. For instance, an online survey requires minimal (if any) expense and less time commitment. The data entry process is typically more simple and the survey itself is relatively easy to execute (Granello & Wheaton, 2004; McCabe 2004). Also, due to the rural focus of study two, an online survey method would provide an ease of access to geographically isolated schools around South Australia.

Finally, I have observed within classrooms that young people tend to be as or more engaged with online tasks than with paper-and-pen, including students with learning and/or concentration difficulties.

Planning of this research began in August, 2007. The online surveys were created using *LimeSurvey*, an open source online survey application that is installed to the user's server. This application is distributed under the GNU General Public License (LimeService, 2011). The surveys were independently created by the researcher and were employed to collect the data specifically for this dissertation. An online survey was created for study one in order to collect data from the high school teachers. The surveys for study two and study three were identical, except that study two included questions assessing social capital in the adolescent rural sample.

The first page of the surveys included information about the research, ethics approval and confidentiality. Informed consent was obtained by participants reading the sentence: "If you agree to these terms and consent to participate in this survey please press the "next" button below" (parental consent for the adolescent participants is discussed below). Once participants had clicked the "next" button they were then taken to the second page, which comprised of the instructions. The following page contained the questionnaire proper. A response was registered when the radio button that corresponded to the selected answer was clicked. Only one answer was allowed per question and participants could not continue if a question was not answered. Once completed, the data were stored on the University's network server.

Study one: Teacher online survey

The teacher survey was designed in a five-section layout (Figure 7 is the first page of the teacher survey). Section one involved collecting the demographic information, including gender, age, years of teaching experience, and employment status. Section two included a definition of internalising and externalising problems to ensure that each teacher possessed a similar understanding of the terms when answering the questions. This section was also designed to assess the extent to which teachers agreed with four questions concerning the mental health aspects as their role as teachers. Section three, invited teachers to indicate the extent to which they agreed with four suggestions, which may assist them with the mental health aspect of their role as teachers. Section four comprised of six questions to assess the teachers' level of awareness of existing mental health resources. The final section, section five, consisted of the qualitative component of the survey and aimed to further add to the understanding of *why*: "Teachers refer a lot more students with externalising problems for mental health services, compared to students with internalising problems". (A copy of sections two to five of the teacher survey in Word format can be found in Appendix eight; a copy is also included in Appendix 19 in the published version of *paper one*).

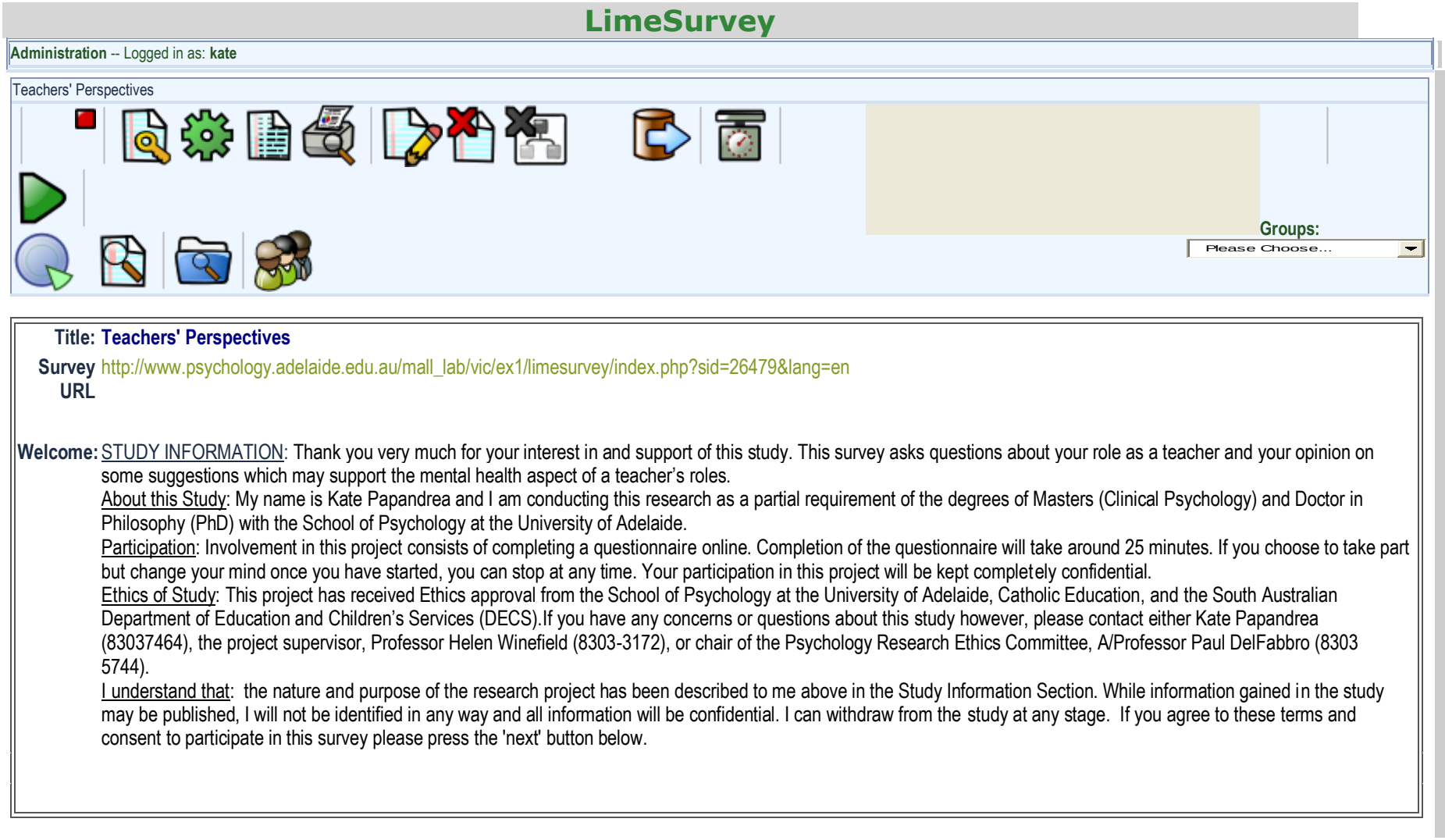

Figure 7. First page of the teacher online questionnaire.

Study two and study three: Year nine student surveys

The Year nine survey was used for study two and three (Figure 8 shows the first page of the Year nine online survey). As already mentioned, the inclusion of questions assessing social capital in the rural study was the only difference between the two surveys. This first page provided students with information about the study, confidentiality and informed consent. The second page included the instructions, which explained that the survey comprised of three main sections: Section one included demographic questions, including gender, age, main female and male caregiver/s, and parental marital status; section two included questions assessing the a range of adolescent characteristics (i.e., individual-level risk factors); and section three comprised of questions concerning relationships with the main caregiver/s (i.e., parental-level risk-factors). The Year nine online survey was piloted with a small group (n = 3) of Year nine students. Certain issues with the formatting of the survey were raised and subsequently altered (e.g., small font).

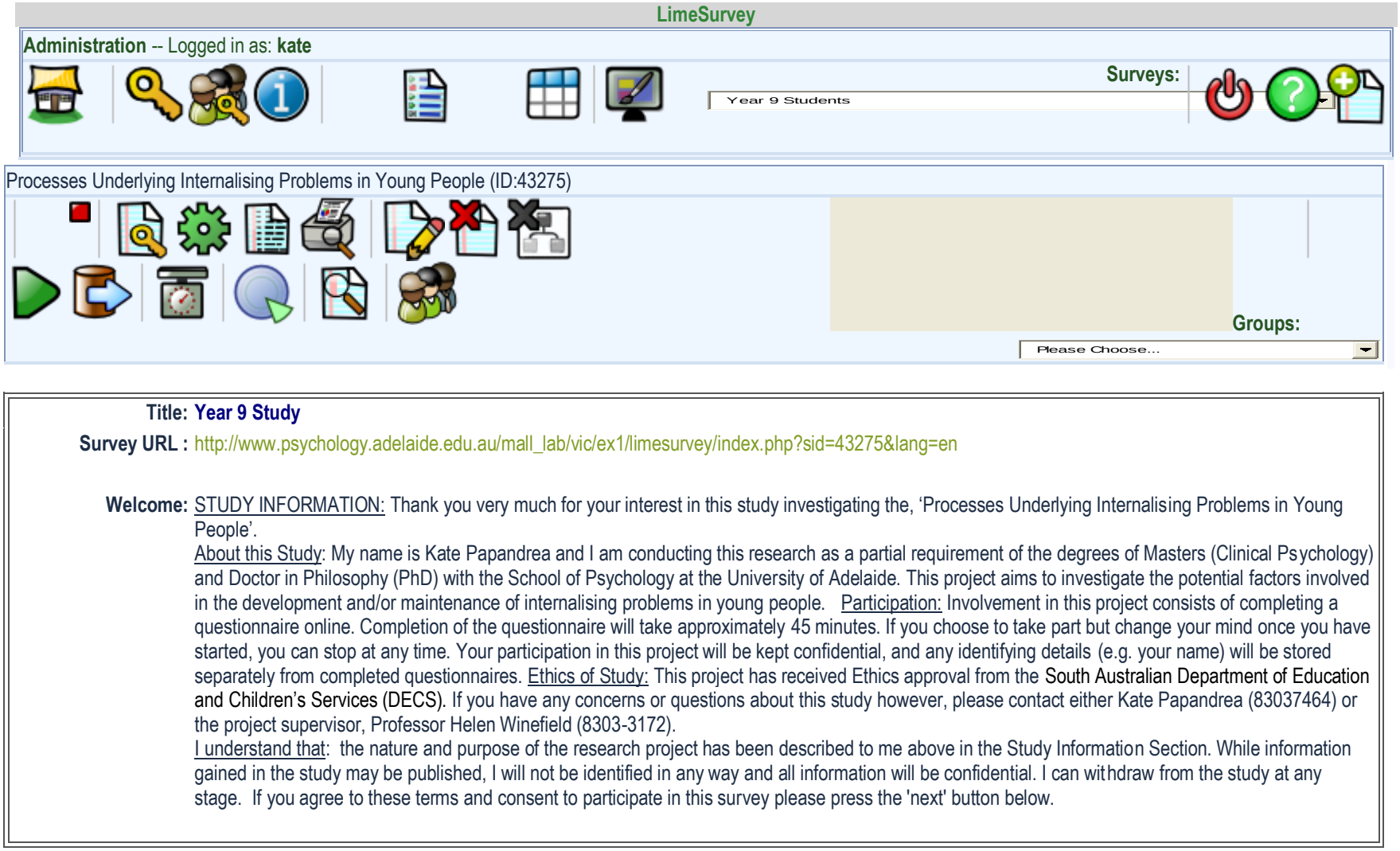

Figure 8. First page of the Year nine student online questionnaire.

Tables 5 and 6 respectively outline the individual adolescent and parenting variables investigated in this research. In total the adolescent survey included eight individual risk-factors and five parental risk-factors. However, due to time constraints, the full data set collected from the adolescent survey was not analysed. Only the three individual and four parental risk-factors (as highlighted in bold in Tables Five & Six) have been analysed. The remaining data will be analysed in post-doctoral work. A copy of the Year nine survey in Word format can be found in Appendix nine. However, only the questions from the risk-factors presented in this dissertation have been provided in Appendix nine.

Table 5

Individual Adolescent Risk-Factors Included in the Year Nine Student Survey

Risk-factor	Measure	Questions
Adolescent Factors		
Self – esteem	**Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965)**	**10**
Attachment – Maternal and/or Paternal	Inventory of Parent and Peer Attachment - Revised (IPPA-R; Armsden & Greenberg, 1987)	28
Social self - efficacy	Self efficacy in Social Situations Scale (SESS; Gaudiano & Herbert, 2003)	9
Probability	The Probability of Negative Social Events Questionnaire (PNSEQ; based on The Consequences of Negative Social Events Questionnaire; CNSEQ; Wilson & Rapee, 2005)	48
Attributions	The Children's Attributional Style Questionnaire (CASQ; Seligman et al. 1984)	48
Social capital	**Social Capital Questionnaire (SCQ; Bullen & Onyx, 2000)**	**12**
Early Maladaptive Schemas (EMS)	**The Schema Questionnaire for Children (SQC; Stallard & Rayner, 2005)**	**11**
Cost/Consequences	The Consequences of Negative Social Events Questionnaire (CNSEQ; adapted from Wilson & Rapee, 2005)	48
Qualitative question	"In general, can you think of 3 ways that parents can show their children they love them?"	1

Note: Only the factors in bold are presented in this thesis; only the rural population completed the Social Capital Questionnaire (SCQ).

Table 6

Parenting Risk-Factors included in the Year Nine Student Survey

Risk-factor	Measure	Questions
Parent Factors		
High Psychological control – Maternal & Paternal	**Psychological Control Scale-Youth Self-Report (PPS-YSR; Barber, 1996).**	**8**
High Overprotection	**Overprotective subscale of Parental Bonding Instrument (Parker, Tupling & Brown, 1979)**	**7**
Low Autonomy granting	**Autonomy Granting Scale (Silk et al. 2003)**	**8**
Low Regulation – Monitoring	Parental Monitoring Scale (Brown, Mounts, Lamborn, & Steinberg, 1993)	5
Low Acceptance – Maternal & Paternal	**Acceptance subscale - Child Report of Parent Behaviour Inventory (CRPBI; Schludermann & Schludermann, 1988)**	**10**

Note: Only the factors in bold are presented in this thesis.

Data collection

In order to maximise the chances of obtaining representative samples, ethics approval was sought from the Department of Education and Children's Services (DECS; the government schools department); Independent Schools of South Australia Association; and the Catholic

Education Centre of South Australia. (The ethics approval letters from the Department of Education and Children's Services (DECS) can be found in Appendix ten). The Independent schools that were contacted did not require official ethics approval. In order to conduct research in Independent schools in South Australia, approval is typically granted by the individual (Heads) Principals from each Independent school.

A randomly generated list of schools was established from schools listed on the Department of Education and Children's Services (DECS): (http://www.decs.sa.gov.au/locs/); the Association of Independent Schools of South Australia: (http://www.ais.sa.edu.au/about-our-schools/search); and the Catholic Education Centre of South Australia: (http://www.adelaide.catholic.org.au/sites/CatholicEducationOfficesSA/our-schools/find-a-school) websites.

Initially, a longitudinal investigation with the Year nine student study was planned. However, although ethics approval from DECS and the Catholic Education Centre of South Australia was granted for a longitudinal study, due to Masters Coursework and Placement commitments it was decided prior to contacting the schools that a longitudinal investigation within the candidature period was too ambitious. Hence, all studies conducted within the research program were correlational in nature.

Each school on the list was individually contacted via e-mail and letters explaining the studies were sent to the Heads (Principals) of each school (see letter of introduction in Appendix

11). Schools were subsequently followed-up one-to-two weeks via telephone. Both the Year nine student and year eight-to-ten teacher populations were recruited simultaneously.

Of the 69 schools (28 from rural areas and 41 from urban areas) invited to participate, adolescents from a total of 38 schools participated in the study (11 schools from rural areas and 27 from urban areas). This indicates a response rate of 55%. As Delfabbro et al. (2006) states, "the very strict ethical requirements to obtain parental approval in Australian school research make it very difficult to obtain very high response rates in Australian surveys". No well-documented Australian standards exists to indicate typical response rates from school surveys, but the rate (55%) is very similar to that obtained in other published work by the author (Delfabbro & Thrupp, 2003). According to the Federal Productivity Commission (1999), one of Australia's peak research organisations, a response rate of 55% for public surveys is considered to be on par with the best surveys conducted in Australia (Delfabbro & Thrupp, 2003). Reasons cited for a school's non-participation included time constraints, simultaneous participation in other research, or previous participation in other research (a letter declining from the invitation to participate in the research is shown in the Appendix 12).

However, of the 69 schools contacted, only a total of 28 schools were randomly invited to participate in both the Year nine and teacher study. This was primarily due to the anticipated additional workload required to analyse the qualitative data included in the teacher survey. Thus, regarding study one (i.e., the teacher sample) a total of 28 secondary (high) schools were randomly selected within the Adelaide metropolitan and rural South Australian areas. Seventeen

schools (eight schools from rural areas and nine schools from urban areas) agreed to participate. This indicated a response rate of 60.7%.

South Australia is 983,482 square kilometres wide (approximately 379,725 square miles) and 8% of Australia's population live in South Australia (approximately 1.64 million people). Figure 9 illustrates the distribution of the data collected from this research from rural and urban areas throughout South Australia. Participating rural schools included Mount Gambier, Berri, Victor Harbor, Port Augusta, Ceduna, Marree, and Coober Pedy.



Figure 9. Map of South Australia to indicate distribution of data collection.

Study information sheets for students, parents and teachers, and parental consent forms (see Appendices 13, 14, 15, & 16 respectively) were sent via mail to participating schools and distributed to the Year nine students by the teachers. Data collection for the Year nine students were conducted between October to December, 2008 and March to September, 2009. A list of South Australian organisations were also included to assist any parents who had possible concerns regarding their adolescent's behaviour, health, emotional wellbeing or issues regarding parenting (see Appendix 17). Students were also provided with a similar list on the last page of the Year nine online survey (see Appendix nine for a Word format of the Year nine survey).

Teachers collected the parental consent forms when signed by a parent or guardian and returned to schools. Completed consent forms were then posted to the School of Psychology, the University of Adelaide, via a reply paid-envelope, and stored in a locked office. Telephone calls with schools during different stages of data collection took place and schools were informed that the researcher could be contacted at any stage. Each school was e-mailed the survey web-link, which was then e-mailed to all participating students during a designated lesson time.

In order to access the survey, each student clicked on the link. As explained above, the student's consent was obtained via the first page of the survey. Most students completed their surveys during lesson time (e.g., during a pastoral care or health class) under teacher supervision, which took approximately 45 minutes to complete. It was suggested to teachers to use the content within the surveys as a catalyst to discuss relevant issues during appropriate lessons. All participants were invited to enter a raffle for one of two $25 department store shopping vouchers. One week after each school participated, one male and one female name was randomly selected

from the data file and two gift vouchers (funded by the School of Psychology) were mailed to each participating school.

Teachers completed the survey in their own time and took an estimated 25 minutes to complete. The majority of the teacher data was collected during the Year nine student data collection period (October to December, 2008 and March to September, 2009). However, data from seven teachers were received during October, 2009 to December, 2009.

Sample characteristics

Sample breakdowns for the teacher (Table 7) and adolescent (Table 8) populations are provided below. More detailed demographic information is provided in the Method sections included in the relevant studies.

Table 7

Age and Gender Breakdown of the Rural, Urban and Total Teacher Data (N = 152)

	Females			Males			Total
	Rural	Urban	Total	Rural	Urban	Total	Combined *N*
26 - 36 years	9	22	31	5	8	13	44
37 - 47 years	16	31	47	11	20	31	78
48 - 60 years	7	6	13	6	11	17	30
Totals	32	59	91	22	39	61	152

Note: N = 152.

Year nine students

The age range targeted was 13 to 15 years of age to coincide with the ages of young people attending Year nine (i.e., the second year of secondary school).

As already stated, a total of 38 schools participated in the adolescent studies (study two and study three; 11 schools from rural areas and 27 from urban areas). Table 8 shows the age and gender breakdown of the rural, urban and total Year nine student data. There was no missing data for the rural sample (N = 388) and all questions were answered. A total of 525 urban adolescents participated in study three, yet nine participants did not complete the survey, and consequently, this data was discarded. Thus, the total urban sample was N = 516.

Note: Study three comprised of a rural sample (N = 388). This sample was combined with the urban sample (N = 516) to comprise of a total of 904 adolescents.

Table 8

Age and Gender Breakdown of the Rural, Urban and Total Year Nine Student Data (N = 904)

	Females			Males			Total
	Rural	Urban	Total	Rural	Urban	Total	Combined *N*
13 years	16	76	92	63	72	135	227
14 years	183	159	342	101	143	244	586
15 years	9	32	41	16	34	50	91
Totals	208	267	475	180	249	429	904

Format of thesis

As the format of the thesis is a combination of Publication and Conventional, the following three chapters (Chapter Four, Five and Six) respectively comprise of the two published papers and one paper in preparation for publication. A General Discussion in Chapter Seven subsequently follows.

CHAPTER FOUR: STUDY ONE --- PUBLISHED

Papandrea, K., & Winefield, H. (2011). It's not just the squeaky wheels that need the oil: Examining teachers' views on the disparity between referral rates for students with internalising vs. externalising problems. *School Mental Health, 3, 222-235.*

Statement of Contributions:

Ms Kate Papandrea (Candidate)

I was responsible for the conception and primary authorship of the paper. I conducted the literature searches, analysed and interpreted the data, wrote the manuscript, and acted as the corresponding author.

Signed …….Date……

Professor Helen Winefield (Co-author)

I was the principal supervisor (advisor) of the research program. The realisation of the idea, collection of data, and analysis of data were the work of Ms. Papandrea. Ms. Papandrea was responsible for writing this paper; my role was to comment on drafts, make suggestions on the presentation of material in the paper, and provide editorial input. I hereby give my permission for this paper to be incorporated in Ms. Papandrea's submission for the degree of Doctor of Philosophy from the University of Adelaide.

Signed: Helen Winefield ……Date……

Abstract

Due to an existing disparity between service need and service use of mental health services for adolescents experiencing internalising problems, a simultaneous mixed-methods research design was employed to investigate how to reduce this discrepancy within an educational context. A total of 152 secondary teachers from seventeen South Australian schools completed an online questionnaire and content analysis was used to explore the qualitative data. Results of the present study highlighted a further disparity: Teachers perceived that they faced an expectation to identify the symptoms of internalising problems in their students; yet did not feel sufficiently capable to put this expectation into practice. This is particularly problematic as teacher referral is the most common pathway to treatment. Recommendations to reduce this disparity are presented and findings hold implications for pre-service teaching programs, policy and current government funding initiatives.

Keywords: Internalising Problems; Adolescents; Teacher Referrals; Treatment Access

There is a mounting body of psychological and educational research which suggests “the squeaky wheels get the oil”. In an educational context, this old adage can be used to illustrate a growing phenomenon where students displaying externalising problems are more likely to receive the assistance they need, whereas students experiencing internalising problems are often overlooked or neglected. Internalising disorders refer to a range of difficulties "within the self”, and thus tend to be directed inward toward the individual rather than being acted out in the environment. Often first appearing during adolescence, such problems include depression, social withdrawal, anxiety and somatic/physical complaints (Gresham & Kern, 2004). Australian adolescents report symptoms of anxiety and depression at rates of 13.2% and 14.2% respectively (Boyd et al. 2000). If left untreated, internalising problems can result in substantial economic and social costs due to a myriad of negative developmental outcomes, including lowered educational performance leading to school dropout, substance abuse, and continued mental health problems in adulthood (Barrett et al. 2005).

Service need versus service use: Disparity one

Despite internalising problems being considered the most common disorders experienced by adolescents, prevalence rates may be even higher than indicated as only a small proportion of young people with such problems receive professional help. Patrick McGorry (2010), Australian of the Year 2010 and Professor at the Centre for Youth Mental Health at the University of Melbourne states, “It is time to end the inequality, as 90% of people with physical health problems access quality care, wheras only 25% of young people receive professional care for their mental health”. Similar statements and supporting figures have been reported elsewhere (see: ABS, 2007). Such circumstances require exploration into the existing pathways to mental

health services in an attempt to identify how to increase access to mental health services for more young people in need.

The investigation by Farmer et al. (2003) of the pathways into mental health services of young people aged 9 – 13 in the United States of America (USA) revealed that where mental health services are available through the education sector, approximately 60% initially received services through the school system than any other. Hoagwood and Johnson (2003, p. 4) argue, "Of those fortunate few who do receive some type of mental health care, the overwhelming majority - 70% - 80% - receive them within the school setting". Factors such as ease of access to young people and the fact that teachers have an opportunity to observe students in a variety of situations that parents and mental health professionals do not, contribute to the regularity of this route to assistance.

In Australia there have been a number of school-based Universal, Selective, and Targeted prevention and early intervention mental health initiatives. For instance, the FRIENDS program, which aims to prevent anxiety and depression through the building of emotional resilience, has shown some promising evaluative outcomes (Barrett et al. 2005). However, Spence and Shortt's (2007) comprehensive review addressing the efficacy and effectiveness of universal school-based interventions designed to prevent the development of depression in children and adolescents, concluded that the majority of such short-term school-based programs were not efficacious or effective. Explanations mentioned included, that the delivery of the interventions was too brief and that school personnel did not have sufficient training and supervision to ensure high levels of program fidelity. Moreover, many of such programs are expensive, time

consuming, involve teacher-training, and purchasing of materials. Similar results have also been reported for longer-term school-based programs. For instance, an evaluation of the three year *beyondblue* schools Universal research intervention, which involved 50 schools in Australia, revealed a slight *deterioration* in mental health outcomes (including internalising symptoms) for all adolescents in the intervention groups compared with the comparison groups (Sawyer, 2007. p.31).

Service use for externalising problems versus internalising problems: Disparity two

Although school-based mental health initiatives have increased in the past decade, as noted by Severson, Walker, Hope-Doolittle, Kratochwill, and Gresham (2007) the most common method of receiving help within the educational context for students with mental health problems is the external referral process. This method involves relevant student support staff seeking services from external health professionals, agencies and/or organisations (Mindmatters, 2010) and primarily relies on the identification by teachers and other school personnel of behaviours and symptoms that are indicative of a mental health problem. Symptoms include, restlessness and irritability, a decline in energy and enthusiasm, and not enjoying things they usually like doing (Sayal, 2006). This is particularly noteworthy, as young people in need of mental health services rarely self-refer and thus are reliant on significant adults in their lives, such as parents or teachers, to recognise the need and seek the necessary assistance (Armbruster & Kazdin, 1994).

Loades and Mastroyannopoulou (2010) highlight that although the existing literature examining factors which impact on teachers' referrals of mental health problems is an under-researched area, and results have been somewhat inconsistent, a number of student and teacher

factors have been identified. For instance, the most commonly reported biases include students' age and gender, and the differing behavioural and performance expectations that exist among teachers (Jackson, & King, 2004; Lane, Givner, Pierson, 2004; Severson et al. 2007). Conversely, Pearcy, Clopton and Pope (1993) and Layne, Bernstein and March (2006) found that teacher ratings of need for referral did not differ for boys and girls and there was no gender effect on the teachers' reported referral experience.

However, the type and severity of the mental health problem itself has been shown to be one of the strongest and stable predictors of students being referred to mental health services. For instance, Pearcy, Clopton and Pope (1993) invited 64 elementary (primary) school teachers to read vignettes describing girls and boys with externalising and internalising disorders. Results demonstrated that the referral rates for mental health problems were higher with greater severity of students' externalising problems, but decreased with the severity of internalising problems, such as anxiety and depression. Teachers also reported having referred more children with externalising than with internalising problems for treatment, even though they did not rate externalising problems as needing referral more than internalising problems. Additional researchers have reported similar findings (Green, Clopton & Pope, 1996; Rothi & Leavy, 2006), which suggests a second disparity: Students experiencing externalising problems are more likely to receive the assistance required, whereas students with internalising problems are under-identified, under-referred, and thus much less likely to receive the mental health services they need (Chang & Stanley, 2003; Green et al. 1996; Pearcy et al. 1993).

A few explanations can be put forward to explain this apparent disparity. The inherent nature of internalising disorders themselves presents complex challenges for teachers to identify the associated symptoms in their students. For example, the associated symptomology is difficult to observe, especially in busy classroom environments; tends to meet teachers' behavioural expectations, yet does not typically challenge teachers' authority (Gresham & Kern, 2004). In contrast, externalising problems, which include such behaviours as aggressive and rule breaking behaviour, hyperactivity and excessive distractibility, are much easier for teachers to notice and thus address such disruptive behaviours.

Chang and Stanley (2003) and Loades and Mastroyannopoulou (2010) reported that overcontrolled problems are perceived by teachers as less serious and concerning than undercontrolled problems, whereas Rothi, Leavey and Best (2008) reported that teachers are more likely to seek help for students if the behaviour appears to negatively impact the student's academic progression, rather than if the student exhibits less disruptive symptoms. Phares and Danforth (1994) noted that teachers were more bothered by externalising than internalising problems in their adolescent students, and hence were more motivated to change associated behaviours, whereas Papandrea (2010a) found that teachers were significantly more confident in identifying externalising as opposed to internalising problems Finally, Liljequist and Renk (2007) reported that teachers' personal teaching efficacy contributed significantly to the prediction of how bothersome internalising behavioural problems were perceived as being. Such findings described support Muris and Meesters (2002) conclusion that "children's problems with anxiety in most cases remain largely hidden" in a classroom context (p. 589).

Expectation versus capacity: Disparity three

A further explanation regarding the disparity between type of disorder (internalising vs. externalising) and at-risk students being referred for assistance, may be due to the changing role of education over the past few decades. Although students are presently more likely to receive assistance for their mental health problem (in particular externalising problems) through the education system than any other pathway, this was not always the case. As noted by Severson et al. (2007) schools have traditionally viewed their key mission as developing and enhancing the academic growth of all students. In contrast, the social-emotional wellbeing (SEW) e.g., the mental health of students has been regarded primarily as a secondary objective. An increased recognition of the importance of SEW on learning outcomes (Ringeisen, Henderson & Hoagwood, 2003), and a growing philosophy that schools also have a duty of care to identify and assist students at risk of disconnection or harm, further contribute to the view that schools can both enhance positive mental health as well as prevent the development of mental health problems in students.

Rothi et al. (2008) suggest that in the United Kingdom (UK), **t**here is a growing expectation that school teachers should not only act as educators by delivering the curriculum, but also be more involved as tier one, or front-line mental health professionals. In this role, teachers are expected to assume some responsibility in the early identification of student's mental health problems and to refer them for appropriate assistance. Similar educational paradigm shifts have been reported in the USA (Stevenson et al. 2007). In Australia, the Melbourne Declaration from the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA, 2008) recognises “the need to address the mental health and wellbeing of young

Australians", and states that "schools play a vital role in promoting the intellectual, physical, social, emotional, moral, spiritual and aesthetic development and wellbeing …"(ibid., p. 4).

However, Rothi et al. (2008) argue that in the UK, such policies have not come with increases in appropriate supports or resources, such as the accessibility of mental health professionals to schools, or changes in the mental health-related training of teachers. Based on this premise, Rothi et al. (2008) analysed interview data from 30 teachers (including 13 secondary [high] school teachers) and investigated their views on competency and training in managing mental health related issues. Results indicated a widespread perception that teachers do not feel sufficiently prepared to manage students experiencing mental health problems. A recent study by State, Kern, Starosta, and Mukjerjee (2011) investigated the preparation future elementary (primary) school teachers receive during teacher training programs in the USA by analysing syllabi from the courses in those programs. Results indicated that pre-service teachers receive very little training in the area of social, emotional, and behavioural problems. In conclusion, such findings suggest a further disparity between the expectations placed on teachers and their capacity to put them into practice.

Rationale and aims of present study

It is apparent that a philosophical shift regarding teachers' and schools' responsibility to the mental health and wellbeing of students has also occurred in Australia. However, prevalence rates of internalising problems in Australian students do not reflect this shift i.e., rates have *increased* in the past few decades. This study thus aimed to investigate whether the disparity reported in the UK and USA between the expectations placed on teachers and their capability to put them into practice, also exists in South Australian schools and why. The present study concentrated on secondary (high-school; Year Eight to Ten) teachers' perspectives. This was because the majority of internalising problems first emerge, or are noticed during the adolescent years, (Boyd et al. 2000) and because of the harmful consequences of untreated internalising problems (including an increased risk of suicide).

Further, few empirical studies have explored Australian secondary teachers' awareness of existing resources for teachers to support the mental health aspect of their teaching role. In Australia, MindMatters is the national mental health initiative for secondary schools and a variety of online resources for teachers to help manage students experiencing high support needs in mental health have been developed and recommended. The present study specifically investigated the MindMatters recommendations: *Practical Steps for an Effective External Referral System* and an *Educator's Guide to Children and Young People's Wellbeing* (MindMatters, 2010). As the most common method of receiving help within the educational context for students with mental health problems is the external referral process, (Severson et al. 2007) and, as this method primarily relies on the identification of symptoms from teachers, it is anticipated that knowledge gained from this study could be applied within the school

environment to increase referral rates and enhance access to mental health services for young people experiencing internalising problems. This study specifically aimed to:

1. Examine teachers' perspectives regarding expectations, capabilities, and training in relation to the apparent mental health aspect of their role as teachers.

2. Present a number of suggestions that may support teachers' apparent mental health role.

3. Investigate teachers' awareness and use of some existing resources developed and recommended by MindMatters.

4. Explore teachers' perspectives qualitatively regarding *why* teachers refer more students experiencing externalising problems compared with students with internalising problems.

Method

Research design

The current research employed a simultaneous mixed-methods research design. Due to issues associated with the ecological validity of vignettes as employed in similar research (While, 1998) an online questionnaire was created and used, to enable teachers' responses to reflect their actual experiences. The majority of the questions were closed-ended questions, and supplementary data of a qualitative nature were also elicited via an open-ended question to further add to our understanding of teachers' referral processes. The qualitative data were analysed via conventional content analysis.

Participants

A total of 28 secondary (high) schools were randomly selected within the Adelaide metropolitan and rural South Australian areas. Seventeen schools (seven non-government schools and ten government schools) agreed to participate, indicating a response rate of 60.7%. A total of 152 South Australian Year eight to Year 10 secondary (high) school teachers (n = 91 females), with a mean age of 39 years (ages ranged from 26 to 60 years) participated. The years of teaching experience ranged from one year to 36 years (M = 25.4 years). The South Australian mean of teaching experience is 23.1 years (Australian Education Union, 2010). The employment status of the teaching sample included: Permanent: 51.3%; a fixed term of more than six weeks, but not permanent: 45.6%; and relief teaching: 3.1%.

Procedures

In order to conduct research in the government high schools, ethics approval was obtained from the South Australian Department of Education and Children's Services (DECS). Non-government schools were contacted directly via email. Each school received letters and information sheets explaining the study and a list of South Australian organisations were included to assist any teachers who had possible concerns regarding their students' behaviour or emotional wellbeing. Once consent had been granted, teachers completed an online questionnaire in their own time, which took approximately 25 minutes to complete.

Measures

The online questionnaire used in this study was developed for this study and was designed in a five-section format. Section One involved collecting the demographic information about the teachers. Sections Two-Five of the questionnaire can be seen in Appendix 19 (a format in Word can also be seen in Appendix eight).

Results

Quantitative analyses

Table 9 shows teachers' responses to questions in Section Two and Section Three (Q1-8). As shown in Table 9, the vast majority of teachers "strongly agreed" or "agreed" that teachers are expected to identify students with internalising problems and refer them for appropriate

assistance (Q1). When asked to report the extent to which teachers felt capable of identifying internalising symptoms in their students (Q2), whether their pre-service teacher training program sufficiently prepared them to identify students with internalising problems (Q3), and whether they had received such training (in-service training) since working as a teacher (Q4), a large majority of teachers “disagreed” or “strongly disagreed”. The vast majority of teachers strongly agreed or agreed with all four suggestions provided (Q5, Q6, Q7, and Q8).

Table 9

Teacher's responses to Sections Two and Three (f (%); N = 152)

	Strongly Disagree	Disagree	Agree	Strongly Agree
Q1. Expectation to identify internalising problems	2 (1.3)	5 (3.3)	28 (18.4)	117 (77.0)
Q2. Capable of identifying internalising problems	26 (15.2)	96 (70.3)	27 (7.8)	3 (2.0)
Q3. Sufficient pre-service training	81 (53.3)	62 (40.8)	9 (5.9)	-
Q4. Sufficient in-service training	63 (41.4)	47 (30.9)	28 (18.4)	14 (9.2)
Q5. Provision of well-being facilitator	3 (2.0)	10 (6.6)	59 (38.8)	80 (52.6)
Q6. Greater pre-service internalising teacher training	-	4 (2.6)	22 (14.5)	126 (82.9)
Q7. Being informed *before* teaching students	-	5 (3.3)	60 (39.5)	87 (57.2)
Q8. Case-study assessment during placement	2 (1.3)	13 (8.6)	56 (36.8)	81 (53.3)

A total of 121 (79.6%) teachers were not aware of the MindMatters' *Practical Steps for an Effective External Referral System*, whereas 31 (20.4 %) teachers were aware of this resource (Q9). A total of 129 (84.9%) teachers were not aware of an *Educator's Guide to Children and Young People's Wellbeing,* whereas 23 (15.1%) teachers reported an awareness of this resource (Q10). When asked whether or not there was an increased access to mental health professionals at their respective schools, 144 (94.7%) teachers responded "no" whereas eight (5.3%) responded "yes" (Q11).

The majority of teachers were either "unsure" or reported "no" to the questions enquiring about the three specific MindMatters' *Practical Steps for an Effective External Referral System*: A total of 65 (42.8%) teachers were "unsure" whether their school used a health care plan (Q12), whereas 27 (17.8%) reported yes, and 60 (39.5%) reported no. A total of 87 (57.2%) teachers responded "unsure" whether their school used or valued community protective factors (Q13), whereas 7 (4.6%) reported "yes", and 58 (38.2%) responded "no". A total of 87 (57.2%) teachers were "unsure" whether their school provided an advocacy or advisory role as required (Q14), whereas 24 (15.8%) responded "yes", and 41 (27.0%) responded "no" to this question.

Section five

Out of a possible 152 participants, 132 (86.8%) teachers in this sample selected "yes" to Q15: "In your experience as a teacher, do you agree that teachers refer a lot more students with externalising problems for mental health services, compared with students with internalising problems?" A total of 13 teachers (8.6%) reported "no" to the statement, whereas seven (4.6%) teachers were "unsure". Teachers who replied "yes" were invited to qualitatively respond to the

question, "*Why* do you think that teachers refer a lot more students with externalising problems for mental health services, compared to students with internalising problems?" In total, 98 (64.5%) teachers provided comments, which ranged from a two-word sentence through to two paragraphs of text. Chi-square tests for independence were used to determine whether the results of each of the 15 questions were related to: The number of years spent teaching; gender; or age. No significant results were found.

Qualitative analyses

The complete qualitative data set was included in this analysis (i.e., all responses from the open-ended question). The primary purpose of the analysis was to understand the teachers' perceptions regarding *why* referral rates for internalising problems are so low when compared with externalising problems. The analysis followed a standard procedure (Coffey & Atkinson, 1996), consisting of two key stages: Identifying categories and applying them to the data, and then counting the frequency of occurrence of different categories of responses.

As the coding of open-ended responses requires the subjective judgment of the coder, in order to reduce possible coding errors, the coding in the present study was performed independently by two coders (one of which was the first author of this paper, the other an experienced qualitative researcher). Both coders initially read through all responses in order to become acquainted with the data. Responses were then grouped together under each similar area and read through again a number of times with the researchers making notes of possible categories. Numerical codes were subsequently developed for each possible category. These codes were modified, removed and added to as the analysis progressed. After the analysis was

complete the categories identified were examined to determine any patterns common across responses, and the data was quantified (frequencies, *f*).

In order to measure the degree of consistency between multiple coders of qualitative data, an inter-rater, or inter-coder reliability analysis is recommended (Gwet, 2008). This analysis refers to an estimate of the consistency between two or more raters who score the same data. According to Gwet (2008), the reliability estimate quantifies the distance of scores assigned by a group of raters to the same subjects; the closer the scores assigned by each rater, the higher the reliability. An inter-rater reliability analysis was calculated using Cohen's *kappa*, which is considered to be the most widely used reliability coefficient (Perrault & Leigh, 1989). The measure of agreement in the present study calculated a Cohen's *kappa* = .84, indicating excellent agreement between the two coders beyond chance (Banerjee, Capozzoli, McSweeney, & Sinha, 1999).

The teachers' responses were organised under four main categories: "Insufficient mental health-related training" (*f* = 63) was the most frequently stated category; "Inadequate available and sustained supports" (*f* = 49) was placed in the second order; "More disruptive in classrooms" (*f* = 36) was placed third and "Teacher stress" (*f* = 21) was the fourth category. An "Other" category (*f* = 8) was also established to highlight some important comments the researchers believed warranted inclusion due to the potential for further discussion. Although the majority of responses were rather negative, five comments were positive and some examples were included. Selected examples of teachers' comments from each category will be presented in highest

frequency order and include the corresponding gender: Female (F); Male (M) and age in years, of the individual.

Category 1: Insufficient mental health-related training

Insufficient training in mental health in general and internalising problems in particular was the strongest recurrent theme reflected in the teachers' responses regarding *why* teachers refer more students with externalising problems for mental health services, compared to students with internalising problems. The issue of teachers being expected to deal with mental health problems, yet not being prepared to do so was a frequent comment. For example:

"I certainly didn't sign up for this. I'm totally out of my depth. We receive no training but are expected to deal with so many problems" (M, 28) and "I really liked the suggestion of the case-study. If I was able to do something like that at uni I think I would have started my teaching career with a lot more confidence – I would actually have had SOME idea of what symptoms to look out for and what to do about the problem. I went in blind" (F, 48).

Category 2: Inadequate available and sustained supports

Teachers' responses concerning inadequate available and sustained supports primarily concerned the insufficient access to mental health professionals. The issue of inconsistent support once accessed was also raised. For instance:

"Sometimes we [teachers] experience "I wonder why I bother..." symptoms - as the support just isn't available" (M, 52); "I have 2 boys - both with anger/depression issues. Both are supposed to have 1 x monthly psychologist visits – one boy has been 3 times in the past 2 yrs, and the other has had 2 visits since his mum died in Term 1!! I have another boy - I set up a weekly session for him - he has never received it - that was at the end of term 2!" (F, 33); and "I think schools would benefit greatly from a well-being facilitator. Someone to be a go-between the school, student, family, and outside help. This would let teachers get on with what we are supposed to do – teach our students! But we could also provide school work to the well-being facilitator and be kept informed about the students' progress" (M, 48).

Category 3: More disruptive in classrooms

Certain comments from the teachers illustrated that not only are disruptive students more likely to receive a referral, but students who are shy, quiet or verified at a low level (of severity) are much less likely to be referred for assistance. For example:

"Students with disruptive problems are easier to identify and they impact on the entire classroom, not just the individual students" (F, 36); "Honestly, I never really thought much about internalising problems. It never occurred to me that the quiet students could be suffering" (M, 30); and "Some of the disruptive kids are so out of control I make sure I refer them to get them out of my classroom!"(F, 31).

Category 4: Teacher stress

Although there was some overlap between the "teacher stress" and the "more disruptive in classrooms" themes, (i.e., the behaviour of disruptive students created stress for teachers), both coders agreed that "teacher stress" was a legitimate separate category as teachers referred to other issues which generated stress. For instance:

"Teachers are stressed out enough with the out of control students without having to worry about the quiet ones as well" (F, 46) and "Everything is harder now with the increased testing and accountability measures. Plus the new national curriculum. What will teachers have to do next??" (F, 48).

Other category

An "Other" category was established to highlight some thoughtful responses. Although the content was not frequent enough to create an independent category, the researchers believed it warranted inclusion due to the potential for further discussion. Comments included:

"Mental health issues are family matters" (F, 59); "Does something drastic have to happen before we get some help out here in country areas? Every teacher in our school is trying to manage kids with severe depression. Families have dealt with so much, especially with long running droughts etc, and it really has affected the kids. We [teachers] are getting as desperate as the kids. We ask for some professional help for our kids, but it takes too long and often no-one

turns up when they're supposed to" (F, 37) and "I tried to get a depressed student help but the mother refused" (F, 28).

Further, although the majority of teacher responses were negative, five comments were positive. Examples included:

"My school is very supportive when it comes to mental health issues. The principal takes a whole school approach and often comments at assemblies that it [mental health] is a priority in our school" (F, 34); and "I have a very supportive principal. Mental health has to be a priority from the top and it will filter downwards" (F, 43).

Discussion

The present study contributes a small step towards the long-term goal of reducing the disparity between service need and service use for adolescents experiencing internalising problems. Students experiencing externalising problems are more likely to receive the assistance required, whereas students with internalising problems are under-identified, under-referred, and thus much less likely to receive the mental health services they need (Chang & Stanley, 2003; Green et al. 1996; Pearcy et al. 1993; Rothi & Leavey, 2006). The results from the present study validate this disparity as 86.8% of teachers in this sample agreed that teachers refer a lot more students with externalising problems for mental health services, compared with students with internalising problems.

One explanation to account for such disparities is that the inherent nature of internalising problems presents challenges for teachers to identify the associated symptoms. This is especially problematic as the most common method of receiving help within the educational context for students with mental health problems is the external referral process (Severson et al. 2007), which primarily relies on the identification from teachers. The present study thus aimed to explore whether the trend regarding the reported lack of preparation, training and supports for teachers to manage this expectation, is also evident in Australia as reported in the UK (Rothi et al. 2008) and USA (Severson et al. 2007). It is anticipated that such knowledge gained could be applied to an educational environment and ultimately increase referral rates and thus access to mental health services for more young people experiencing internalising problems.

The results of this study support those of Rothi et al. (2008): As part of their role as educators, teachers overwhelmingly perceived there is an expectation to identify the symptoms of internalising problems in their students and to refer them for appropriate assistance; yet do not feel sufficiently capable to put this expectation into practice. In order to examine this apparent disparity, and as Rothi et al. (2008) established, the teachers in the present study reported an insufficient level of relevant training and no noticeable increases in accessibility to mental health professionals to enable the effective management of this mental health aspect of their role as teachers.

The present study extended existing findings by employing a simultaneous mixed-method research design and identifying that the majority of teachers were not aware of or utilise a number of available mental health-related resources. The present study also highlighted teachers'

positive responses to the suggestions offered that may support teachers' mental health role. Finally, this study examined teachers' perceptions qualitatively by asking teachers "*why* do you think that teachers refer a lot more students with externalising problems for mental health services, compared to students with internalising problems?" Based on the teachers' responses, four main categories were identified: "Insufficient mental health-related training"; "Inadequate available and sustained supports"; "More disruptive in the classroom", and "Teacher stress". An "Other" category was also included for the purpose of further discussion. Each qualitative category will be addressed subsequently and where applicable the relevant quantitative results will be incorporated. Figure 10 integrates the two main categories ("Training" and "Supports") and the well-received suggestions (i.e., conducting a case-study assessment and provision of a "well-being facilitator" [WBF]), to present an illustration of the results. Such a representation may facilitate discussion concerning a range of processes aimed at enhancing access to mental health services for adolescents experiencing internalising problems within an educational context.

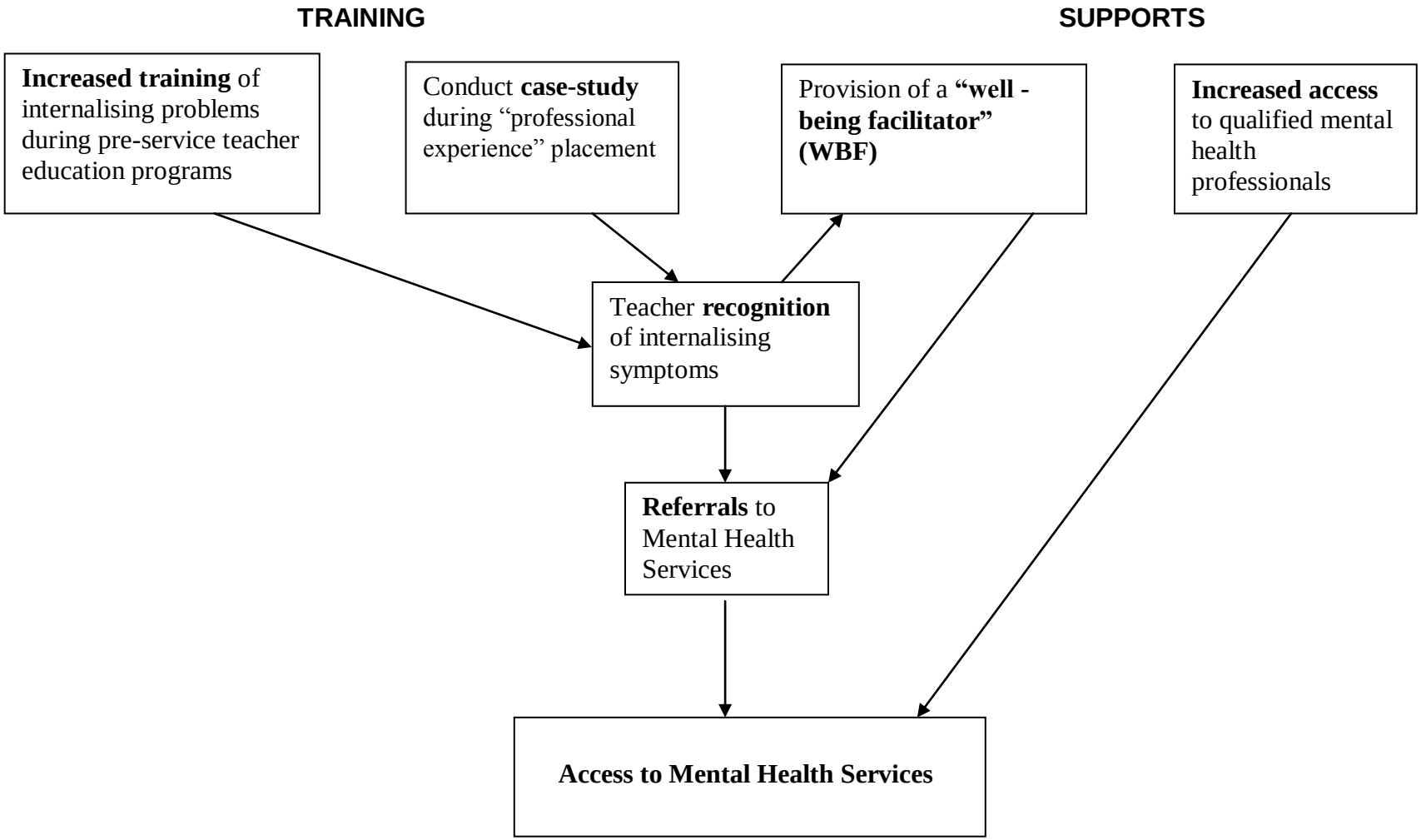

Figure 10 . Processes to enhance access to mental health services for adolescents experiencing internalising problems within an educational context (Papandrea, 2011).

Policy and practice implications

Category 1: Mental health-related training

As the Australian National Curriculum is rolled out this year (2011), it seems timely to reflect on the current tertiary pre-service teacher education programs. The results of the present study support a view that incorporating a clinically and evidence-based "mental health toolkit" package, outlining student behaviours, speech and expressions that are indicative of internalising disorders into the pre-service teacher curriculum, teachers-in-training may be more effectively prepared *prior* to interacting with students. Such knowledge of how to recognise some common symptoms evident in internalising disorders may not only make teachers feel more capable, but also confident, as they would be more aware of what to look out for. Moreover, as young people tend not to self-refer, they are even more reliant on significant adults, such as teachers to identify the symptoms and seek assistance on their behalf (Armbruster & Kadzin, 1994).

The suggestion of incorporating a case-study as an assessment requirement during a supervised Professional Experience Placement within the pre-service university training program was very well accepted by teachers. Perhaps once teachers-in-training gain knowledge of internalising disorders theoretically, a case-study involving an "at-risk" student could be conducted during a Professional Experience placement. This could be carried out under supervision and involve identifying relevant symptoms and behaviours indicative of internalising problems and the possible courses of action leading to the referral process. The MindMatters' (2010) *Practical Steps for an Effective External Referral System* could accompany the case-study assessment requirement. Such a practically-based assessment would enable teachers-in-training

to make use of their theoretical knowledge and apply it to a "real-life" classroom context. Although in-service training is generally time consuming, school psychologists could also use such resources to educate current teachers. This would ensure consistency of procedures between current and future teachers.

Category 2: Supports to assist mental health role

Although resources for teachers to support the mental health role do exist, the results from the present study highlight a large degree of uncertainty toward the *awareness* of such resources, and the specific recommendations which may assist with the referral process. For instance, approximately 80% of teachers were not aware of the Australian national mental health initiatives for secondary schools, MindMatters' *Practical Steps for an Effective External Referral System* (MindMatters, 2010). Similar results were evident regarding teachers' awareness of the three specific MindMatters' recommendations for an effective external referral system. For example, the majority of teachers were either "unsure" or reported "no" whether their school: Created a health care plan, used some community protective factors, or provided an advocacy or advisory role as required.

The present results indicated that a large majority of teachers were also not aware of the MindMatters recommended resource, *An Educator's Guide to Children and Young People's Wellbeing* (MindMatters, 2010). Although it is possible that the teachers in this research may be using other resources rather than the ones investigated in the present study, it appears that currently in South Australia, these specific resources are not being used to their full potential, as few teachers were aware of them. *An Educator's Guide to Children and Young People's*

Wellbeing includes information on a number of behavioural characteristics and other signs which could indicate that students may need assistance for their mental health, including internalising problems. Such a resource could be invaluable to teachers and in particular, teachers-in-training. It is possible, that simply having the resources on the MindMatters website for teachers to access is not adequate. Incorporating both resources into the pre-service curriculum may further enhance teachers' knowledge of internalising problems and the resources available. For example, *An Educator's Guide to Children and Young People's Wellbeing* resource could be utilised during the pre-service teaching program and also during the suggested case-study assessment.

Approximately 85% of teachers reported that there was not an increased access to mental health professionals at their respective schools, supporting findings of Rothi et al. (2008). A number of qualitative comments mirrored this perspective and highlight the irregularity and inconsistency of current mental health services. The Australian Psychological Society (APS, 2010) argue that although "…psychologists are the most qualified professional group to provide early intervention services to students who are experiencing poor psychological health, few students benefit from these services as there is insufficient funding for school-based psychologists". Moreover, the APS has grave concerns about the Australian Government's announcement of a $222 million investment for the National School Chaplaincy Program and believe the funds could be better spent on evidence-based psychological services to meet the serious mental health needs of young people.

"Chaplains and pastoral care workers provide general personal advice, comfort and support to all students and staff, regardless of their religious denomination and irrespective of

their religious beliefs" (Hughes & Sims, 2009) and there is no doubt that such workers provide an invaluable role. However, as the APS highlights, a National School Chaplaincy Association (NSCA) report (Hughes & Sims, 2009) revealed that the majority of issues school chaplains deal with are of a psychological nature, including anxiety and depression, alcohol and drug use, physical and emotional abuse and neglect, suicide and self-harm. The Executive Director of the APS, Professor Littlefield states (2010) "The evidence shows young people need support for complex personal problems and mental health issues; yet chaplains are not professionally qualified to undertake this work and by their own account they very rarely refer students for specialist assistance". Other commentators have voiced similar concerns (Gott, 2003; Kaye, 2011) which suggest that such comments are perhaps comparable to the disparity investigated in the present study: Expectations placed on chaplains or teachers vs. their capacity to put them into practice.

To this end the APS strongly questions whether the amount of funding allocated to the National School Chaplaincy Program could be better spent on designing a more comprehensive and effective system. One suggestion that teachers in the present study responded especially favorably to was the inclusion of a "well-being facilitator" (WBF). In fact 91.4% "strongly agreed" or "agreed" to the suggestion of schools having access to such support. With increased training regarding how to identify internalising symptoms in their students during pre-service training, teachers will be in a better position to identify problems early. A WBF could be a point of contact for a teacher when they become concerned about a student's mental health. The WBF could be responsible for organising a referral to a mental health service, creating a mental health care plan, monitoring the progress of the student, and liaising with the relevant parties involved

(e.g., parents and teachers). Perhaps chaplains and pastoral care workers could be involved as WBF and school psychologists could assist with training and supporting the WBFs. This would enable chaplains to participate in a supportive role and allow psychologists, who are "the most qualified professional group to provide early intervention services to students who are experiencing poor psychological health" (APS, 2010).

Category 3: More disruptive in classrooms

Certain comments from the teachers supported previous quantitative research which has demonstrated that the type and severity of the mental health problem itself is one of the strongest and stable predictors of students being referred to mental health services (Pearcy et al. 1993; Severson et al. 2007). This is a great concern as although externalising symptoms tend to be more disruptive, more easily recognised and thus tend to be perceived as more common, such problems are in fact *less* prevalent than internalising problems However, in the present study, externalising problems being more disruptive in classrooms was only the third most frequent category. This may indicate that it is not just the "squeakiness" of externalising problems that influences more referrals. It is possible that teachers do not feel they have sufficient knowledge to identify and manage the symptoms of internalising problems in their students, yet are becoming more mental health literate and aware of the increasing incidence and impact of such problems. This may be why comments related to *mental health-related training* and *supports to assist mental health role* featured so prominently in the qualitative responses. However, other factors must be considered. For instance, the majority of quantitative questions focused on mental health training and improved access to mental health professionals. Such questions were

presented to teachers prior to the qualitative question and thus may have influenced teachers' responses.

Category 4: Teacher stress

The category of teacher stress to account for why secondary students with externalising problems receive more referrals was a new addition to the literature. It has been suggested that teachers experience more stress than many other professions (Abel & Sewell, 1999), and is a significant contributing factor to burnout and attrition rates. Recent Australian national figures have provided some alarming facts about new teachers and their prospects of remaining in the profession. According to the Joint Principal's Association Survey (2007), 24% of 25,155 new students who entered teacher-training courses in 2006 will have left by 2015 and 25-40% experience burnout in their first 3–5 years. Moreover, half will be needed to fill the positions vacated by teachers with less than 5 years experience, whereas 46% leave after 5 years.

There are a variety of reasons to account for such findings. For instance, when 9,695 Australian teachers were surveyed by the Australian Education Union (AEU, 2010) and asked: "What would most help retain teachers in the profession?" 33% of teachers surveyed selected "reduced workloads", whereas 35% selected "fewer student management issues". According to Mr. Gavrielatos (2011), president of the AEU, "teachers and principals are constantly expected to deal with matters that fall well outside the central work of teaching. Society is changing and there are many more expectations of teachers. All of that contributes significantly to teacher

stress. It seems then that, until the subject is discussed openly teaching will remain a breeding ground for stress and burnout".

Much research has investigated the relationship between perceived work competence and work stress. The results from the present study showed, 85% of teachers do not feel competent to fulfill the expectation of identifying internalising problems in their students. Moreover, teachers reported they are receiving inadequate training, resources and access to relevant professionals. It is possible, that enhanced pre-service training may increase perceived work confidence and thus competence, and with additional supports established, teachers' stress levels may reduce. This may lead to lower attrition and drop-out rates. As Liljequist and Renk (2007) found, teachers' personal teaching efficacy contributed significantly to the prediction of how bothersome internalising problems were perceived. It is possible that increased knowledge could be a protective factor for teachers and coupled with sufficient resources and enhanced access to qualified mental health professionals, both teachers' and students' socio-emotional well-being would be fostered.

Although the "fewer student management issues" discussed above were not defined, it may be beneficial for future research to examine the extent that student mental health or management issues in the classroom generate stress for teachers, and the relationship between the level of competence managing such issues and level of stress. Considering the taxpayer-costs associated with teacher burn-out, stress-related absenteeism, mental stress claims, and high numbers of teachers leaving the profession, one may consider that it may be a more financially sound option in the long-term to invest in delivering pre-service programs to educate teachers

with the necessary knowledge and practical skills to identify at-risk students and again, additional mental health professionals to treat students. A poignant comment from a teacher in the present study not only highlights the impact of the perceived lack of knowledge or competence of the teacher, but the devastating impact of the tragic loss of the young student:

"A year 12 student of a colleague of mine committed suicide last year. He blames himself for not recognising the signs and doing something about it. He is now depressed and has left the profession" (M, 46).

"Other" important issues

There were a number of teachers' comments which revealed additional issues which warrant further discussion. For example, issues such as teacher attitudes towards mental health (i.e., "mental health is a family matter") and parent-related factors (e.g., parents unsupportive of referrals). Perhaps these concerns could be explored in greater detail in future research. The issues associated with mental health in rural areas were particularly concerning, especially considering the lack of mental health resources and research addressing the mental health of adolescents from rural areas in South Australia (Judd, 2001; Papandrea, Winefield, & Livingstone, 2010b). Similarly to comparable research which has been inconsistent regarding the effect of student and teacher related variables, such as age, gender, and concern for academic progress, and teacher referral behaviour (Jackson, & King, 2004; Lane, Givner, Pierson, 2004; Layne, Bernstein, & March, 2006; Pearcy et al. 1993; Severson et al. 2007), the results of the present study concerning teacher-related variables e.g., the number of years spent teaching; gender; or age were not significantly associated with teacher referral-related attitudes and

behaviours. This suggests that further study investigating this phenomenon is required to establish any possible relationships.

Strengths and limitations of current study

There are a number of additional limitations of the present study worth noting. First, the participation rate of teachers was not provided. However, on examination of the profiles of the teachers, there is no reason to consider this was a biased sample. Further, South Australia is one state in Australia and although a National Curriculum is presently in progress, a national pre-service teacher education university curriculum is not. Thus, the results from this study cannot be generalised to all Australian teachers. It must be noted that the findings from this study relied on teacher self-reports and cross-sectional data. Additionally, unlike interview-based studies, the qualitative portion of the present research was conducted online which could have influenced the length and depth of the participant responses. Further, as previously mentioned, the presentation order of the questions may have influenced teachers' qualitative responses. However, the mixed-methods approach was a strength as it provided the research with the scope to produce new insights and to validate findings through the use of several sources of information (Plano Clark et al. 2008).

Conclusions

Few people would argue, that one of the most challenging careers today is teaching. Not only do school teachers operate as educators, but also deal with greater diversity of ability in the classroom due to mainstreaming of students with disabilities, continuous challenges to master

new technology, and increased emphasis on academic standard performance and testing accountability measures. In Australia at present, teachers are also faced with increased pressures associated with the roll-out of the National Curriculum, while many are simultaneously lobbying for increased wages and improved working conditions.

Due to the apparent evolution concerning the "social-emotional wellbeing role" of education, teachers are also expected to identify the symptoms of internalising problems in their students and refer them for appropriate assistance. However, as highlighted in the present study, the majority of teachers do not feel capable to put this expectation into practice. Schools do provide an opportunistic environment to facilitate the early intervention for our young people experiencing internalising problems. Providing teachers-in-training with adequate pre-service preparation training to identify internalising symptoms in their students, and access to sustainable and supportive resources are only the beginning. Governments need to show a serious commitment to invest in enough appropriately qualified mental health professionals to provide evidence-based treatment options to students experiencing internalising problems. As without such commitment, this apparent educational evolution may be an ambitious and perhaps idealistic philosophy, and a wasted opportunity to help "end the inequality".

CHAPTER FIVE: STUDY TWO --- PUBLISHED

Papandrea, K., Winefield, H., & Livingstone, A. (2010). Oiling a neglected wheel: An investigation of adolescent internalising problems in rural South Australia. *Rural and Remote Health, 10*, 1524. Available from http://www.rrh.org.au

Statement of Contributions:

Ms Kate Papandrea (*Candidate*)

I was responsible for the conception and primary authorship of the paper. I conducted the literature searches, analysed and interpreted the data, wrote the manuscript, and acted as the corresponding author.

Signed: Kate Papandrea …….Date……

Professor Helen Winefield and Mr Andrew Livingstone (*Co-authors*)

We were the supervisors (advisors) of the research program. The realisation of the idea, collection of data, and analysis of data were the work of Ms. Papandrea. Ms. Papandrea was responsible for writing this paper; our role was to comment on drafts, make suggestions on the presentation of material in the paper, and provide editorial input. We hereby give our permission for this paper to be incorporated in Ms. Papandrea's submission for the degree of Doctor of Philosophy from the University of Adelaide.

Signed: Helen Winefield …….....……. Date……

Signed: Andrew Livingstone ..... ……. Date……

Abstract

Despite a paucity of research, adolescents living in rural areas appear to have a heightened risk for developing a mental health problem compared with their urban counterparts. The main objectives of this study were to contribute to building an evidence base of prevalence rates and determinants of internalising problems of adolescents in rural South Australia. A multidimensional Process Model was used as the theoretical framework to enable an investigation of the various determinants from individual, family and community domains; specifically, the contribution of self-esteem, parental acceptance and elements of social capital at an individual level (i.e., participation in the local community and proactivity in a social context represented structural social capital, and feelings of trust and safety, and neighbourhood connections represented cognitive social capital). In this cross-sectional prospective study, a total of 388 Year 9 (2nd year of secondary school) students (208 females, 180 males) aged 13–15 years (mean age = 14.2 years) participated from 11 high schools within the Country Health South Australian area. These adolescents completed a battery of self-reported measures online at school. The results demonstrated that the adolescents experienced a "normal" level of self-esteem and a "moderate" level of perceived parental acceptance. The level of social capital was considered "low" and the adolescents experienced a "moderate" level of internalising symptoms. Based on the mean score of the Revised Child Anxiety & Depression Scales (RCADS), 25% of the adolescents experienced internalising symptoms ranging in severity from mild to severe, with no significant differences between males and females. Approximately 13% were considered above the clinical threshold, with 4% reporting experiencing severe symptoms. Relationships between all measures were investigated using Pearson product-moment correlations coefficients and associations between self-esteem, parental acceptance, social capital, and internalising

problems were assessed using multivariate linear regressions. Both parental acceptance and social capital were found to predict self-esteem. Parental acceptance was also significantly associated with social capital. The linear contribution of self-esteem, parental acceptance and social capital was significantly related to internalising problems. Approximately 33% of the variance in internalising problems could be accounted for by the combination of the three predictors; however, self-esteem and parental acceptance were the significant contributors to the prediction of internalising problems. Social capital was not a significant predictor of internalising problems. The present study only begins to contribute to the lack of existing data on the mental health status of adolescents from rural areas of South Australia. Greater research is needed to enhance understanding of this overlooked population and also assist in providing evidence-based guidelines in establishing priorities for newly appointed Federally funded youth services in rural Australia. In light of the concerning rates of internalising problems demonstrated by the present study, coupled with the fact that young people from rural areas were not considered in previous National Mental Health Surveys, it seems timely to highlight the importance of including as many Australians as possible from rural and remote areas, in the approaching, subsequent National survey. This will provide a more accurate evidence-based representation of Australia's adolescent population to inform policy and facilitate the implementation of relevant strategies.

Research efforts investigating the mental health of Australians living in rural areas, in particular rural adolescents, have been scant (Aisbett, Boyd, Francis, Newnham, & Newnham, 2007; Boyd et al. 2006; Boyd et al. 2008; Fraser et al. 2002; Judd & Humphreys, 2001). An overview of rural health research in Australia in the period 1990–1999 revealed only a small number of published articles on adolescent mental health (Patterson, 2008) despite the fact that, as Kilkkinen et al. (2007) highlighted, children and adolescents represent a higher proportion of the population in rural and remote areas compared with urban areas, and research needs to target these priority groups. The Australian National Health Policy also supported the need for greater research attention on the mental health of rural and remote Australians (Hourihan & Kelly, 2006), and the rural health policy framework, "Healthy Horizons", recognises "mental health, suicide and attempted suicide as among the highest priorities for action in rural health" (Australian National Rural Health Alliance, 2003).

This paucity of research investigating rural adolescent mental health in Australia in particular is of concern for a number of reasons:

- It has been empirically established that, in contrast to the overall health gains of world populations in recent decades, the burden of mental illness is mounting (World Health Report 2001).

- Mental and behavioural health disorders are common, being present at any point in time in approximately 10% of the population, and affecting more than 25% of all people at some time during their lives (World Health Report 2001).

- In 2002, depression accounted for 4.5% of the worldwide total burden of disease. It is also responsible for the greatest proportion of burden attributable to non-fatal health outcomes, accounting for almost 12% of total years lived with disability worldwide (World Health Report, 2001).

- It is estimated that by 2020, depression will be one of the leading causes of disease along with HIV/AIDS and heart disease (Mathers & Loncar, 2006).

Moreover, it has been reported that adolescents living in rural areas *appear* to be at a heightened risk for developing a mental health problem, compared with their urban counterparts. This is apparently due to a number of psychosocial factors:

- Stressful life events, perceived control of life events (Eckert et al. 2006)
- Lack of access to mental health services
- The effect of the economic downturn on rural areas, and severe drought in a number of geographical regions.

In addition, the suicide rates are consistently higher in rural towns than in metropolitan areas; for example, the suicide rate of males aged 15 to 24 years in rural towns has been reported as approximately twice that of their city counterparts (Australian Institute of Health and Welfare, 2000). For young Indigenous males, the suicide rate is up to 40% higher than the national Australian average (Australian National Rural Health Alliance, 2009).

In response to such issues, The Australian Rural Mental Health Study (Kelly et al. 2010) embarked on building an evidence base for the adult rural population. "Proxy" (i.e., alternative) measures of child health and wellbeing have also been included in this study. The establishment of *headspace* (Hodges, O'Brien, & McGorry, 2007), a federally funded youth mental health foundation service, in a number of rural areas of Australia has included two centres in South Australia. However, Boyd (2008) suggests that while we are facing a period of mental health reform with such strategies:

"……although assurances have been made that the needs of rural youth will be considered as part of a national strategy to transform youth mental health services, rural communities remain without vision or direction as to how this might be achieved".

One possible way to achieve direction in order to address the needs of adolescents from rural communities may be to enhance the evidence base of this population. This may be achieved by investigating not only prevalence rates of adolescent mental health problems, but also by examining the individual, family (Kilkkinen et al. 2007), and community factors, or the determinants (Allan, 2010), of such problems. For it has been suggested that many large population-based studies have failed to include an assessment of such important factors associated with mental health problems (Australian Institute of Health & Welfare; AIHW, 2008).

A number of studies have reported that family processes, in particular the nature and quality of adolescents' relationships with their parents, contribute to the onset and maintenance of a range of negative developmental outcomes (Ambert, 1992; Kerr, & Stattin, 2000). The nature of

the interpersonal interactions children experience with their parents may influence the level of perceived acceptance from their parents, for instance, which may impact on a young person's developing sense of self and identity. If responses during interactions from significant others are disregarded and/or not recognised as important, a negative self-view is more likely, which may increase the risk for developing an internalising problem, such as depression or anxiety.

However, the challenge is to integrate variables of interest from multiple domains (i.e., individual, family, and community) into a theoretical framework capable of structuring and exploring the possible processes that influence specific developmental outcomes. Employing a theoretically-derived framework for the basis of empirical research is essential, as the data generated is evidence-based and so more likely to effectively inform policy and, hence, interventions and/or preventative efforts.

The framework that formed the basis of this study is a Process Model (Papandrea, 2005) which consists of a number of theoretically-derived variables. A multidimensional blueprint such as this enables a dynamic investigation of Individual Processes (e.g., self-esteem; emotional security), Family Processes (e.g., parenting practices and styles); and inherent predispositions, such as gender. The potential value of such a framework is that it can address negative or positive outcomes, and examine risk or protective factors, at the child/adolescent and family levels. Each variable of interest may be assessed independently, or the interaction of numerous factors, moderators and/or mediators, may be examined.

The investigation into the influence of community-related factors, teacher and peer relationships on individual and family processes and developmental outcomes are also essential. Hence, for the purposes of the current study, a Community Processes dimension consisting of a number of core elements of social capital was added to the Process Model. Social capital consists of a small set of central features, including reciprocity, trust, and cooperation among members of a social network that aims to achieve common goals (Putnam, 1995). The concept can also be broken down into "structural" and "cognitive" social capital. Structural components or "what we do" refer to roles, rules, behaviours, networks and institutions. Cognitive social capital or "what we feel" describes the values, attitudes and beliefs that produce cooperative behaviour (Harpham, 2005). Although reviews investigating potential links between a range of social capital dimensions and mental health outcomes have revealed somewhat inconsistent findings (Almedom, 2005; De Silva et al. 2005; McKenzie, Whitley & Weich, 2003), social capital has been shown to play a role in the incidence and prevalence of mental health outcomes (Aneshensel & Sucoff, 1996; Lundborg, 2005).

The following variables from the Process Model were selected for use in this study (Figure 11):

1. Individual Process: Self-esteem.
2. Family Process: Parental acceptance.
3. Community Process: The elements of social capital at an individual level of participation in the local community and proactivity in a social context represented structural social

capital; whereas, feelings of trust and safety, and neighbourhood connections represented cognitive social capital.

Note: Only unidirectional relationships are investigated here, hence the inclusion of unidirectional arrows in Figure 11. However bidirectional associations are acknowledged and addressed in the Discussion.

The outcome focus was internalising problems, specifically, anxiety and depressive symptoms. Internalising problems were selected as the focus of the study primarily because by 2020, depression is estimated to be one of the leading causes of disease (World Health Report, 2001) and Australia's most recent National Survey of Mental Health and Wellbeing (2007). Henderson, Andrews, & Hall (2009) revealed that anxiety disorders were the most common mental health problem reported in adults, considerably more prevalent than affective disorders, such as depression, affecting 14% (1/7) and 6% (1/16) of adults, respectively; however, current rates for adolescent populations are unknown. Moreover, important groups in the Australian population (i.e., rural, remote, and Indigenous) were not included the 1997 National Survey (Beumont, 2002; Boyd et al. 2008; Rajkumar & Hoolahan, 2004). Consequently, current prevalence rates of adolescent mental health problems from rural Australia, in particular internalising disorders such as anxiety disorders, are not known.

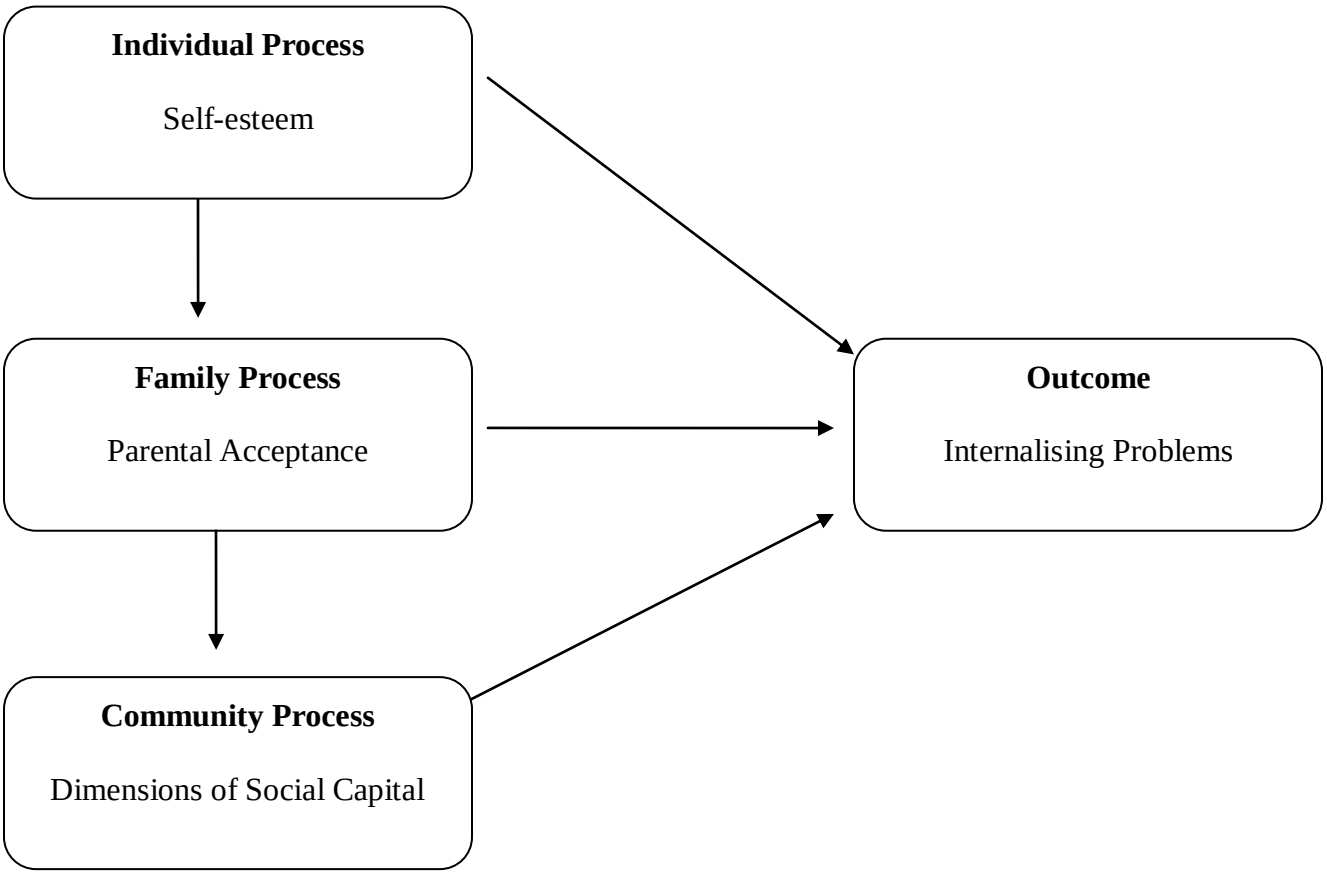

Figure 11. Selected variables to be investigated in the present study (self-esteem, parental acceptance, dimensions of social capital, and internalising problems).

Method

Participants

In order to conduct research in government high schools, ethics approval was obtained from the South Australian Department of Education and Children's Services (DECS). A total of 28 non-government and government high schools were randomly selected within the Country Health South Australian area by each of the 7 existing health regions (Eyre Hills Mallee Southern, Mid North, Northern & Far Western, Riverland, South East, and Wakefield).

Each school was individually contacted and letters explaining the study were sent to the Heads (Principals) of each school. Eleven high schools agreed to participate, and from these a total of 560 Year Nine (second year of secondary school) students were invited to participate in the study. A total of 388 adolescents (208 females, 180 males) aged 13–15 years (mean age = 14.2 years) participated, a 69.3% response rate.

Procedure

Information sheets and consent forms were provided to students and their parents and distributed by teachers. A list of South Australian organisations were also included to assist any parents who had possible concerns regarding their adolescent's behaviour, health, emotional wellbeing or issues regarding parenting. Students were also provided with a similar list. All participants were invited to enter a raffle for one of two $25 department store shopping vouchers. Once consent had been granted, students completed an online questionnaire at school under the

supervision of a teacher, which took approximately 50 min to complete.

Measures

Self-esteem

The Rosenberg Self-Esteem Scale (RSES) was used to assess self-esteem (Rosenberg, 1989). The RSES is a 10-item self-report uni-dimensional measure of global self-esteem, consisting of statements related to overall feelings of self-worth or self-acceptance. Scores range from 0 to 30, with higher scores indicating higher self-esteem. Scores between 15 and 25 are considered to be within normal range; scores below 15 suggest low self-esteem. Example questions include: “I feel that I am a person of worth” and “I feel at least on an equal plane with others”. In this study, the internal consistency alpha (α) = 0.86.

Parental acceptance

Parental acceptance was assessed using the Acceptance subscale from the revised Child Report of Parent Behaviour Inventory (CRPBI; Schaefer, 1965). This revised measure contains ten items designed to assess the adolescents’ perceptions of the extent to which they feel accepted by their parent/s. Adolescents responded on a 3 point Likert-type scale from 1 (= not like her/him) to 3 (= a lot like her/him) as to how well items described their parent/s. Example questions include: “My Mother/Father is a person who ...makes me feel better after talking over my worries with her/him” and “...tells me how much s/he loves me”. Higher scores indicated

greater levels of parental acceptance as perceived by the adolescent. In this study $\alpha = .89$.

Social capital

A total of four measurable components of social capital were assessed via 12 questions selected from the Social Capital Questionnaire (Bullen & Onyx, 2000). A total of 6 questions each representing structural and cognitive social capital were included.

Structural social capital

Participation in the local community - Example questions included: "Have you attended a local community event in the past 6 months (church fete, school concert)?" and "are you an active member of a local organisation or club (sport, craft, social club)?".

Proactivity in a social context - Example questions included: "Have you ever picked up other people's rubbish in a public place?" and "if you need information to make a life decision, do you know where to find that information?"

Cognitive social capital

Feelings of trust and safety - Example questions included: "If someone's car breaks down outside your home, do you invite them into your home to use your phone?" and "does your local community feel like home?"

Neighbourhood connection - Example questions included: "If you were caring for a child and needed to go out for a while, would you ask a neighbour for help?" and "when you go shopping in your local area are you likely to run into friends and acquaintances?"

Responses ranged from: "Not at all/Not much" (= 1) to "Yes, definitely/frequently" (= 4). Total structural, cognitive and combined scores were calculated. Possible combined total scores ranged from 12 to 48. Both structural and cognitive total scores each ranged from 6 to 24. Higher scores indicated greater social capital as reported by the adolescents. In this study, $\alpha = 0.77$.

Internalising problems

Internalising problems were measured with the Revised Child Anxiety & Depression Scales (RCADS; Chorpita et al. 2000). The RCADS is a 47 item self-report questionnaire, with 5 scales corresponding to separation anxiety disorder (SAD), social phobia (SP), generalised anxiety disorder (GAD), panic disorder (PD), obsessive compulsive disorder (OCD), and 10 items for major depressive disorder (MDD). The RCADS has been shown to have clinical and research utility for young Australians up to the age of 19 years (de Ross, Gullone, & Chorpita, 2002). Items were scored on a scale from 0 to 3 and a total internalising score was calculated based on the total score of the RCADS. Total possible scores ranged from 0 to 141 with higher scores indicating more severe levels of anxiety and depressive symptoms. Respondents were also categorised into one of 3 symptom severity categories based on their total RCADS score: "Mild": 0 – 46; "moderate": 47 – 94; and "severe": 95 – 141. Adolescents scoring within the "moderate" symptom category indicate symptoms above the clinical threshold (Chorpita et al.

2000). In this study α = 0.87.

Results

Prior to analyses, variables were examined for accuracy of data entry, missing values and fit between the distributions and the evaluation of assumptions of multivariate analysis. All assumptions were considered to be met. Statistical analyses were completed using PASW Statistics 17.0 (SPSS Corporation; Chicago, IL, USA: http://www.spss.com/). Relationships between all measures were investigated using Pearson product-moment correlations coefficients and associations between self-esteem, parental acceptance, social capital, and internalising problems were assessed using multivariate linear regressions.

As is shown in Table 10, the mean level of self-esteem (*M* = 19.89) was considered in the "normal" range. A mean "moderate" level of perceived acceptance (*M* = 22.56) by their parents was reported, and the total mean level of social capital (*M* = 21.47) was considered "low" (a score of 22 and over was considered in the "moderate" range). Based on the total mean score of the RCADS, the adolescents experienced a "moderate" level of internalising symptoms (*M* = 47.09). No significant differences were found for males (*M* = 46.02, SD = 9.0) and females (*M* = 48.17. SD =11.2, *t* [386] = -.74, *p* = .42), two-tailed.

Table 10

Means (Standard Deviations) of all Measures

Measure			
	Male	Female	Total
Self-esteem	18.34 (4.4)	21.44 (5.2)	19.89 (9.6)
Parental acceptance	21.51 (9.6)	23.62 (2.2)	22.56 (5.9)
Social capital	20.33 (2.4)	22.61 (3.3)	21.47 (5.8)
Internalising problems	46.02 (9.0)	48.17 (11.2)	47.09 (10.12)

Note: N = 388.

Based on the total mean score of the RCADS, 25% of adolescents experienced anxious and/or depressive symptoms ranging in severity from mild to severe (see Table 11). Approximately 4% of adolescents reported experiencing severe symptoms.

Table 11

Total Prevalence Rates (%) of Severity of Internalising Symptoms

Internalising symptom severity	*n* (%)
No symptoms	291 (75)
Mild	47 (12.11)
Moderate	35 (9.02)
Severe	15 (3.87)
Total	388 (100)

Note: Mild level: 0 – 46; moderate: 47 – 94; severe: 95 – 141.

The relationship between parental acceptance and self-esteem was moderate and positive (see Table 12), indicating that adolescents who reported a higher level of parental acceptance also reported a greater level of self-esteem. A moderate, negative relationship was found between parental acceptance and internalising symptoms, indicating that adolescents who reported that they felt accepted by their parents experienced lower symptoms of anxiety and depression. A moderate and negative relationship was found between self-esteem and the total internalising score, signifying that the greater level of self-esteem, the less internalising difficulties experienced by the adolescents.

The relationship between social capital and self-esteem were smaller, yet still significant and positive, indicating that adolescents who reported a greater sense of social capital within their communities, experienced higher self esteem.

Table 12

Correlations of Measures

	1	2	3	4
1 Self-esteem	-	.40**	- .55**	.22
2 Parental Acceptance	-	-	-. 33**	.17
3 Internalising problems	-	-	-	- .07
4 Total Social Capital	-	-	-	-

Note: *N* = 388; correlation is significant at *p < .05 (1 – tailed); ** p < .01 (1 – tailed).

The relationship between parental acceptance and social capital was very small and negative, yet significant, indicating that adolescents who perceived their parents to accept them reported higher social capital. The relationship between social capital and internalising problems was not significant.

Results from a linear regression demonstrated that parental acceptance was significantly related to greater self esteem, F (1, 386), = 70.47, β = .393, p = .000. Approximately 15% of the variance in self-esteem was explained by its relationship with parental acceptance (R^2 = .15). Parental acceptance also predicted social capital, F (1, 386), = 11.68, β = .17, p = .001. Approximately 4% of the variance in self-esteem was explained by its relationship with social capital (R^2 = .04).

Results from a linear regression demonstrated that social capital was significantly related to greater self esteem, F (1, 386), = 16.80, β = .22, p = .000. Approximately 4.2% of the variance in self-esteem was explained by its relationship with social capital (R^2 = .04).

A simultaneous regression analysis was conducted to evaluate how much of the variance in internalising problems could be explained by the level of self-esteem, parental acceptance and social capital. The linear contribution of the three predictors was significantly related to internalising problems, F (3, 384) = 58.33, p = .000. Approximately 33% of the variance in internalising problems could be accounted for by the combination of predictors, R^2 = .33.

Self-esteem and parental acceptance were the significant contributors to the prediction of internalising problems in the adolescent sample (β = .52, p = .000). Social capital was not a significant predictor of internalising problems.

Discussion

The present study contributes a small step towards building an evidence base for the prevalence rates and determinants of internalising problems of adolescents from rural South Australia. Moreover, employing a multidimensional theoretical framework enables an investigation of the various determinants of mental health problems from individual, family and community domains.

Implications

Although the results from the present study represent adolescents from South Australia only, a number of implications are worth noting. For instance, based on the total mean score of the RCADS, the majority of the adolescents experienced a "moderate" level of internalising symptoms. Further, approximately 13% of adolescents were considered to be above the clinical threshold, with 4% reporting experiencing severe symptoms. Although it is difficult to compare these findings with national figures (because young people were not included in the 2007 National Study, and anxiety disorders and young people from rural areas were not included in the 1997 National Study) such results must be of concern when examining comparable normative data. For instance, the results of the total internalising scores of the present study were higher for both Australian boys and girls than reported in de Ross, Gullone and Chorpita's (2002) investigation. Higher standard deviations were also evident in the present study, indicating greater variability. It is also important to note, that the populations of this study did not distinguish between rural and urban groups, thus preventing comparisons.

As a consecutive National Mental Health Survey is approaching, it is timely to highlight the importance of including as many Australians as possible from rural and remote areas, and in particular young people. This will produce a more accurate evidence-based representation of Australia's adolescent population, which will more effectively inform policy and ultimately facilitate implementation of relevant strategies.

Because this study was cross-sectional, causality cannot be demonstrated. Nonetheless, the findings demonstrate the importance of parental acceptance and may have implications for preventative and intervention programs for adolescents and their families. Not only did higher levels of parental acceptance predict lower levels of internalising problems, but they also predicted higher levels of self-esteem. Such findings may be applied to educate parents regarding the benefits of parental acceptance. To begin with, it is important to inform parents that "acceptance" does not equate to agreeing with or accepting all of their adolescent's behaviours, but more to do with recognising, validating and demonstrating understanding of their experiences, thoughts and feelings, even during times of conflict.

Such an approach shows implicit and explicit interest and concern in the adolescent's perspective (which is especially important during times of conflict or disagreement), without creating a possible impression of disappointment. Thus, an adolescent is likely to internalise this acceptance, leading to a positive inner sense of self. This is particularly necessary when faced with the challenges inherent in the developmental years when an increase in autonomous functioning requires belief in one's self-worth.

The results of this study showed that higher levels of self-esteem decreased the probability of experiencing internalising symptoms. Teaching parents relevant strategies to understand and display acceptance may not only help to strengthen the relationship with their adolescent, but further enhance their self-esteem, which may help to prevent or delay possible anxious or depressive symptoms from emerging. It is important to emphasise, however, that young people with internalising problems may hold a negative view of themselves, their families and the world around them. Consequently, these young people are more likely to report lower self-esteem, less acceptance from their parents and be less involved in their community.

Limitations and suggestions

There are a number of limitations worth noting. First and foremost, South Australia is merely one region in Australia and no rural district in Australia is homogenous (Judd, 2001; Fraser et al. 2002). Heterogeneity within rural settings must be recognised as differences do exist. For instance, different rates of suicide have been acknowledged according to the degree of geographical remoteness (Australian Institute of Health & Welfare: AIHW, 2000). Further, the findings from this study relied on adolescent self-reports and cross-sectional data. Thus, longitudinal data are required to establish causal relationships. Moreover, given the overlap of the predictor variables, the potential for multicollinearity to threaten the stability of the regression analyses must be acknowledged.

In the present study, social capital did not predict lower internalising problems. Perhaps such a result reflects the low social capital scores reported by the adolescents, rather than not being beneficial to mental health. It would be of interest to examine the outcomes of studies which report higher levels of social capital to explore the effects on mental health outcomes. However, social capital is such a multifaceted concept that it is not likely to be represented by any single measure (Berry & Rickwood, 2000).

Exploring potential comparisons between the prevalence rates and determinants of mental health problems of rural and urban adolescents (Judd & Humphreys, 2001; Quine, Booth, Kang, Usherwood, & Alperstein, 2003) is also important. This is especially noteworthy when considering that potential differences between rural and urban populations may have been overlooked with the omission of rural populations included in national surveys (Judd & Humphreys, 2001; Beumont 2002; Rajkumar, & Hoolahan, 2004).

Additionally, it may be useful to examine the role of other factors included in the Process Model (Papandrea, 2005) in the developmental outcomes of rural adolescents. For example, emotion regulation, parental autonomy granting, and/or a range of health indicators may be explored. By adopting a strengths-based approach, the determinants of mental health may also be investigated. This may include examining protective factors that could cushion the effects of adversity specifically to conditions which rural groups are more likely to encounter (e.g., the impact of drought, see Dean & Stain, 2010).

Finally, progressing from investigating *what* factors contribute to the onset of a particular developmental outcome, to examining *how* and *why*, or the underlying processes involved would be worthwhile. For instance, examining the interplay between various theoretically-derived individual processes as mediators of the relationships between specific family and/or community process factors. For instance, the potential role emotional security plays in the relationship between parental punitiveness and GAD; whether other aspects of social capital (e.g., social trust) account for the relationship between self-efficacy and PD; or the impact that self-control plays in the relationship between perceived teacher or peer support and depressive symptoms.

Conclusions

It has been suggested that in many rural and remote communities in Australia, mental health issues may be something of a "sleeping giant" (Judd, 2001). The challenge facing health professionals is to provide practical and evidence-based programs designed to address and/or strengthen a range of individual, family, and community factors - before the "giant" begins to stir. Although the pathways to internalising problems are complex, it is anticipated that the knowledge gained from the current study may assist in preventing the development of mental health problems in rural youth, where local mental health services are often limited or unavailable.

CHAPTER SIX: STUDY THREE --- PAPER IN PREPARATION FOR PUBLICATION

Papandrea, K., & Winefield, H. (2011). The relationship between typical family origins, Early Maladaptive Schemas and internalising problems in adolescents: An empirical approach to a clinically-based conceptualisation. *In preparation for publication.*

Statement of Contributions:

Ms Kate Papandrea (Candidate)

I was responsible for the conception and primary authorship of the paper. I conducted the literature searches, analysed and interpreted the data, wrote the manuscript, and acted as the corresponding author.

Signed: Kate Papandrea …….Date……

Professor Helen Winefield (Co-author)

I was the principal supervisor (advisor) of the research program. The realisation of the idea, collection of data, and analysis of data were the work of Ms. Papandrea. Ms. Papandrea was responsible for writing this paper; my role was to comment on drafts, make suggestions on the presentation of material in the paper, and provide editorial input. I hereby give my permission for this paper to be incorporated in Ms. Papandrea's submission for the degree of Doctor of Philosophy from the University of Adelaide.

Signed: Helen Winefield …….Date……..

Abstract

The present study applied four empirically-derived parenting constructs (parental psychological control, parental acceptance, parental autonomy granting, and parental overprotection) to Young's typical family origin (TFO) conceptualisations. The aim was to examine cross-sectionally the relationships between 11 of the hypothesised corresponding EMS and parenting constructs and the impact on depression and anxiety symptoms. A total of 904 adolescents (13 to 15 years) prospectively reported on their perceptions of their parents, EMS and internalising problems via online self-report methodology. Results demonstrated that out of the 11 EMS, eight supported Young's TFO. Multivariate analyses also examined the relationships between the parenting constructs and EMS, as well as specificity of individual EMS. Consistent with content-specificity hypothesis, depression was associated with EMS themes of worthlessness and failure, whereas anxiety was associated with EMS themes of vulnerability to harm or illness. However, depression and anxiety also shared certain EMS. The results of the study highlight the importance of the addition of a parent-level component to intervention and prevention programs for young people experiencing internalising problems where applicable.

The alarming prevelance and distressing impact of internalising problems, such as anxiety and depresison in adolescents are both clinically and empircially well established. Despite enhanced prevention and intervention efforts, particularly within educational environments over the last decade, the global burden of internalising problems is mounting. For instance, as Farrell and Barrett (2007) state, in Australia, approximatley 75% of young people who experience such problems will not receive treatment and of the minority who do, many will terminate prematurely, fail to respond, or experience recurrent difficulties despite treatment. Thus, aiming to improve the evidence base to examine *why* mental health programs are not effective is a challenging, yet essential undertaking.

A number of scholars have examined such issues, for instance Spence and Shortt's (2007) and Merry's (2007) review addressing the efficacy and effectiveness of universal school-based interventions designed to prevent the development of depression in children and adolescents concluded that the majority of short-term school-based interventions in Australia are not efficacious or effective. A number of factors have been put forward to account for this view including that the delivery of the interventions was too brief and that school personnel did not have sufficient training and supervision to ensure high levels of program fidelity (Spence & Shortt, 2007). Merry (2007) states that despite early promise, there is modest evidence to demonstrate that prevention of depression is a practical possibility at this stage.

Giesen et al. (2007) provides guidance to service providers for selecting programs designed to reduce mental health problems. Giesen et al. (2007) not only emphasises the importance of developing and/or selecting programs that are empirically supported, but more

importantly stresses that the key feature of effective programs is the use of empirically-based frameworks. This requires programs to have a conceptual framework built on a solid empirical base that describes the relationship between risk and/or protective factors, and the relevant mental health problem being addressed.

In South Australia, the majority of intervention and prevention programs designed to reduce and/or prevent internalising problems in young people employ a conceptual framework consisting of multi-level risk and/or protective factors. Such an approach reflects the complexity of the myriad of factors in which the literature has reported an empirical association with negative developmental outcomes. For instance, standard conceptual frameworks primarily include individual-level factors, such as problem solving and social skills, and community/environment-level factors such as, relationships with teachers and schools.

However, a noticeable gap in the conceptual frameworks of interventions designed to prevent or reduce internalising problems in South Australia (e.g., the Aussie Optimism Program, *beyondblue*, Solving for Life) is the absence of risk and/or protective factors at the *family level*, i.e., parent-child/adolescent relationship factors. Clearly, the addition of yet another component to an existing framework presents challenges. However, it may be argued that the mere absence of a family-level component within such frameworks prevents the acknowledgement of perhaps the most influential domain of a young person's psychological development i.e., the relationship with their caregiver/s. When considering the significant connection recognised between parent-child/adolescent relations and mental health problems, failing to include this component in a framework may contribute to the existing ineffective outcomes experienced by such

interventions. It may also contribute to explaining *why* young people terminate treatment prematurely; fail to respond to treatment and/or experience recurrent difficulties despite treatment – because in many cases, the essential core of the root of the problem is not being addressed.

To illustrate, the individual-level protective factors comprised in the *beyondblue* universal depression school-based framework include a "positive sense of the self, the world, control, belonging, future, and purpose". However, it may be challenging attempting to instil or teach such individual-level factors when the young person inherently accepts something entirely contradictory regarding him/herself due to negative experiences within the family environment. For example, a young person exposed to a lower level of parental acceptance might develop an inner working model which promotes a hostile view of the self, the world and others; an overprotective parent may portray to a young person that s/he has little control over her/his world; whereas a young person who experiences their parents "love" as conditionally-based are more likely to develop a view of themselves as unworthy and less deserving of love.

However, a conceptual framework built on a solid empirical base that describes the relationship between multiple parental risk-factors and internalising problems is currently lacking (Chorpita et al. 1996). Empirically examining the impact of parental-level risk-factors on adolescent-level factors within the same study may also be worthwhile. As Merry (2007) contends, due to the considerable potential cost-savings associated with intervention and prevention programs, it is imperative that the search continues for effective interventions for young people. Thus, there is a compelling need for further research in this area.

Family – level risk-factors

A rich developmental and psychopathology literature exists demonstrating the impact of the parent-child relationship on the development of internalising problems. Through the exploration into the unique contributions of empirically identified parenting constructs that have often been aggregated in previous work, a more comprehensive understanding is beginning to emerge. The two most widely researched and implicated parenting constructs concerning internalising problems are "support" and "control" (Darling & Steinberg, 1993). Although some inconsistencies, methodological and measurement issues have been acknowledged (McLeod, Wood & Weisz, 2007; Wood, McLeod, Sigman, Hwang, & Chu, 2003) in general, lower parental support has been more strongly associated with depression (Bean, Barber & Crane, 2006), whereas excessive parental control has been more specifically related to anxiety (Coplan, 2008; McLeod 2007; Hudson & Rapee 2001; Parker, 1983; Rapee, 1997; van der Bruggen, Stams & Bogels, 2008).

The parental support construct includes lower levels of warmth, nurturance, acceptance, and affection or higher levels of rejection towards the child. Due to the multidimensional nature of parental control, Schaefer (1965) and Barber (1996) have underscored the importance of distinguishing between the *types* of parental control. The diversity of terms used and operationalisation of such a broad construct has prevented firm conclusions from being drawn regarding the effects of specific types of control on negative developmental outcomes. The importance of examining discrete parental constructs, instead of typologies has also been acknowledged (Barber, 1996); whereas McLeod et al. (2007) suggest that disaggregating parenting constructs may inform theory development and future research.

To illustrate the differences between the types of parental control, psychological control is referred to as a type of intrusive, covert, coercive, passive-aggressive control that is characterised by hostility toward the adolescent. Psychological control is manifested primarily through covert strategies, such as invalidating feelings and guilt induction. Behavioural control however, generally is conceptualised as parents' attention to and tracking of their children's whereabouts and activities, the extent to which parents are knowledgeable about their adolescents' activities, companions, and whereabouts (Dishion & McMahon, 1998), whereas parental overprotection is defined as excessive parental involvement in over-managing the child's environment to minimise aversive experiences for the child, regardless of whether those situations represent actual threats (Coplan et al. 2008; Hudson & Rapee, 2005; Parker, 1983).

An additional parenting construct particularly salient during adolescence when young people are becoming increasingly more individuated from their families is autonomy granting. This construct is reflected in parental encouragement of adolescents' individual expression and decision making. Parents higher in autonomy granting allow adolescents to make choices about activities and behaviour, and encourage the development of independence (Ennett, Bauman, Foshee, Pemberton, & Hicks, 2001). McLeod et al. (2007) defined autonomy granting as parental encouragement of young people's opinions and choices, acknowledgment of their independent perspectives on issues and solicitation of their own decisions and solutions of problems. A recent meta-analysis (McLeod et al. 2007) reported that lower parental autonomy granting accounted for 18% of the variance in anxiety in children as opposed to parental warmth (1%).

An individual–level risk-factor

Investigating the role of individual risk-factors in the development of internalising problems in young people in the same prospective study is also of both clinical and theoretical importance (Stallard, 2007). One child or adolescent characteristic gaining increased empirical attention is Early Maladaptive Schemas (EMS). Much research has identified a number of core emotional needs that must be met in childhood by caregivers in order to ensure appropriate psychological health and positive adjustment later in life (Bowlby, 1969, 1988; Main & Solomon, 1986; Young, 1990). For instance, Young (1990) proposed five core emotional needs: 1. Secure attachments to others (includes safety, stability, nurturance, and acceptance); 2. Autonomy, competence and a sense of identity; 3. Realistic limits and self control; 4. Freedom to express valid needs and emotions; and 5. Spontaneity and play (Young et al. 2003, p. 9-10).

EMS are defined as "broad, pervasive themes or patterns, comprised of memories, emotions, cognitions, and bodily sensations, regarding oneself and one's relationships with others" (Young et al. 2003, p.7). Although not empirically tested (Dale, Power, Kane, & Stewart, 2010), Young (1990) suggests that if such needs are not met, various EMS will develop during childhood or adolescence. In this model, 18 schemas have been identified and are grouped into five broad categories based on the proposed unmet emotional needs. The categories are referred to as "schema domains" and comprise respectively of the following: 1. Disconnection and Rejection; 2. Impaired Autonomy and Performance Dependence; 3. Impaired Limits; 4. Other-Directedness; and 5. Overvigilance and Inhibition. (See Table 13 for the Schema Domains and corresponding EMS to be investigated in this study).

Table 13

Schema Domains and corresponding EMS

Domain	Corresponding EMS
DISCONNECTION & REJECTION	**Emotional Deprivation (ED):** Belief that one's desire for a normal degree of emotional support will not be adequately met by others **Social Isolation/Alienation (SI):** Belief that one is isolated from the world, different from others, &/or not part of any community **Defectiveness/Shame (DS):** Belief that one is defective, bad, unwanted, inferior, or invalid in important respects; or that one would be unlovable to significant others if exposed **Mistrust/Abuse (MA):** Belief that others will intentionally take advantage in some way & others will hurt, cheat or put them down
IMPAIRED AUTONOMY & PERFORMANCE DEPENDENCE	**Vulnerability to Harm or Illness (VH):** Belief that one is always on the verge of experiencing a major catastrophe (external, medical, emotional) at any time & that one will be unable to prevent it **Failure (FA):** Belief that one has failed, will inevitably fail, or is fundamentally inadequate relative to one's peers, in areas of achievement (school, career, sports, etc.). Often involves beliefs that one is stupid, inept, untalented, ignorant, lower in status, less successful than others, etc. **Dependence/Incompetence (DI):** Belief that one is unable to handle one's everyday responsibilities in a competent manner, without considerable help from others (e.g., take care of oneself, solve daily problems, exercise good judgment, tackle new tasks, make good decisions)
OTHER-DIRECTEDNESS	**Subjugation (SB):** Belief that one's own desires, opinions, & feelings are not valid or important to others. Frequently presents as excessive compliance, combined with hypersensitivity to feeling trapped **Self-sacrifice (SS):** Belief that one must excessively sacrifice one's own needs in order to help others. When these people pay attention to their own needs, they often feel guilty. To avoid this guilt, they put others needs ahead of their own
OVERVIGILANCE & INHIBITION	**Emotional Inhibition (EI):** Belief that you must inhibit emotions & impulses, especially anger, because any expression of feeling would harm others, or lead to loss of self-esteem, embarrassment, retaliation or abandonment **Unrelenting Standards/Hypercriticalness (US):** Belief that one must strive to meet very high internalised standards of behaviour & performance, usually to avoid criticism

Young suggests that EMS lead directly or indirectly to psychological distress and personality disorders (Young, 1990; Young et al. 2003). Increasing empirical evidence with adult populations support such assumptions and have demonstrated that EMS are risk-factors for a range of psychopathologies, including self-mutilating behaviour (Castille et al. 2007) and social phobia (Pinto-Gouveia, Castilho & Galhardo, 2006). The few studies that have examined the role of EMS in the development of psychopathology in adolescence have indicated some support for the proposition that EMS play a part in a number of mental health problems in young people. For instance, Vlierberghe and Braet (2007) reported that referred obese adolescents with internalising problems (n = 91) scored significantly higher EMS scores compared to normal weight control (n = 91). In this sample, internalising problems were most closely related to the Social Isolation/Alienation (SI) and Vulnerability to Harm or Illness (VH) schemas and the EMS model explained about 45% of the variance in internalising problems. Finally, Stallard (2007) found significant differences in the EMS of children attending a specialist mental health clinic (n = 53) than those in a community sample (n = 46).

As Vlierberghe et al. (2010) suggests studying EMS among younger populations is of special relevance. However, investigations into EMS in younger populations have lagged far behind that of adult samples (Lumley, 2007). Consequently, researchers in the field are calling on further studies to use adolescent populations (Muris, 2006; Vlierberghe, Braet, Bosmans, Rosseel, & Bögels, 2010) and with larger samples (Stallard, 2007). As Millon (1981; as cited in Young, 1990) suggests, because schemas are developed early in life they often form the core of an individual's self-concept and conception of the environment. EMS are self-perpetuating and therefore much more resistant to change. Thus, investigating how to prevent EMS from

becoming established or softening the intensity in the first instance is a promising line of enquiry and would have major implications for the delivery of services for young people with mental health problems (Stallard, 2007).

Parenting and Early Maladaptive Schemas (EMS)

Few studies have examined the relationship between the role of parenting factors and EMS. However, in a sample of 173 non-clinical adolescents aged between 12 and 15 years, Muris (2006) found that higher levels of parental rejection (e.g., "your parents wish that you were like somebody else"), parental control (e.g., "your parents want you to reveal your secrets to them"), anxious rearing (e.g., "your parents are scared when you do something on your own"), and lower levels of emotional warmth (e.g., "your parents show that they love you") were related to higher EMS scores.

Using a contextual semi-structured interview in a community sample of depressed adolescent boys (n = 24) and girls (n = 52), aged 13–19, Lumley (2007) reported that parental emotional maltreatment was associated particularly with Vulnerability to Harm or Illness (VH), Self-sacrifice (SS) and Social Isolation/Alienation (SI). Emotional maltreatment was operationalised as antipathy, hostility and criticism directed toward the child and/or neglect of the child's emotional and/or material needs by parent/s (e.g., frequent name-calling or harsh criticism, not providing adequate food or clothing, not comforting an upset child).

Young's typical family origin (TFO) conceptualisation

According to McGinn, Young and Sanderson (1995, p.188), EMS "develop during childhood as a result of ongoing noxious experiences, such as severe deprivation, rejection, abuse, instability, criticism, or abandonment". More specifically, Young (1990) suggests that EMS are primarily the result of "typical family origins" (TFO), which places children at a greater risk of developing EMS in one or more of the core emotional areas. For instance, the EMS associated with the Disconnection and Rejection Domain (i.e., Mistrust/Abuse [MA]; Emotional Deprivation [ED]; Defectiveness/Shame [DS]; & Social Isolation/Alienation [SI]) are hypothesised to be primarily a result of a TFO characterised as "detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive". Young suggests that an early environment such as this, "promotes expectations that one's needs for security, safety, stability, and nurturance, empathy, sharing of feelings, acceptance, and respect will not be met in a predictable manner".

Cognitive-content specificity

One of the most prominent cognitive theories of differentiation between internalising problems is the cognitive-content specificity hypothesis (CCSH; Beck, 1987). This theory suggests that specific cognitive content is associated with specific psychological disorders. In general, the cognitive aspects of depression have been found to be characterised by hopelessness, failure and loss. In contrast, the content of anxious cognitions has generally reflected themes of psychological and physical threat (Clark, 1989). For instance, when validating the Schema Questionnaire with adults, Schmidt, Joiner, Young, and Telch (1995) found that the

Dependence/Incompetence (DI) and Defectiveness/Shame (DS) EMS were significantly associated with depression, whereas the Vulnerability to Harm or Illness (VH) EMS was associated with anxiety.

However, significant comorbidity between mood and anxiety disorders have been widely documented (Greenberg & Beck, 1989; Watson, Clark & Carey, 1988). Moreover, differentiation research in anxiety and depression has generally yielded inconsistent patterns (Greenberg & Beck, 1989; Ingram, Partridge, Scott, & Bernet, 1994), with some studies drawing a distinction between the two disorders on a symptomatic versus cognitive basis (e.g., Watson et al. 1988), with little consensus as to which distinction proves the more robust.

Numerous authors agree however, of the importance of investigating the CCSH as such models provide a foundation for the development of cognitive-behavioural treatments. Bruch, Mattia, Heimberg, and Holt (1993) state that differentiation of the unique factors associated with specific emotional disorders enhances understanding of their aetiology, course, exacerbation, and treatment. In fact, Beck suggested that the cognitive symptoms of depression actually precede the affective and mood symptoms of depression, rather than vice versa.

Lumley (2007) and Vlierberghe et al. (2010) highlight that in EMS research in particular, few studies have focused on whether specific EMS uniquely contribute to specific problems in adolescence. As Lumley (2007) states, the present lack of cognitive content-specificity prevents solid conclusions from being drawn on the tenability of the CCSH within Young's framework.

For this to emerge, researchers are advocating for a more fine-grained analysis of the complex and specific relations among relevant variables (Lumley, 2007; Vlierberghe et al. 2010).

Lumley (2007) reported that EMS with themes of danger (e.g., Vulnerability to Harm or Illness [VH]) were associated with symptoms of anxious arousal, whereas EMS with themes of loss and worthlessness (e.g., Self-sacrifice [SS] and Social Isolation/Alienation [SI]) were associated with and anhedonic (i.e., depressive) symptoms. Vlierberghe et al. (2010) also established a content-specificity association of EMS and psychopathology in a sample of 112 non-referred and 104 referred adolescents. Regression analysis indicated that Vulnerability to Harm or Illness (VH), Unrelenting Standards (US) and Emotional Deprivation (ED) schemas predicted anxiety symptoms, whereas the Emotional Deprivation (ED) and Failure (FA) schemas predicted depressive symptomatology. Finally, Muris (2006) reported that depressive symptoms were uniquely predicted by Mistrust/Abuse (MA), Unrelenting Standards (US) and Failure (FA) schemas whereas anxiety symptoms were predicted by Emotional Inhibition (EI) and Social Isolation/Alienation (SI) schemas.

Rationale of present study

Although it is likely that a variety of factors contribute to *why* young people who experience internalising problems terminate treatment prematurely, fail to respond to treatment and/or experience recurrent difficulties despite treatment, it may be possible, that the absence of a family-level component in intervention and prevention programs plays a part. Given the importance of the prevention, early identification, intervention, and treatment of young people

either at-risk of developing or have developed internalising problems, recognising *both* parental and adolescent factors that contribute to the emergence of such problems is an important goal.

Empirical evidence concerning the influence that parenting factors have on the development of EMS in adolescents is beginning to emerge. Young's conceptualisations also have a solid clinical foundation. However, the hypothesised TFO and posited corresponding EMS have not yet been empirically examined. Thus, it may be of both theoretical interest and clinical relevance to apply empirically-derived parenting constructs to Young's conceptualisations of TFO and examine whether and if so, to what extent, each parenting construct is associated with the posited corresponding EMS. Further, the knowledge gained from exploring the potential influence of the parenting constructs and EMS on internalising problems, may generate a clinically and empirically-based exploratory family-level framework that may be incorporated into intervention and prevention initiatives.

Hence, the present study selected parenting constructs which the researchers deemed comparable to four of Young's five Domains and this conceptualisation became the family-level framework of the study. *Note:* The Impaired Limits Domain (and two corresponding EMS) was not included (see Method section for details). An explanation of the rationale behind the selection of each parenting construct is provided below (details of scale measurement may be found in the Method Section). The parenting constructs selected are particularly salient during adolescence when young people are becoming increasingly individuated from their families and thus a developmental focus was acknowledged. The four Domains and respective parenting constructs selected for the present study were as follows:

The Disconnection and Rejection Domain

Individuals with the specific schemas hypothesised to be linked within this domain expect that their needs for security, stability, nurturance, and empathy in intimate or family relationships will not be met in a consistent or predictable way. The associated TFO is conceptualised as, "detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive" Young (1990). To represent this TFO, a lower level of parental acceptance was selected.

The Impaired Autonomy and Performance Dependence Domain

The schemas in this domain concern expectations about oneself and the environment that interferes with one's ability to separate and function independently and one's perceived ability to survive alone. The associated TFO is conceptualised as, "enmeshed, undermining of child's confidence, overprotective or failing to reinforce child for performing competently outside the family". To represent this TFO, a higher level of parental overprotection was selected.

The Other-Directedness Domain

The schemas within this domain relate to an excessive focus on meeting the needs of others, at the expense of one's own needs. The associated TFO is conceptualised as, [an environment] "where children must suppress important aspects of themselves in order to gain love, attention and approval". To represent this TFO, a lower level of parental autonomy granting was selected.

The Overvigilance and Inhibition Domain

The schemas in this domain involve an excessive focus on controlling, suppressing or ignoring of one's emotions and spontaneous feelings in order to avoid making mistakes, or meeting rigid internalised rules. The associated TFO is conceptualised as, "grim, demanding and sometimes punitive. Further, performance, duty, perfectionism, following rules, hiding emotions, and avoiding mistakes predominates over joy, pleasure and relaxation. There are also undercurrents of pessimisms and worry that things could fall apart if one fails to be vigilant and careful at all times". To represent this TFO, a higher level of parental psychological control was selected.

See Table 14 for the family-level framework employed by the present study: The framework includes the four schema domains, TFO conceptualisations and corresponding EMS, the expectations posited to be promoted by the individual TFO, and the parenting constructs applied in the current study.

Table 14

Framework Employed for Study Three (Applied Parenting Constructs in Bold)

Schema Domain	Young's Typical Family Origin (TFO) Conceptualisation	Young's Corresponding EMS	Expectations Promoted from TFO	**Applied Parenting Constructs**
DISCONNECTION & REJECTION	Detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive	• Mistrust/Abuse (MA) • Emotional Deprivation (ED) • Defectiveness/ Shame (DS) • Social Isolation (SI)	Expectation that one's needs for security, safety, stability, nurturance, empathy, sharing of feelings, acceptance, & respect will not be met in a predictable manner	**Lower Level of Parental Acceptance**
IMPARIED AUTONOMY & PERFORMANCE DEPENDENCE	Enmeshed, undermining of child's confidence, overprotective or failing to reinforce child for performing competently outside the family	• Dependence/Incompetence (DI) • Vulnerability to Harm or Illness (VH) • Failure (FA)	Expectations about oneself & the environment that interfere with one's perceived ability to separate, survive, function independently, or perform successfully	**Higher Level of Parental Over-protection**
OTHER-DIRECTEDNESS	Children must suppress important aspects of themselves in order to gain love, attention and approval. Parents' emotional needs and desires -- or social acceptance and status -- are valued more than the unique needs and feelings of each child	• Subjugation (SB) • Self-sacrifice (SS)	Relates to an excessive focus on meeting the needs of others, at the expense of one's own needs. Usually involves suppression and lack of awareness regarding one's own anger and natural inclinations	**Lower Level of Parental Autonomy Granting**
OVERVIGILANCE & INHIBITION	Grim, demanding & sometimes punitive: performance, duty, perfectionism, following rules, hiding emotions, & avoiding mistakes predominates over joy, pleasure & relaxation. Undercurrents of pessimisms & worry that things could fall apart if one fails to be vigilant & careful at all times	• Emotional Inhibition (EI) • Unrelenting Standards (US)	Excessive emphasis on suppressing one's spontaneous feelings & choices OR on meeting rigid internalised rules & expectations re performance & ethical behaviour often at the expense of happiness, self-expression, relaxation, close relationships, or health	**Higher Level of Parental Psychological Control**

Hypotheses of present study

Based on Young's TFO conceptualisations, the posited corresponding EMS and selected parenting constructs, the following hypotheses were formulated:

H1. A lower level of parental acceptance will predict higher levels of the EMS: Mistrust/Abuse (MA); Emotional Deprivation (ED); Defectiveness / Shame (DS); Social Isolation / Alienation (SI)

H2. A higher level of parental overprotection will predict higher levels of the EMS: Dependence / Incompetence (DI); Vulnerability to Harm or Illness (VH); Failure (FA)

H3. A lower level of parental autonomy granting will predict higher levels of the EMS: Subjugation (SB); Self-sacrifice (SS)

H4. A higher level of parental psychological control will predict higher levels of the EMS: Emotional Inhibition (EI); Unrelenting Standards / Hypercticalness (US)

Further investigations into relationships between the parenting constructs and additional EMS which are not included in Young's hypothesised conceptualisations were also examined. In order to enhance cognitive content-specificity (Lumley, 2007) some exploratory analyses were undertaken. For instance, relationships between the eleven EMS and anxiety and depression, and the relationships between the parenting constructs and anxiety and depression were explored.

Method

Participants

Participants were a community sample of secondary (high) schools throughout metropolitan (urban) and rural areas of South Australia. A total of 69 secondary (high) schools were randomly selected within the Adelaide metropolitan and rural South Australian areas (28 schools from rural areas and 41 from urban areas). A total of 38 schools participated in the study (11 schools from rural areas and 27 from urban areas), indicating a response rate of 55%. As Delfabbro (2006) states, "the very strict ethical requirements to obtain parental approval in Australian school research make it very difficult to obtain very high response rates in Australian surveys". No well-documented Australian standards exists to indicate typical response rates from school surveys, but the rate (55%) is very similar to that obtained in other published work (Delfabbro & Thrupp, 2003). According to the Federal Productivity Commission (1999), one of Australia's peak research organisations, a response rate of 55% for public surveys is considered to be on par with the best surveys conducted in Australia.

A total of 525 adolescents from urban schools participated in the study, yet nine participants did not complete the survey and consequently, this data was discarded. This resulted in a sample total of 516 adolescents from urban schools. The data from study two (n = 388) from the rural schools was combined with the urban sample. Thus, a total sample of 904 Year nine students participated. The age and gender breakdown of the rural, urban and total Year nine student data can be seen in Table 15.

Table 15

Age and Gender Breakdown of the Year Nine Students (N = 904)

Age	Females	Males	Total
13 years	92	135	227
14 years	342	244	586
15 years	41	50	91
Total	475	429	904

The mean age of the females (*n* = 475; 52.5%) was 14.2 years, whereas the mean age of males was 14.4 years. When asked who their main female caregiver was, *n* = 829 (91.7%) selected “my mother”; whereas *n* = 797 (88.2%) selected “my father” as their main male caregiver. When asked if their parents lived together, *n* = 517 (57.2%) responded “yes”; *n* = 377 (41.7%) responded “not anymore”; and *n* = 10 (1.1%) responded “never”.

Procedure

In order to conduct research in the government and Catholic high schools, ethics approval was obtained from the South Australian Department of Education and Children's Services (DECS) and Catholic Education respectively. The non-government schools were contacted directly via email. Study information sheets for students, teachers and parents, and parental consent forms were sent via mail to participating schools and distributed to the Year nine students by the teachers. A list of South Australian organisations were also included to assist any parents who had possible concerns regarding their adolescent's behaviour, health, emotional wellbeing or issues regarding parenting. Students were also provided with a similar list. Teachers collected the signed parental consent forms and returned them in the reply-paid envelopes provided.

Once parental consent was granted, each school was e-mailed the survey web-link, which was then e-mailed to all participating students during a designated lesson time. Students completed their surveys during lesson time (e.g., during a pastoral care or health class) under teacher supervision, which took approximately 45 minutes to complete. All participants were invited to enter a raffle for one of two $25 department store shopping vouchers. Data were recorded electronically from the 38 schools (n = 904).

Measures

Parental acceptance

The 10-item Acceptance subscale from the revised Child Report of Parent Behaviour Inventory (CRPBI; Schaefer, 1965) was used to assess the level of parental acceptance as perceived by the adolescents and represented the Disconnection and Rejection Domain. Adolescents were asked to report the extent to which they feel the questions related to their parent/s using responses on a three-point Likert-type scale from ranging from 1 = *not like her/him* to 3 = *a lot like her/him*. Example items included: My mother/father: "Smiles at me very often"; makes me feel like the most important person in her/his life"; and "often praises me". Total scores can range from ten to 30 with higher scores indicating greater levels of parental acceptance as perceived by the adolescents. A "low" parental acceptance score was considered to be between 10 - 16; a "moderate" score = 17 - 23; and a "high" score = 24 - 30. In this study $\alpha = .88$.

Parental overprotection

The Overprotective subscale of the Parental Bonding Instrument (PBI; Parker et al. 1979) was used to assess the level of parental overprotection and represented the Impaired Autonomy and Performance Dependence Domain. This scale assesses adolescents' descriptions of experiences of parental overprotection. The seven negatively worded items contained in the subscale were used and sample items included: My parent/s: "Feel I cannot look after myself unless she/he is around"; "do/es not want me to grow up"; and "tends to baby me". Responses

were rated on a 4-point Likert-scale from 0 = *very unlike* to 3 = *very like*. Scores can range from 0 to 21 with higher scores indicating greater parental overprotection. A "low" parental overprotection score was considered to be between 0 - 6; a "moderate" score = 7 - 13; and a "high" score = 14 - 21. In this study $\alpha = 0.82$.

Parental autonomy granting

The eight-item Autonomy Granting Scale (Silk et al. 2003) was used to assess the level of parental autonomy granting and represented the Other-Directedness Domain. This scale assessed the adolescents' perception of the level of their parents' granting of autonomy. Sample items include: My mother/father: "Emphasises that every member of the family should have some say in family decisions"; "emphasise that it is important to get my ideas across even if others don't like it"; and "lets me make my own plans for the things I wanted to do". Responses are rated on a 4-point Likert-scale from 1 = *very unlike* to 4 = *very like*. Possible scores ranged from 8 to 32 with higher scores indicating greater parental autonomy granting. A "low" parental autonomy score was considered to be between 8 - 16; a "moderate" score = 17 - 25; and a "high" score = 26 - 32. In this study $\alpha = 0.87$.

Parental psychological control

The Psychological Control Scale - Youth Self-Report (PPS-YSR: Barber, 1996) was used to assess adolescents' perception of their parents' level of parental psychological control and represented the Overvigilance and Inhibition Domain. The 8-item scale includes three specific aspects of psychological control: Invalidating Feelings, Constraining Verbal Expression, and

Love Withdrawal. Adolescents responded on a three-point Likert-type scale from 1 = *not like her/him* to 3 = *a lot like her /him* as to how well items describe their mothers and father. Items include: My Mother/Father is a person who: "Always tries to change how I feel or think about things"; "avoids looking at me when I disappoint him/her"; and "less friendly with me if I do not see things his/her way". Possible score range from 8 to 24 and higher scores indicate greater perceived parental psychological control. A "low" parental psychological score was considered to be between 8 - 13; a "moderate" score = 14 - 19; and a "high" score = 20 - 24. In the current study $\alpha = .87$

Early Maladaptive Schemas (EMS)

The Schema Questionnaire for Children (SQC; Stallard & Rayner, 2005) was used to assess the adolescents' Early Maladaptive Schemas (EMS). This scale is based on the Young Schema Questionnaire (YSQ; Young 1990; Young et al. 2003). A single item was created for each of the fifteen EMS. Stallard and Rayner (2005) invited sixteen clinicians to rate the face validity of the items and to verify whether each item adequately represented the nature of a particular schema. Subsequently, 46 children (mean age = 12.91 years) completed the 15-item child version as well as the adult YSQ-short-form, which was adapted for children (e.g. "school" replaced "work"). Ten out of the 15-items were significantly correlated with the intended schemas, as measured by the YSQ-short-form, whereas almost significant coefficients were found for two items.

The discriminative power and stability of the 12-item version was tested by Stallard (2007). The composite score of the questionnaire discriminated well between a small community

sample (*n* = 46; age range: 11 to 16 years), and a clinical group (*n* = 53; age range 9 to 18 years). To determine stability, schemas were assessed twice in a group of 77 schoolchildren (aged 9 to 10 years), at a 6-month interval. Correlation coefficients were modest (range *r* = 0.27 to 0.54), indicating that the endorsement of the specific schema items is moderately stable over time. Concurrent validity of this measure has also been supported (Lumley et al. 2011) as higher maladaptive schema scores were associated with greater depression symptoms in youth (*r* = .48).

The Impaired Limits Domain comprises only of two schemas: Insufficient Self-control/Self-discipline (IS) and Entitlement/Grandiosity (ET). The IS schema was discarded by Stallard (2007) for failing to show a significant correlation with the YSQ-short form corresponding schema. Further, the IS schema has also been found to have unacceptable low internal reliability in a non-clinical sample of adults (Cecero et al. 2004). Thus, the present study decided not to include the Impaired Limits Domain. Hence, a total of 11-items were used to assess EMS. As mentioned, nine of these items showed significant correlations with the Young Schema Questionnaire (YSQ), whereas Subjugation (SB) and Self-sacrifice (SS) approached statistical significance (both *p* values =.06). Internal consistency reliability for the SQC in the current study was α = .66.

Adolescents were asked to rate how much they agreed or disagreed with the 11 schema statements on a 6-point Likert-type scale, ranging from 1 = *strongly disagree* to 6 = *strongly agree* with higher scores indicating higher levels of EMS maladaptive schema content. Possible scores range from 1 to 6. A “low” individual EMS score was considered to be between 1 - 2; a

“moderate” score = 3 - 4; and a “high” score = 5 - 6. All 11 items and corresponding EMS can be seen in Table 16.

Table 16

Schema Questionnaire for Children (SQC) Items and Corresponding EMS

SQC Item Statement	EMS
It is important to be better than others at everything I do	Unrelenting Standards (US)
No one understands me	Social Isolation (SI)
Others are out to get or hurt me	Mistrust/Abuse (MA)
I need other people to help me get by	Dependence/Incompetence (DI)
Bad things happen to me	Vulnerability to Harm or Illness (VH)
No one loves or cares about me	Emotional Deprivation (ED)
Other people are better than me	Defectiveness/Shame (DS)
I am a failure	Failure (FA)
People will be cross or upset if I say the things I really want to say	Self-Sacrifice (SS)
I must not show my feelings to others	Emotional Inhibition (EI)
It is more important to put other people's wishes and ideas before my own	Subjugation (SB)

Internalising symptoms

Internalising symptoms (i.e., anxiety and depression) were measured with the Revised Child Anxiety and Depression Scale (RCADS; Chorpita et al. 2000). The RCADS is a multidimensional 47-item self-report questionnaire, for young people aged 8 to 18, with six scales corresponding to SAD, SP, GAD, PD, OCD, and ten items for MD. The RCADS also includes a Total Anxiety Scale (sum of the five anxiety subscales) and a Total Internalising Scale (sum of all 6 subscales). Items are rated on a 4-point Likert-scale from 0 = *never* to 3 = *always*. In the present study only the total Anxiety Scale (sum of the five subscales scores) and the total Depression score were analysed. Higher scores indicate more severe levels of anxiety and depressive symptoms. A "low" combined total anxiety score was considered to be between 0 - 36; a "moderate" score = 37 - 73; a "high" score = 74 - 111. A "low" total depression score was considered to be between 0 - 9; a "moderate" score = 10 - 19; and a "high" score = 20 - 30. The RCADS has been shown to have good internal consistency, convergent and discriminant validity, and a factor structure corresponding to DSM problems in both community and clinical youth samples in the US (Chorpita et al. 2000, 2005) and Australia (de Ross et al. 2002). In this study $\alpha = .75$.

Statistical analyses

All statistical analyses were carried out using the Statistical Package for Social Sciences (SPSS) for Windows, Version 17. Prior to analyses, variables were examined for accuracy of data entry, missing values and fit between the distributions and the evaluation of assumptions of multivariate analysis. Descriptive statistics for each measure were obtained and the relationships

between all measures were investigated using Pearson product-moment correlation coefficients. A series of standard linear regression analyses were conducted to test the hypotheses. Finally, simultaneous multiple regressions were conducted to examine how efficiently the parenting variables and EMS independently and together would predict anxiety and depression in the adolescents.

A correlation Coefficient Power Calculation revealed that for a sample size of 904 and an *a* of 0.05, the present study had the power of 1 to detect correlation coefficients of the magnitude of 0.30 and above.

Results

Preliminary analyses

Preliminary screening procedures were used to assess the assumptions underlying multivariate procedures. This included evaluation of normality of the distribution, outliers, linearity, and homoscedasticity. Further preliminary analyses revealed no missing values in predictor variables, no evidence of multicollinerarity and singularity and the recommended ratio of cases to independent variables was satisfied (Tabachnick & Fidell, 2001).

Normality and outliers

The distribution shapes of all variables were examined by (a) the absolute size of skewness and kurtosis statistics, (b) visual inspections of histograms and stem and leaf plots, and (c) the Kolmogorov-Smirnov (Lilliefors) tests of normality. According to these plots, all

variables were normally distributed. All variables were inspected for outliers and none were evident.

Linearity and homoscedasticity

Bivariate scatterplots of each relationship to be tested with correlations were visually inspected to determine whether the two assumptions of linearity and homoscedasticity were met. Each scatterplot gave the appearance of acceptable linearity and homoscedasticity. Thus the assumptions of linearity and homoscedasticity regarding all variables were considered to be met.

Descriptive statistics

As shown in Table 17, the adolescents perceived their parents demonstrated a "moderate" level of acceptance, psychological control, overprotection, and autonomy granting towards them. The means of the eleven EMS ranged from 1.4 to 2.5 out of a possible six, indicating a "low" level of each EMS. Based on the total mean Anxiety and Depression scores of the RCADS, the total mean scores fell within the "low" and "moderate" ranges respectively.

A series of exploratory independent-samples t-tests were undertaken to investigate possible gender differences in the parenting constructs, eleven EMS and anxiety, and depression. No significant gender differences existed except for parental overprotection, males (M = 7.22, SD = 4.35) and females (M = 8.0, SD = 5.0), t (902) = -2.74, p = .006, two-tailed and the EMS, Emotional Deprivation, males (M = 2.0, SD = 1.2) and females (M = 2.1, SD = 1.4), t (902) = -2.10, p = .036, two-tailed.

Table 17
Means and Standard Deviations (SD) for all Measures

Measure	Adolescents M (SD)			Possible range of scores
	Male	Female	Total	
Parental Acceptance	21.4 (6.0)	21.0 (6.5)	21.0 (6.3)	10 - 30
Parental Psychological Control	15.1 (4.8)	15.5 (4.5)	15.6 (4.6)	8 - 24
Parental Overprotection	7.2 (4.3)	8.0 (5.0)	7.6 (4.6)	0 - 21
Parental Autonomy Granting	22.0 (5.6)	21.6 (5.6)	21.6 (5.6)	8 - 32
No one loves or cares about me (ED)	2.0 (1.2)	2.1 (1.4)	2.0 (1.3)	1 - 6
No one understand me (SI)	2.0 (1.4)	2.0 (1.5)	2.0 (1.5)	1 - 6
Other people are better than me (DS)	2.0 (1.5)	2.0 (1.5)	2.0 (1.5)	1 - 6
Others are out to get or hurt me (MA)	1.4 (0.7)	1.4 (1.0)	1.4 (1.0)	1 - 6
I need other people to help get me by (DI)	2.2 (1.3)	2.1 (1.2)	2.1 (1.4)	1 - 6
Bad things happen to me (VH)	2.0 (1.3)	2.0 (1.4)	2.0 (1.4)	1 - 6
I am a failure (FA)	1.6 (1.2)	1.6 (1.3)	1.6 (1.3)	1 - 6
It is more important to put other peoples wishes and ideas before my own (SB)	2.0 (1.4)	2.0 (1.4)	2.0 (1.4)	1 - 6
People will be cross or upset if I say the things I really want to say (SS)	2.1 (1.4)	2.1 (1.4)	2.1 (1.4)	1 - 6
I must not show my feelings to others (EI)	2.1 (1.4)	2.1 (1.5)	2.1 (1.4)	1 - 6
It is important to be better than others at everything I do (US)	2.5 (1.5)	2.5 (1.5)	2.5 (1.5)	1 - 6
Total Anxiety	28.0 (17.4)	30.0 (16.4)	28.4 (17.5)	0 - 111
Total Depression	10.0 (8.0)	11.0 (8.0)	10.00 (8.0)	0 - 30

Note: N = 904; Male 429; Female 475.

Table 18 shows the correlations between all variables. Moderate, negative correlations were found between parental acceptance and Failure (FA) and Social Isolation/Alienation (SI), whereas milder yet significant negative relationships were evident with Emotional Deprivation (ED), Unrelenting Standards (US), Emotional Inhibition (EI), and Defectiveness/Shame (DS). Such results indicate that the lower level of parental acceptance reported by the adolescents, the higher these EMS were endorsed.

Table 18

Correlations of all Measures

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 Parental Acceptance	1																
2 Parental Psych Control	-.114**	1															
3 Parental Autonomy Granting	.240**	-	1														
4 Parental Overprotection	-	-	-.146**	1													
5 Unrelenting Standards	-.240**	.407**	-.066*	.160**	1												
6 Social Isolation	-.380**	.057**	-.240**	-	.116**	1											
7 Mistrust/Abuse	-	.150**	-.126**	-	.100*	.107**	1										
8 Dependence/ Incompetence	-.180**	.160**	-.200**	.400**	.176**	.150**	.100**	1									
9 Vulnerability to Harm/ Illness	-.164**	.100**	-.131**	.445**	.160**	.110**	.100**	.600**	1								
10 Emotional Deprivation	-.300**	.154*	-.200**	-	.160**	.270**	.104*	.162**	.120**	1							
11 Subjugation	-.106**	.125**	-.430**	-	.140**	.112**	-	.220**	.111**	-	1						
12 Defectiveness/ Shame	-.224**	.253**	-.100**	.103**	.205**	.245**	.120**	.102**	-	.230*	-	1					
13 Self-Sacrifice	-	.103*	-	-	-	.170**	.1706*	.236**	-	.120**	.212**	-	1				
14 Emotional/ Inhibition	-.230**	.320**	-.140**	.236**	.403**	.204**	.154**	.250**	.204**	.41**	.223**	.236**	.200**	1			
15 Failure	-.404**	.070*	-.160**	-	-	.323**	.110**	.161**	-	.342**	.100**	.216**	.153**	-	1		
16 Depression	-.400**	.313**	-.300**	.204**	.322**	.303**	.100**	.200**	.126**	.330**	.300**	.224**	-	.340**	.334**	1	
17 Anxiety	-.310**	.405**	-.301**	.340**	.407**	.140**	.200**	.344**	.300**	.205**	.200**	.170**	-	.604**	.125**	.510**	1

Note: $N = 904$; correlation is significant at *p < .05 (1 – tailed); ** p < .01 (1 – tailed).

A significant strong positive relationship was found between parental psychological control and Unrelenting Standards (US), whereas Emotional Inhibition (EI) and Defectiveness/Shame (DS) were also significantly positively related. This indicates that the greater level of psychological control perceived by the adolescents, the higher the level of the specified EMS.

A significant strong negative relationship was found between parental autonomy granting and Subjugation (SB), whereas Social Isolation/Alienation (SI) and Dependence/Incompetence (DI) returned milder yet significantly negative relationships. This indicates that the lower level of autonomy granting prescribed to the adolescents, the higher the Subjugation (SB), Social Isolation/Alienation (SI) and Dependence/Incompetence (DI) endorsed respectively.

A significant strong positive relationship was found between parental overprotection and Vulnerability to Harm or Illness (VH), whereas Dependence/Incompetence (DI) and Emotional Inhibition (EI) returned moderate positive correlations. This indicates that the greater use of parental overprotection, the higher the Vulnerability to Harm or Illness (VH), Dependence/Incompetence (DI) and Emotional Inhibition (EI) respectively endorsed by the adolescents.

Significant positive relationships were found between depression and ten out of the 11 EMS. The strongest positive relationships respectively were Emotional Inhibition (EI), Failure (FA), Emotional Deprivation (ED), Unrelenting Standards (US), Social Isolation/Alienation (SI), Subjugation (SB), and Defectiveness/Shame (DS). Significant positive relationships were also

found for anxiety and ten EMS. The strongest relationships were found between Emotional Inhibition (EI), Unrelenting Standards (US), Dependence/Incompetence (DI), Vulnerability or Harm to Illness (VH), and Subjugation (SB) respectively.

Significant negative relationships were found between parental acceptance, autonomy granting and anxiety, indicating that the lower level of acceptance and autonomy granting perceived by the adolescents, the greater level of anxiety experienced. Significant positive relationships with psychological control, overprotection and depression were also found. This indicates that the higher the level of parental overprotection and parental psychological control, the greater the level of depression experienced.

The results of the four hypotheses examining Young's TFO conceptualisations (represented as the four parenting constructs) and hypothesised corresponding EMS will be presented first. Further investigations into significant relationships between the parenting constructs and additional EMS which were not included in Young's conceptualisations will then be provided. The relationships between the eleven EMS and anxiety and depression and the relationships between the parenting constructs and anxiety and depression will be subsequently presented.

Hypothesis testing

H1: Disconnection and Rejection Domain

Bivariate linear regressions were conducted to evaluate the prediction of Social Isolation/Alienation (SI), Emotional Deprivation (ED) and Defectiveness/Shame (DS) from a

lower level of parental acceptance. Parental acceptance was not significantly associated with Mistrust/Abuse (MA) and thus was not investigated further with regression analyses.

As expected, a lower level of parental acceptance was significantly related to greater Social Isolation /Alienation (SI), F, (1, 902), = 149.912, β = -.378, p = .000. Approximately 14% of the variance in Social Isolation /Alienation (SI) was explained by its relationship with parental acceptance (R^2 = .143).

As expected, a lower level of parental acceptance was significantly related to greater Emotional Deprivation (ED), F, (1, 902), = 77.83, β = -.282, p = .000. Approximately 8% of the variance in Emotional Deprivation (ED) was explained by its relationship with parental acceptance (R^2 = .079).

As expected, a lower level of parental acceptance was significantly related to greater Defectiveness/Shame (DS), F, (1, 902), = 47.436, β = -.224, p = .000. Approximately 5% of the variance in Defectiveness/Shame (DS) was explained by its relationship with parental acceptance (R^2 = .050).

Significant relationships were also found between Failure (FA), Unrelenting Standards (US) and Defectiveness/Shame (DS). Bivariate linear regressions were conducted to evaluate the prediction of Failure (FA), Unrelenting Standards (US) and Defectiveness/Shame (DS) from parental acceptance.

A lower level of parental acceptance was significantly related to greater Failure (FA), *F*, (1, 902), = 156.05, β = -.384, *p* = .000. Approximately 15% of the variance in Failure (FA) was explained by its relationship with parental acceptance (R^2 = .147).

A lower level of parental acceptance was significantly related to greater Unrelenting Standards (US), *F*, (1, 902), = 54.43, β = -.239, *p* = .000. Approximately 6% of the variance in Unrelenting Standards (US) was explained by its relationship with parental acceptance (R^2 = .0.57).

H2: Impaired Autonomy and Performance Dependence Domain

Bivariate linear regressions were conducted to evaluate the prediction of Dependence/Incompetence (DI) and Vulnerability to Harm or Illness (VH) from a higher level of parental overprotection. As no significant correlation was found between parental overprotection and Failure (FA), no regression analysis was conducted.

As expected, a higher level of parental overprotection was significantly related to greater Vulnerability to Harm or Illness (VH), *F*, (1, 902), = 222.63, β = .445, *p* = .000. Approximately 20% of the variance in Vulnerability to Harm or Illness (VH) was explained by its relationship with parental overprotection (R^2 = .198).

As expected, a higher level of parental overprotection was significantly related to greater Dependence/Incompetence (DI), *F*, (1, 902), = 152.18, β = .380, *p* = .000. Approximately 14% of

the variance in Dependence/Incompetence (DI) was explained by its relationship with parental overprotection (R^2 = .144).

Parental overprotection also significantly predicted Emotional Inhibition (EI). A bivariate linear regression was conducted to evaluate the prediction of Emotional Inhibition (EI) from parental overprotection. A higher level of parental overprotection was significantly related to greater Emotional Inhibition (EI), F, (1, 902), = 52.99, β = .236, p = .000. Approximately 5% of the variance in Emotional Inhibition (EI) was explained by its relationship with parental overprotection (R^2 = .055).

H3: Other-Directedness Domain

As no significant correlation was found between parental autonomy granting and Self-sacrifice (SS), no regression analysis was conducted.

A bivariate linear regression was conducted to evaluate the prediction of Subjugation (SB) from parental autonomy granting. As expected, a lower level of parental autonomy granting was significantly related to greater Subjugation (SB), F, (1, 902), = 204.94, β = -.430, p = .000. Approximately 18% of the variance in Subjugation (SB) was explained by its relationship with parental autonomy granting (R^2 = .185).

Parental autonomy granting also significantly predicted Social Isolation/Alienation (SI). A bivariate linear regression was conducted to evaluate the prediction of Social Isolation/Alienation (SI) from parental autonomy granting. A lower level of parental autonomy

granting was significantly related to greater Social Isolation/Alienation (SI), *F*, (1, 902), = 53.52, β = -.237, *p* = .000. Approximately 5% of the variance in Social Isolation/Alienation (SI) was explained by its relationship with parental autonomy granting (R^2 = .056).

H4: Overvigilance and Inhibition Domain

Bivariate linear regressions were conducted to evaluate the prediction of Emotional Inhibition (EI) and Unrelenting Standards (US) from a higher level of parental psychological control.

As expected, a higher level of psychological control was significantly related to greater Unrelenting Standards (US), *F*, (1, 902), = 179.522, β = .407, *p* = .000. Approximately 17% of the variance in Unrelenting Standards (US) was explained by its relationship with psychological control (R^2 = .166).

As expected, a higher level of parental psychological control was significantly related to greater Emotional Inhibition (EI), *F*, (1, 902), = 101.649, β = .318, *p* = .000. Approximately 10% of the variance in Emotional Inhibition (EI) was explained by its relationship with parental psychological control (R^2 = .101).

Parental psychological control also significantly predicted Defectiveness/Shame (DS). A bivariate linear regression was conducted to evaluate the prediction of Defectiveness/Shame (DS) from parental psychological control. A higher level of parental psychological control was

significantly related to greater Defectiveness/Shame (DS), *F*, (1, 902), = 61.53, β = .253, *p* = .000. Approximately 6% of the variance in Defectiveness/Shame (DS) was explained by its relationship with parental psychological control (R^2 = .064).

Emotional Inhibition (EI) to predict Anxiety

A bivariate linear regression was conducted to evaluate the prediction of anxiety from Emotional Inhibition (EI). A higher level of Emotional Inhibition (EI) was significantly related to greater anxiety, *F*, (1, 902), = 491.80, β = .594, *p* = .000. Approximately 35% of the variance in anxiety was explained by its relationship with Emotional Inhibition (EI) (R^2 = .353).

Unrelenting Standards (US) to predict Anxiety

A bivariate linear regression was conducted to evaluate the prediction of anxiety from Unrelenting Standards (US). A higher level of Unrelenting Standards (US) was significantly related to greater anxiety, *F*, (1, 902), = 178.67, β = .407, *p* = .000. Approximately 16% of the variance in anxiety was explained by its relationship with Unrelenting Standards (US) (R^2 = .165).

Dependence/Incompetence (DI) to predict Anxiety

A bivariate linear regression was conducted to evaluate the prediction of anxiety from Dependence/Incompetence (DI). A higher level of Dependence/Incompetence (DI) was significantly related to greater anxiety, F, (1, 902), = 121.12, β = .344, p = .000. Approximately 12% of the variance in anxiety was explained by its relationship with Dependence/Incompetence (DI) (R^2 = .118).

Vulnerability to Harm or Illness (VH) to predict Anxiety

A bivariate linear regression was conducted to evaluate the prediction of anxiety from Vulnerability to Harm or Illness (VH). A higher level of Vulnerability to Harm or Illness (VH) was significantly related to greater anxiety, F, (1, 902), = 70.65, β = .270, p = .000. Approximately 7% of the variance in anxiety was explained by its relationship with Vulnerability to Harm or Illness (VH) (R^2 = .073).

Emotional Inhibition (EI) to predict depression

A bivariate linear regression was conducted to evaluate the prediction of depression from Emotional Inhibition (EI). A higher level of Emotional Inhibition (EI) was significantly related to greater depression, F, (1, 902), = 115.20, β = .337, p = .000. Approximately 11% of the variance in depression was explained by its relationship with Emotional Inhibition (EI) (R^2 = .113).

Failure (FA) to predict depression

A bivariate linear regression was conducted to evaluate the prediction of depression from Failure (FA). A higher level of Failure (FA) was significantly related to greater depression, *F*, (1, 902), = 113.06, β = .334, *p* = .000. Approximately 11% of the variance in depression was explained by its relationship with Failure (FA); (R^2 = .111).

Emotional Deprivation (ED) to predict depression

A bivariate linear regression was conducted to evaluate the prediction of depression from Emotional Deprivation (ED). A higher level of Emotional Deprivation (ED) was significantly related to greater depression, *F*, (1, 902), = 109.402, β = .329, *p* = .000. Approximately 11% of the variance in depression was explained by its relationship with Emotional Deprivation (ED); (R^2 = .108).

Unrelenting Standards (US) to predict depression

A bivariate linear regression was conducted to evaluate the prediction of depression from Unrelenting Standards (US). A higher level of Unrelenting Standards (US) was significantly related to greater depression, *F*, (1, 902), = 104.43, β = .322, *p* = .000. Approximately 10% of the variance in depression was explained by its relationship with Unrelenting Standards (US); (R^2 = .104).

Parenting constructs and internalising problems

Parental acceptance and internalising problems

A bivariate linear regression was conducted to evaluate the prediction of anxiety from a lower level of parental acceptance. A lower level of parental acceptance was significantly related to greater anxiety, F, (1, 902), = 95.62, β = -.310, p = .000. Approximately 9% of the variance in anxiety was explained by its relationship with parental acceptance (R^2 = .096).

A bivariate linear regression was conducted to evaluate the prediction of depression from a lower level of parental acceptance. A lower level of parental acceptance was significantly related to greater depression, F, (1, 902), = 140.95, β = -.368, p = .000. Approximately 13% of the variance in depression was explained by its relationship with parental acceptance (R^2 = .135).

Parental overprotection and internalising problems

A bivariate linear regression was conducted to evaluate the prediction of anxiety from a higher level of parental overprotection. A higher level of parental overprotection was significantly related to greater anxiety, F, (1, 902), = 117.42, β = .339, p = .000. Approximately 12% of the variance in anxiety was explained by its relationship with parental overprotection (R^2 = .115).

A bivariate linear regression was conducted to evaluate the prediction of depression from a higher level of parental overprotection. A higher level of parental overprotection was significantly related to greater depression, F, (1, 902), = 28.25, β = .174, p = .000. Approximately 0.3% of the variance in depression was explained by its relationship with parental overprotection (R^2 = .030).

Parental autonomy granting and internalising problems

A bivariate linear regression was conducted to evaluate the prediction of anxiety from a lower level of parental autonomy granting. A lower level of parental autonomy granting was significantly related to greater anxiety, F, (1, 902), = 81.58, β = -.288, p = .000. Approximately 8% of the variance in anxiety was explained by its relationship with parental autonomy granting (R^2 = .083).

A bivariate linear regression was conducted to evaluate the prediction of depression from a lower level of parental autonomy granting. A lower level of parental autonomy granting was significantly related to greater depression, F, (1, 902), = 78.13, β = -.282, p = .000. Approximately 8% of the variance in depression was explained by its relationship with parental autonomy granting (R^2 = .080).

Parental psychological control and internalising problems

A bivariate linear regression was conducted to evaluate the prediction of anxiety from a higher level of parental psychological control. A higher level of parental psychological control was significantly related to greater anxiety, F, (1, 902), = 157.06, β = .385, p = .000. Approximately 15% of the variance in anxiety was explained by its relationship with parental psychological control (R^2 = .148).

A bivariate linear regression was conducted to evaluate the prediction of depression from a higher level of parental psychological control. A higher level of parental psychological control was significantly related to greater depression, F, (1, 902), = 97.95, β = .313, p = .000. Approximately 10% of the variance in depression was explained by its relationship with parental psychological control (R^2 = .098).

Discussion

The present study employed a novel empirical approach by applying four theoretically-derived parenting constructs (parental acceptance, parental overprotection, parental autonomy granting, and parental psychological control) to Young's (1990) clinically-derived TFO conceptualisation. Young's hypothesised corresponding EMS were simultaneously examined. Such relationships have not been investigated empirically. It was anticipated that the knowledge gained from exploring the influence of the parenting constructs and EMS on internalising problems, may generate a clinically and empirically-based exploratory family-level framework that may be incorporated into intervention and prevention initiatives. It was anticipated that such an addition may reduce the number of young people who terminate treatment prematurely, fail to respond to treatment and/or experience recurrent difficulties despite treatment (Farrell & Barrett, 2007), thus enhancing the effectiveness and efficacy of such programs. This investigation was conducted with a large community sample (N = 904) of adolescents.

The findings from the present study provide preliminary support for the proposition of Young's TFO conceptualisations and corresponding EMS. The results supported eight out of the 11 EMS hypothesised to corresponded to Young's TFO conceptualisations.

The Disconnection and Rejection Domain, as represented by a lower level of parental acceptance significantly predicted three out of the four hypothesised EMS: Social Isolation/ Alienation (SI), Emotional Deprivation (ED) and Defectiveness/Shame (DS). The EMS Mistrust/Abuse (MA) was not predicted by low parental acceptance.

The Impaired Autonomy and Performance Dependence Domain, as represented by a higher level of parental overprotection significantly predicted two out of the three hypothesised EMS: Dependence/Incompetence (DI) and Vulnerability to Harm or Illness (VH). Failure (FA) was not predicted by higher parental overprotection.

The Other-Directedness Domain, as represented by a lower level of parental autonomy granting significantly predicted one out of the two hypothesised EMS: Subjugation (SB). Self-sacrifice (SS) was not predicted by parental autonomy granting.

Finally, the Overvigilance and Inhibition Domain, as represented by a higher level of parental psychological control significantly predicted both hypothesised EMS: Unrelenting Standards (US) and Emotional Inhibition (EI).

Additional noteworthy results included: A lower level of parental acceptance (Disconnection & Rejection Domain) also significantly predicted Failure (FA), Unrelenting Standards (US) and Defectiveness/Shame (DS); a higher level of parental overprotection (Impaired Autonomy and Performance Dependence Domain) significantly predicted Emotional Inhibition (EI); a lower level of parental autonomy granting (Other-Directedness Domain) significantly predicted Social Isolation (SI); and a higher level of parental psychological control (Overvigilance and Inhibition Domain) significantly predicted Defectiveness/Shame (DS).

Findings were generally consistent with the cognitive-content specificity hypothesis (CCSH). In particular: Emotional Inhibition (EI), Failure (FA), Emotional Deprivation (ED), and

Unrelenting Standards (US) were the strongest predictors of depression, whereas, Emotional Inhibition (EI), Unrelenting Standards (US), Dependence/Incompetence (DI), and Vulnerability to Harm or Illness (VH) were the strongest predictors of anxiety. However, Unrelenting Standards (US) and Emotional Inhibition (EI) were both associated with depression and anxiety in the adolescent sample.

Typical family origins and the development of EMS

Disconnection and Rejection Domain

The Disconnection and Rejection Domain includes a TFO that is "detached, cold, rejecting, withholding, lonely, explosive, unpredictable, or abusive" (Young, 1990), and is hypothesised to foster an expectation that one's needs for security, safety, nurturance, and respect will not be met. In the present study, this TFO was represented by a lower level of parental acceptance. Three out of the four hypothesised EMS were significantly predicted by this TFO: Social Isolation (SI); Emotional Deprivation (ED) and Defectiveness/Shame (DS). A significant relationship was not evident between Mistrust/Abuse (MA) and this TFO.

A great deal of research has identified a number of core emotional needs that must be met in childhood by caregiver/s in order to ensure psychological health and positive adjustment later in life (Bowlby, 1969; 1988 Young, 1990). For instance, relevant to the Disconnection and Rejection Domain, Young suggests that children have a core emotional need for secure attachments to others, which includes safety, stability, nurturance, and acceptance. The results from the present study demonstrate that when such needs are not met i.e., a young person perceives a lower level of acceptance from a parent, an adolescent is more likely to feel that that they are isolated from the world, or different from others. In particular, believing that "no-one understands me (Social Isolation/Alienation [SI])". Young people who tend to perceive a lower level of parental acceptance also expect that they will not receive a normal degree of emotional support, believing that, "no-one loves or cares about me" (Emotional Deprivation [ED]). Further,

this TFO promotes the belief that “other people are better than me” (Defectiveness/Shame [DS]), that they are defective, bad, unwanted, inferior, or invalid in important respects.

Attachment theory also provides explanations of the developmental origins of internal working models of the self, the world and others (Bowlby, 1969, 1988). Children who experience their parents as caring and comforting are more likely to carry an expectation that the world will be accepting into other relationships throughout their lives. They are also more likely to develop a view of themselves as worthy and deserving of love. Conversely, a child exposed to a lower level of parental acceptance might develop an inner working model which promotes a hostile view of the self, the world and others (Pettit, Bates & Dodge, 1991). Beck has also (1964) stated that the influence of parents on depression for instance, might be at the schematic level of cognition.

This perspective linking parenting and children’s cognitive self-processing is also consistent with the overall concept of Rohner’s (1986) parental acceptance-rejection theory (PAR-theory). This perspective argues that children’s psychological adjustment is directly related to the degree of acceptance they perceive from their parents. Rohner (1986) discusses the need of children to receive a positive response for parents and considers that such a need was possibly acquired over the course of human evolution as physical dependency, environmental threats, behavioural, and cognitive capacities of children and their caregivers, interacted to favour survival of children who had caregivers who positively nurtured their offspring. PAR-Theory suggests that humans are motivated to reduce “psychological discomfort” symbolically. For instance, adopting a negative self-concept is one way to resolve the dissonance created by

strong need to be loved by parents when such love is not forthcoming (i.e., “I am not loved because I am unworthy of love”).

A social-learning perspective has also been suggested, in which the nature of the parent-child relationship serves as the prototype of basic relationship functioning. The child transfers negative or positive interaction styles encountered with their parent to their developing self-perceptions and relationships with others. A child learns primarily by internalising the parent’s voice i.e., “children learn what they live, children live what they learn” (Law Nolte, 1972).

However, a lower level of parental acceptance failed to predict Mistrust/Abuse (MA) and thus this hypothesis was not supported. Mistrust/Abuse (MA) refers to the expectation that others will intentionally take advantage in some way and will hurt, cheat or put them down. Mistrust (MA) might also include the sense that one always ends up being cheated relative to others or "getting the short end of the stick”. Perhaps the statement used to assess Mistrust/Abuse (MA) (“others are out to get or hurt me”) was too severe and thus did not adequately represent this EMS. For instance, it may be possible that a lower level of parental acceptance perceived by an adolescent does not necessarily lead to an expectation that others will want to hurt them, but more likely to a view that their parent/s did not value and/or accept them as an individual. Perhaps a statement such as “others take advantage of me” may be a more appropriate reflection of this EMS.

Further, it is possible that a harsher style of parenting (not included in this study) may also place young people at a greater risk of developing the Mistrust/Abuse (MA) schema. For

instance, in situations whereby parents employ power assertive control techniques and respond severely to their child/adolescent's transgressions, such as physical abuse, a young person may develop a general view towards other people that others are out to hurt them.

Additional noteworthy results not hypothesised included: A lower level of parental acceptance predicted Failure (FA). The Failure (FA) schema is hypothesised to develop from the Impaired Autonomy and Performance Dependence Domain (i.e., parental overprotection). Perhaps the statement used to assess Failure (FA; "I am a failure") represents more of how a young person views themselves (i.e., "I" am a failure) which may be a reflection of the lower level of perceived parental acceptance rather than parental overprotection. For instance, higher overprotection has been linked more with lower child performance e.g., skills, abilities, competence and independence. Perhaps Failure (FA) is more appropriately suited to the Disconnection and Rejection Domain, or a statement such as "I am a failure at doing most things" may be a more appropriate expression of this EMS. It may be possible that statements involving "I" (i.e., self-reflections) are more strongly influenced by parental acceptance, whereas the performance-based concepts (i.e., what I can/not do) are more strongly influenced by parental overprotection.

Impaired Autonomy and Performance Dependence Domain

The Impaired Autonomy and Performance Dependence Domain include a TFO that is "enmeshed, undermining of the child's confidence, overprotective or failing to reinforce the child for performing competently outside the family". Such a TFO is hypothesised to foster expectations about oneself and the environment that interfere with one's perceived ability to

separate, survive, function independently, or perform successfully. The core need associated with this domain is "autonomy, competence and a sense of identity" (Young et al. 2003) and in the present study was represented by a higher level of parental overprotection. Two out of the three hypothesised EMS were significantly predicted by this TFO: Dependence/Incompetence (DI) and Vulnerability to Harm or Illness (VH). No significant relationship was evident between Failure (FA) and this parenting construct.

Dependence/Incompetence (DI) refers to the belief that one is unable to handle one's everyday responsibilities in a competent manner, without considerable help from others (e.g., take care of oneself, solve daily problems, exercise good judgment, tackle new tasks, make good decisions) and was assessed by the statement: "I need other people to help get me by". Vulnerability to Harm or Illness (VH) refers to the belief that one is always on the verge of experiencing a major catastrophe (external, medical, emotional) at any time and that one will be unable to prevent it. This EMS was assessed by the statement: "Bad things happen to me".

Such results suggest that overprotective parenting conveys to a young person that they need others in order to manage their daily activities. For instance, a parent's excessive regulation of a child's activities and routines and their discouragement of independence, is likely to promote a limited sense of competency and self-efficacy, and may serve to reinforce avoidance of challenges (Parker, 1983; Chorpita et al. 1996) and dependence. Such parents have been referred to as "helicopter parents", with an analogy of hovering over the child. Higher levels of parental overprotection in childhood may lead to a belief that one is inadequate and incapable of making decisions, and of living a full and independent life.

An additional message such parenting may transmit to a young person is to interpret their environment as threatening and may develop biases towards interpreting ambiguous events as dangerous. These biases can subsequently lead such children to become apprehensive and anxious due to believing that events in their life will end poorly (Shirk, Gudmundsen, & Burwell, 2005).

The EMS Failure (FA) was not predicted by this TFO. As previously discussed, perhaps the "I" (i.e., the self) statements may be more strongly associated with parental acceptance whereas the "doing" or performance-based statements related more strongly to parental overprotection.

Other-Directedness Domain

The Other-Directedness Domain includes a TFO that is "based on conditional acceptance whereby children must suppress important aspects of themselves in order to gain love, attention and approval. Moreover, the parents' emotional needs and desires - or social acceptance and status - are valued more than the unique needs and feelings of child". Such a TFO is posited to foster expectations that relates to an excessive focus on meeting the needs of others, at the expense of one's own needs. This TFO was represented by a lower level of parental autonomy granting and the relevant core need associated with this domain is the child's "freedom to express valid needs and emotions". This TFO significantly predicted one out of the two hypothesised EMS: Subjugation (SB). No significant relationship was evident with Self-sacrifice (SS).

Subjugation (SB) refers to the belief that one's own desires, opinions and feelings are not valid or important to others. This EMS frequently presents as excessive compliance, combined with hypersensitivity to feeling trapped. The statement used to assess this EMS was: “It’s more important to put other people’s ideas and wishes before my own”.

The results from the present study suggest, that adolescents who perceive that their parents grant them a lower level of autonomy, tend to believe that it is more important to put other people’s wishes and ideas before their own. An important component of family relations, particularly during adolescence is the opportunity for young people to have increased input in decisions about issues that affect their daily lives (Fuligni & Eccles, 1993; Silverberg & Gondoli, 1996; Steinberg, 1990). Enabling adolescents to have input when decision-making opportunities arise has been identified as an important way in which families can provide an appropriate fit with their adolescents' developing needs for independence in a supportive context (Fuligni & Eccles, 1993).

Parental encouragement of adolescents' participation in decision-making also may promote appropriate levels of individuality and autonomy by demonstrating to adolescents that their points of view are important (Luthar, Cicchetti & Becker, 2000). Indeed, higher levels of family decision-making input have been linked to positive outcomes, including lower levels of potentially unhealthy reliance on peers (Fuligni & Eccles, 1993) and increases over time in positive self-concept (Holmbeck & O'Donnell, 1991).

However, lower parental autonomy did not predict Self-sacrifice (SS; "people will be cross or upset if I say the things I really want to say"). Perhaps the Self-sacrifice (SS) EMS involves fear of consequence i.e., the young person feels if they express an opinion, other people with be cross or upset, whereas Subjugation (SB) is primarily based on the perspective that other people's view are more important than their own.

Overvigilance and Inhibition Domain

The Overvigilance and Inhibition Domain comprises of a TFO that is, "grim, demanding and sometimes punitive: Performance, duty, perfectionism, following rules, hiding emotions, and avoiding mistakes predominates over joy, pleasure and relaxation". Thus, the relevant unmet core emotional needs as a result of this domain are "spontaneity and play". There are also undercurrents of pessimism and worry that things could fall apart if one fails to be vigilant and careful at all times". This TFO fosters expectations that concern an excessive emphasis on suppressing one's spontaneous feelings, impulsiveness, and choices or on meeting rigid internalised rules and expectations re performance and ethical behaviour often at the expense of happiness, self-expression, relaxation, close relationships, or health. This TFO was represented by a higher level of psychological control and significantly predicted both hypothesised EMS: Unrelenting Standards (US) and Emotional Inhibition (EI).

Parental psychological control refers to inducing guilt, instilling anxiety, withdrawing love, constricting verbal interaction, and invalidating the child's perspective (Barber, 1996). These parenting strategies are particularly salient throughout the transition to adolescence, when independent identity and self-expression become important (Barber, 1996). The results from the

present study indicate that the use of psychological control towards an adolescent instills a belief that one is not "good enough as they are" and thus must strive to meet very high internalised standards of behaviour and performance. Such behaviour is motivated by the view that "it is important to be better than others at everything I do" and this is conditionally-based, usually to avoid criticism.

Emotional Inhibition (EI) refers to the belief that you must inhibit emotions and impulses, especially anger, because any expression of feeling would harm others, or lead to loss of self-esteem, embarrassment, retaliation, or abandonment. This EMS was assessed by the statement: "I must not show my feelings to others". Such an environment may stifle independent expression and identity exploration (Soenens et al. 2005). If a young person feels they must "appear" to stay in control at any cost, the view that individual feelings are not important is reinforced; it is more important how other people perceive them.

Note: The above explanations are discussed in a general context as each parenting dimension in the present study did not have specific effects on the corresponding EMS.

Early maladaptive schemas and internalising problems

The results of the present study were generally consistent with the CCSH. This hypothesis is a component of Beck's cognitive theory of emotional disorders (Beck, 1987) which in broad terms refers to the view that threat or danger cognitions are associated with anxiety, and hopelessness, past loss and failure distinguishes depression (Clark, Beck & Brown, 1989; Ingram et al. 1994).

For instance, in this study, depression was predominately predicted by Emotional Inhibition (EI), Failure (FA), Emotional Deprivation (ED), and Unrelenting Standards (US), whereas anxiety was predicted by Emotional Inhibition (EI), Unrelenting Standards (US), Dependence/Incompetence (DI), and Vulnerability to Harm or Illness (VH). Lumley (2007) similarly reported that depressive EMS tend to reflect themes of loss or worthlessness, whereas anxiety related EMS reflect themes of danger or threat. Muris (2006) also found that Unrelenting Standards (US) and Failure (FA) predicted depression, whereas both Van (2010) and Lumley (2007) reported that Emotional Deprivation (ED) and Failure (FA) were positively predictive of depressive symptomatology.

In the present study, Failure (FA) predominately predicted depression. The Failure (FA) EMS refers to the belief that one has failed; will inevitably fail, or is fundamentally inadequate relative to one's peers, in areas of achievement (school, sports etc.). Such a belief often involves a view that one is stupid, inept, untalented, ignorant, lower in status, less successful than others, etc. Further, adolescents higher on depressive sympomatology were more likely to report that "no one loves or cares for me". Combined with a belief that one's desire for a normal degree of emotional support will not be adequately met by others, appears to contribute to depression in this adolescent sample.

With regards to anxiety, Muris also reported that Emotional Inhibition (EI) predicted anxiety symptoms, whereas both Lumley and Vlierberghe et al. (2010) report that Vulnerability to Harm or Illness (VH) predicted anxiety. Vlierberghe and Braet (2007) also reported that Unrelenting Standards (US) predicted anxiety. The theme of threat or danger was reflective of

young people with anxiety in the present study. In particular, Vulnerability to Harm or Illness (VH) which refers to the belief that one is always on the verge of experiencing a major catastrophe (e.g., external, medical, emotional) at any time and that one will be unable to prevent it ("bad things happen to me") are typically evident in people experiencing a variety of anxiety disorders, such as PD and GAD.

However, the EMS Dependence/Incompetence (DI), which refers to the belief that one is unable to handle one's everyday responsibilities in a competent manner, without considerable help from others (e.g., take care of oneself, solve daily problems, exercise good judgment, tackle new tasks, make good decisions) also significantly predicted anxiety. This is an interesting finding as this EMS reflects a "worthlessness" theme and thus is posited to be associated with depressive symptomatology. Such results may indicate that a young person experiencing anxiety may also hold a belief that they are unable to handle everyday responsibilities for instance. Such a mindset may trigger thoughts and emotions associated with danger or threat, for example, "what will happen if I can't solve this problem on my own?" etc.

The results of the present study revealed that adolescents who endorsed Unrelenting Standards (US) and Emotional Inhibition (EI) experienced both anxiety and depression. Van (2010) also reported that Emotional Deprivation (ED) was found in both anxiety and depression. Such results suggest that adolescents with anxiety and depression hold the belief that one must strive to meet very high internalised standards of behaviour and performance, usually to avoid criticism. In this sample, this was combined with a belief that you must inhibit emotions and

impulses, especially anger, because any expression of feeling would harm others, or lead to loss of self-esteem, embarrassment, retaliation or abandonment.

Such results suggest that although specific EMS may differentiate anxiety from depression, shared EMS are also apparent. A similar conceptualisation is referred to in the tripartite model of anxiety and depression (Clark & Watson, 1991). According to the tripartite model, an elevated level of negative affectivity is a common and shared component for both anxiety and depression, which would help to account for the high comorbidity of these two disorders. In addition, there are specific components related to anxiety and depression that discriminate between the two disorders: For instance, low positive affectivity (i.e., anhedonia, fatigue, or sluggishness) is associated with depression, whereas physiological hyperarousal is associated with anxiety.

It may be possible, that young people with internalising problems not only have EMS which may be used to discriminate depression (Failure [FA] and Emotional Deprivation [ED]) from anxiety (Vulnerability to Harm or Illness [VH] and Dependence/Incompetence [DI]), but also have common or shared components (Emotional Inhibition [EI] and Unrelenting Standards [US]). Moreover, there is research suggesting child/adolescent anxiety is a precursor to adult depression and child/adolescent depression is a precursor to adult anxiety (Essau et sl. 2000; Pine et al. 1998).

Parenting and internalising problems

The present results indicate significant associations between negative parenting and internalising problems in adolescents. For instance, all four parenting constructs significantly contributed to the anxiety model (approximately 32% of the variance), whereas the parenting constructs combined accounted for approximately 25% of the variance in depression.

Although some of the present results are in-line with previous research which has demonstrated that lower parental support has been more strongly associated with depression (Bean et al. 2006), and excessive parental control has been more specifically related to anxiety (Coplan et al. 2008; McLeod et al. 2007; Hudson & Rapee, 2001; Parker, 1983; Rapee, 1997; van der Bruggen et al. 2008), other findings offer additional insights.

As reported elsewhere and supported by the present findings, lower parental acceptance explained more of the variance in depression than anxiety in the adolescents. Adolescents who reported depressive symptoms also experienced a strong sense of being a failure (Failure; FA) and that "other people are better than me" (Defectiveness/Shame; DS). This resultant perception of one's self as a failure or defective may impact on confidence for forming and maintaining social relationships, thus increasing the risk of depression. Further, this TFO promotes the belief that "no-one understands me" (Social Isolation; SI), "no-one loves or cares about me" or my parents cannot be relied upon for emotional support (Emotional Deprivation; ED). Such beliefs may generate considerable unhappiness, especially throughout periods of increased challenges and change during adolescence.

The results demonstrated that a higher level of parental overprotection explained more of the variance in anxiety (12%) than depression (0.3%). A parent's excessive regulation of a young person's activities and routines is likely to promote a limited sense of competence, self-efficacy and mastery. When a young person feels unable to handle their everyday responsibilities in a competent manner (Dependence/Incompetence; DI) without considerable help from others, it is likely that anxiety will escalate when an expectation of independence from others i.e., peers and teachers increase, particularly during adolescence.

Parental overprotection can also increase anxiety through the adolescent's perception of threat and reducing the young person's own opportunities or perception of control over their environment (Shirk et al. 2005). With this type of parenting, a young person may interpret their environment as threatening and develop a bias towards interpreting ambiguous events as threats. These biases can foster anxiety from believing that events in their life will end badly and that the environment is threatening (Vulnerability to Harm/Illness; VH). As Coplan et al. (2008) reported shyness and internalising problems were stronger among children with mothers characterised by overprotective parenting style.

In comparison to existing research, (McLeod et al. 2007) the results from the present study revealed that a lower level of parental autonomy granting explained an equal amount of the variance in both anxiety and depression. If a parent does not encourage autonomy, an adolescents' ability to express themselves confidently and make decisions is impaired. The granting of autonomy is an essential process, because it plays a role in identity formation, which is a central task in adolescence (Cooper, Grotevant & Condon, 1982).

For example, a young person who experiences a lower level of autonomy granting may develop a belief that one's own desires, opinions and feeling are not valid or important to others. This may be especially problematic during adolescence when self-expression becomes particularly important (Barber, 1996; Silk et al. 2003). This may lead to thoughts that one is inadequate (Dale, 2010), which is often indicative of depression. However, when a young person has experienced little to no opportunities to learn how to make decisions, or be involved in making their own plans, when faced with situations where such tasks are required, a young person may feel apprehensive and hesitant, which may be indicative of anxiety.

In the present study, parental psychological control explained slightly more of the variance in anxiety than depression. Parental psychological control has been robustly associated with both anxiety and depression in young people (Barber, 1996). Such an association may be elevated throughout adolescence, when independent identity becomes particularly salient (Barber, 1996). Examples of psychological control are inducing guilt, instilling anxiety, withdrawing love, constricting verbal interaction, and invalidating the child's perspective.

These parenting strategies can stifle independent expression and identity exploration (Soenens et al. 2008). In turn, children may experience internalising problems symptoms, such as heightened guilt and worry, physiological arousal, limited perceptions of control and competence, and diminished feelings of self-worth. For instance, if a young person believes they must inhibit emotions and impulses because any expression of feeling may lead to abandonment (Emotional Inhibition; EI), such a conditionally-based relationship may foster depression. Whereas, parenting strategies that make young people strive to meet very high standards of

performance and behaviour, usually to avoid criticism (Unrelenting Standards; US), may generate increased anxiety and physiological arousal.

Implications of present study

The present study is the first to apply empirically-derived parenting constructs to Young's clinically-based TFO conceptualisation and examine whether, and if so to what extent, each parenting construct is associated with the posited corresponding EMS. Young's hypothesised TFO and corresponding EMS conceptualisations have provided valuable clinical insight into the origins of EMS and psychopathology. The present study has added some support concerning the parental origins of EMS and the role EMS play in the development of internalising problems in adolescents. The results from the present study not only support Young's clinical observations from which much of the EMS theory is based on, but are also in line with a mounting body of empirical data.

As already mentioned, a large proportion of intervention and prevention programs for young people with internalising problems have not been efficacious or effective. It was suggested by the present study, that only including individual and community-level factors in a program framework may not be sufficient. For instance, it may be challenging attempting to instil or teach positive individual-level factors (e.g., optimistic thinking style) when the young person inherently accepts something entirely contradictory regarding him/herself, the world and others, due to negative experiences within the family environment.

Thus, it was proposed in the present study that in addition to individual and community-level components, programs should also focus on enhancing the parent-child/adolescent relationship and educating parents about and the effects of the different parenting constructs. Such additions may lessen the potential development of EMS and internalising problems in many young people. Further, a program based on a more comprehensive, multiple domain framework may assist in reducing the "high numbers of young people with internalising problems who terminate treatment prematurely, fail to respond to treatment and/or experience recurrent difficulties despite treatment" (Farrell & Barrett, 2007). This may be possible if a program is effective in reaching the origin of the heart of the problem in many cases - the relationship between a parent and a child/adolescent.

As Millon (1981; cited in Young, 1990, p. 10) states,

Significant experiences of early life may never recur again, but their effects remain and leave their mark….they are registered as memories, a permanent trace and an embedded internal stimulus….. Once registered, the effects of the past are indelible, incessant and inescapable…..

However, as a conceptual framework built on a solid empirical base that describes the relationship between multiple parental risk-factors and internalising problems is currently lacking (Chorpita et al. 1996), the results of the present study have provided an initial step to investigate further the potential of a clinically and empirically-based parent-level framework.

Although the findings of the present study cannot demonstrate causality, it seems plausible to assume that if young people were not exposed to such maladaptive parenting practices and styles in the first instance, not only would it help to prevent the development of EMS, there would be less numbers of young people experiencing internalising problems. Beck (1964) also noted that the impact of parents on depression for instance, might be at the schematic level of cognition.

The addition of a parent-level component may appear theoretically sound, however in practice; the execution presents a myriad of challenges. For instance (although not the focus of this thesis), one of the most significant issues is deciding on the most appropriate mode of delivery, length, and the extent and role of parents in the intervention or prevention strategy. Perhaps universal screening (Essex et al. 2009) at secondary (high) school entry could effectively identify young people reporting with EMS, symptoms indicative of internalising disorders etc, and based on the results, selected adolescents and their parents could be invited to participate in a parent-adolescent-program.

Parents could be educated on practical methods concerning how to reduce and/or enhance specific behaviours inherent in each parent construct. For instance, parents could be educated about the benefits of displaying acceptance to their adolescent, i.e., a smile, offering praise and commenting or showing their adolescent that they are the most important person in her/his life. Further, teaching parents to be less overprotective and more granting of autonomy will enable parents to implement new behaviours that convey to their adolescent that they are competent and have control over events in their lives, thus enhancing self-esteem and reducing anxiety.

Also, educating parents about the impact of psychologically controlling techniques, e.g., being less friendly with their adolescent when they do not see things his/her way, attempting to change how their adolescent feels or think about things or avoiding looking at their adolescent when the adolescent has disappointed him/her. Parents could be taught about "normal" adolescent development and strategies for encouraging and promoting independent thought and decision making. Parent-adolescent sessions, including didactic training sessions, interpersonal therapy and role-playing exercises could also be offered. Focusing on teaching strategies to balance independence within a supportive context may reduce the existing negativity and nurture a more secure attachment relationship.

It may be argued, that raising a child is the most challenging and most responsible undertaking a human being can face. It is also a role for which people receive the least formal training. Each parent's knowledge of how to raise a child is often a result of their own upbringing. This may result in patterns from the parent's own experiences being repeated and passed on to their children. An additional suggestion which may be of assistance is a complementary strategy designed by water safety experts in conjunction with the Australian Government. A team has compiled a comprehensive resource for parents (i.e., a DVD) to reduce drowning; the greatest cause of death in children under five in Australia. Every new parent in Australia receives a free "Kids Alive – Do the Five!" DVD (Lawrence, 1999; http://kidsalive.com.au/). Perhaps an evidenced-based DVD which addressed: Educating parents about the different parenting constructs and how certain parenting practices and styles impact on young people, role playing illustrations and real-life suggestions for managing difficult

behaviours could be presented to every child who starts school. Parent-child exercises could accompany the resource to reinforce the relevant messages.

The results from the present study also have implications for including an EMS-based individual component to existing programs. As suggested above, because EMS are developed early in life they often form the core of an individual's self-concept and conception of the environment, serving as templates for processing and defining later behaviours, thoughts, feelings, and relationships with others. Even when presented with evidence that disproves the EMS, an individual will distort data to maintain its validity over a lifetime and become the organising principles for one's emotional and behavioural functioning (Young, 1990, p. 56). It thus seems imperative to prevent such schemas from developing. Perhaps if young people were assessed and treated for EMS, it may be possible that such interventions may prevent or reduce the likelihood of the development of internalising problems in the future.

The present results also contribute to the literature regarding differentiation of the unique and shared EMS associated with specific emotional disorders. Such results could be the focus of clinical interventions. For example, young people presenting with depressive symptoms could be assessed for Emotional Inhibition (EI), Failure (FA), Emotional Deprivation (ED), and Unrelenting Standards (US), whereas individuals presenting with anxiety symptoms could be assessed for Emotional Inhibition (EI), Unrelenting Standards (US), Dependence/Incompetence (DI), and Vulnerability to Harm or Illness (VH). Unrelenting Standards (US) and Emotional Inhibition (EI) were associated with both depression and anxiety in the adolescent sample. Identifying and challenging specific core beliefs and automatic thoughts related to the specific

EMS may be done through exposure to social situations in Behaviour Therapy; through the management of relationships in Interpersonal Therapy; and through social skills training. Young (1990) proposes a primary emphasis on the deepest level of cognition. EMS therapy probes more deeply into early life experiences than standard cognitive therapy. However, without engaging in the underlying EMS, difficulties experienced in early life may continue to impact on current symptomatology (Young, 1990).

Limitations of present study

A number of limitations of this study should be mentioned. Although the community sample was large (N = 904), was recruited from government, independent and non-government high schools, and rural and urban areas, it was comprised of a non-clinical sample. Thus, the majority of young people reported rather low-moderate levels of EMS, internalising symptoms and negative parenting practices and styles. Moreover, cultural factors were not addressed. Thus, it is important to interpret these results with caution when applying them to a clinical sample, to adolescents who are living with families experiencing considerably poorer overall functioning, or other cultures. Nevertheless, research in community populations can provide insight into developmental issues relevant to the clinical setting.

Further, although the self-report method employed in the present study enabled the maximum participants within a limited time constraint as well as provided a sensitive examination of constructs such as perceived psychological control and internalising problems that may have been difficult to obtain using other methods, such methods have limitations. For instance, since parental reports of their own parenting behaviours were not included, it cannot be

stated for certain whether the adolescent perception is in agreement with actual parental behaviours or if adolescent internalising problems play a role in the appraisal of parental behaviours. Further, the correlations significant at $p < .01$ were rather small in magnitude.

However, adolescent self-report may be the most valid method to assess constructs of parental treatment because of the subjective nature of this experience (Barber, 1996). The young person's actual experience of parental behaviours may be more important for development than objectively measured parental characteristics (Parker, 1989). Nonetheless, researchers are encouraged to replicate the current findings with parent-reported indices of the measured constructs.

Similarly, as all variables were assessed from adolescent self-report, the issue of shared method variance due to potential confounding must be considered. Furthermore, although the use of adolescent self-report is widely accepted in research, when conclusions are made concerning internalising problems, it should be noted that as the symptoms were derived from self-report, this does not equate to a clinical diagnosis of an internalising disorder.

In addition, a number of issues associated with the scale used to measure the EMS (Schema Questionnaire for Children; SQC; Stallard, 2005) should be acknowledged. First, the SQC contains only one item per EMS. Distilling each EMS into a single question may result in the multiple dimensions of each schema becoming lost. The correlations reported in this study may therefore reflect a consistency across the singular cognitive dimension assessed by the SQC with possibly important and subtle developmental variations within each EMS not being

adequately captured (Stallard, 2007). Moreover, the use of a single item representation did not enable a structural analysis of EMS leaving the identification of each separate EMS in the adolescents unfeasible (Rijkeboer & de Boo, 2010). It should also be noted that the Cronbach's alpha of the SQC in the present study was 0.66, which is regarded as "questionable".

Although cross-sectional data can provide information about the relationships that exist between variables, satisfying statistical criteria for supporting a number of pathways does not shed light on the direction of effects nor does it necessarily rule out alternative pathways. The reciprocal nature of relationships is influenced by the complex interaction of many factors existing within a young person, their family, community, and culture, and hence a "one-way" influence is unlikely. Children and adolescents play an active role in their own socialisation and development and as such, parent-child/adolescent interactions are co-constructed by the parent and the child/adolescent rather than imposed on the young person in a "top-down" manner by the parent (Friedman & Chase-Lansdale, 2002).

Thus, a plausible alternative interpretation regarding the effects of parenting on the development of EMS or internalising problems may include a "child/adolescent effects" model whereby a young person's EMS or internalising problems symptoms may place added stress on a parent who in turn, may elicit more negative responses. For example, a parent may respond with greater over-protectiveness toward a young person who was exhibiting anxiety symptoms. Thus, it is the interaction of factors that contributes to the psychological development of young people. In order to gain further insight into the directions of potential causal pathways between such variables, longitudinal data are necessary to determine the temporal sequence of events.

It may be possible that other variables are involved in the prediction of EMS. For instance, Young (1990, p. 11) states that ‘‘EMS seem to be the result of the child’s innate temperament interacting with dysfunctional experiences with parents, siblings and peers’’. In particular, temperamental shyness is considered a risk-factor for the development of childhood internalising problems (Coplan, Reichel & Rowan, 2009).

It is also possible that additional parenting practices and styles may be as, or more responsible for the development of EMS and/or internalising problems than those addressed in the present study. For instance, the impact of inconsistent parenting practices and styles. A child raised in an environment, for example, where parent/s alter discipline techniques, displays of affection and level of involvement, not only creates confusion of what is expected of young person, but does not help a child learn the essential problem solving and social skills they need to thrive in the world. Such environments create insecurity and contribute to a child feeling incompetent, despite their best efforts.

Finally, the parenting constructs (parental acceptance, parental overprotection, parental autonomy granting, and parental psychological control) which were selected and subsequently applied to Young’s TFO conceptualisations were chosen based on empirical reviews of the literature and careful evaluation, contrast and comparison. However, the final selection was accomplished by the subjective perspective of the researchers and this should be kept in mind.

Suggestions for future research

Despite the acknowledged limitations of the present study, it is important that future research continue to examine the relations among parenting constructs, EMS and internalising problems in young people. For instance, future studies could investigate whether the relations among the parenting constructs and EMS are applicable to all subtypes of anxiety in order to identify the most effective approaches to prevention and treatment. For example, the results of the present study demonstrate that the use of parental psychological control can instill beliefs that one must strive to meet very high internalised standards of behaviour and performance, motivated by the EMS that "it is important to be better than others at everything I do" (Unrelenting Standards; US). Such techniques can foster maladaptive perfectionism, which has been associated with OCD symptoms (Soenens et al. 2005). Further, symptoms indicative of SP often include overestimating how threatening the world is (comparable to the EMS: Vulnerability to Harm or Illness; VH), whereas SAD can include apprehension of being separated from a significant other (comparable to the EMS: Dependence/Incompetence; DI).

Similarly, when the cognitive-content related to depression and anxiety are directly compared; support for content-specificity has been less consistent for anxiety relative to depression (Greenberg & Alloy, 1989). It may be possible that grouping all the anxiety disorders together could contribute to such mixed findings. Examining each disorder individually will provide additional insight into the cognitive-content of specific disorders, which will offer a foundation for a more fine-grained approach to intervention and prevention initiatives.

Although gender differences were explored in the present study, only two significant differences were evident. The adolescent females reported higher levels of parental overprotection and the EMS, Emotional Deprivation (ED), than the males. Avison **AND** Mcalpine (1992) similarly reported that parents tend to display greater overprotection to their daughters than sons. This may be enhanced during adolescents when increased independence take**S** place. The females in the present study also reported significantly higher levels of Emotional Deprivation (ED) than the males. Although research has not investigated gender differences in adolescent samples, Shorey, Stuart and Anderson (2011) reported that young adult females (aged 17 to 26 years) in a residential substance use treatment program in the USA, reported higher Emotional Deprivation (ED) EMS than males. It may also be interesting to examine potential dyadic relationship differences i.e., mother/daughter, mother/son, father/daughter, and father/son. Some research has demonstrated that fathers tend to be more overprotective towards daughters experiencing symptoms of depression than sons (Avison & Mcalpine, 1992). Further examination would provide greater gender-specific insight.

Young suggests that apart from parenting factors, EMS also develop from the interaction between the child's innate temperament and the child's ongoing damaging experiences with siblings or peers and surrounding cultural influences. Investigation of this type of research would refine our understanding of the origins of the relationship between such factors and internalising problems in youths (Muris & Field, 2008). For instance a positive association between maternal neuroticism and overprotective parenting was found to increase with higher levels of temperamental shyness (Coplan et al. 2009), whereas negative teacher-child relationships have

been reported to exacerbate the relations between shyness and anxiety (Arbeau, Coplan & Weeks, 2010).

Further, it has been suggested that families in certain collectivist cultures consider that "feeling good about your group or community is important but feeling good about yourself is not" (Multicultural Health Communication Service, 2004). Some parents from such cultures may not praise or encourage their children for fear it will create a self-satisfaction that will prevent the child from trying harder. Moreover, in some cultures people consider that praise will make children "boastful". Taking into account Australia's increasingly culturally diverse population, investigating such differences between cultures, parenting practices and styles and developmental outcomes may assist in understanding possible differences and where appropriate, teaching young people and parents that "having personal confidence and self-esteem does not equate to giving up these cultural values, but it can add to them" (Multicultural Health Communication Service, 2004).

The present study and many studies within the cognitive framework rely solely on self-report questionnaires. By additionally questioning parents via clinical interviews for instance, the issue of shared method variance can be reduced. Qualitative analyses may also contribute to existing knowledge. The adolescents involved in this study were also invited to answer the question: "Can you think of three ways that parents can show their children that they love them?" The author of the present thesis is in the process of identifying relevant themes and plans to compare and contrast responses with the existing quantitative data. It is also important to develop a more psychometrically sound questionnaire to assess EMS in children and adolescents. Perhaps

a modified version of the Young's Schema Questionnaire, comprising of a cluster of items per individual EMS would enable the underlying essence of each EMS to be more adequately assessed.

Finally, it would be of considerable interest to employ an evidence-based parent-level framework and examine the effectiveness and efficacy of the program with adolescents in South Australia. At present, no such framework exists in South Australia. The most prominent parenting program in Australia however is the Triple P-Positive Parenting Program (Sanders & Glynn, 1981). This multilevel system was developed at the University of Queensland in Australia and was primarily designed as a training program for parents of disruptive preschool children. This program has expanded to include older children and adolescents at-risk of developing or who already are exhibiting aggression, delinquency, oppositional behaviour, conduct problems, and other externalising-type problems.

Among additional areas, the program addresses the acknowledged relationship between low parental self-efficacy regarding the responsibilities of raising children, and the development of externalising or behavioural problems in young children (Johnston & Mash, 1989). Low parental self-efficacy can often result in parental reliance of power assertive control techniques, such as physical punishment, yelling and verbal threats (Unger & Waudersman, 1985). A fundamental objective of Triple P is the development of an individual's capacity for self-regulation, thus the program involves increasing parental self-efficacy and the teaching of assertive discipline techniques (Sanders, 1999; Sanders, Markie-Dadds, & Turner, 2003). The Triple P-Positive Parenting Program is based on 30 years of clinical research and clearly

demonstrates the profound impact of including family-level factors within prevention and/or intervention efforts, not merely addressing individual and/or community-level factors.

With regards to young people at-risk of developing or who are already experiencing internalising problems, and as demonstrated in the present study, a significant relationship exists in particular, between higher levels of parental psychological control and lower levels of parental acceptance and internalising problems. As addressed in this study, psychological control refers to control attempts by parents that intrude into the psychological and emotional development of the child.

This form of control is referred to as a type of intrusive, covert, coercive, passive-aggressive control that is characterised by hostility toward the adolescent. Psychological control is manifested primarily through covert strategies, such as inducing guilt, instilling anxiety, withdrawing love, constricting verbal interaction, and invalidating the young person's perspective (Barber, 1996). It may be possible that power assertive control techniques are more likely to foster externalising problems, whereas the covert strategies involved with psychological control may more likely foster internalising problems in young people.

In order to examine such hypotheses, four parent and adolescent groups could be involved in an empirical trial: Group 1 would receive a standard program, such as the *beyondblue* intervention (based on the individual and community-level framework only); Group 2 would receive an appropriate version of the Triple P-Positive Parenting Program; Group 3 would participate in a new parent program (e.g., similar to the concepts explained in the

Implications of Results section); in particular, the parental psychological control and parental acceptance components); and Group 4 would be the control group and receive no intervention.

All groups would complete baseline assessments of internalising/externalising problems, EMS, parental psychological control, parental acceptance, and power assertive control techniques. These variables would be also examined post-intervention and at follow-up. The outcome would be measuring potential differences of the level of internalising/externalising problems between the four groups at the different time-points. The parenting constructs could be examined for potential relationships between power assertive control techniques and externalising problems, and psychological control and internalising problems.

There is also some empirical support that there are differences between the EMS in young people with externalising versus internalising problems (Sava, 2009). Such research would provide a more fine-grained empirically-based insight into the multiple-level contributory factors involved in the development of internalising *and* externalising problems in order to inform prevention and intervention initiatives. Longitudinal data are also required to establish causal relationships and would enable an enhanced test of the framework.

Note: The author of this dissertation is currently designing a program based on addressing the components involved in parental psychological control and low parental acceptance.

Conclusions

Although preliminary until replicated and extended, the results from the present study provide support for Young's TFO conceptualisations and posited corresponding EMS. A total of eight out of the 11 propositions were supported and it is possible that methodological issues (e.g., the EMS measurement scale) contributed to the three unsupported hypothesis.

Although it is to be expected that a variety of factors contribute to *why* young people who experience internalising problems terminate treatment prematurely, fail to respond to treatment and/or experience recurrent difficulties despite treatment, the results from the present study highlight the impact and necessity of addressing parenting practices and styles on the development of EMS and internalising problems in adolescents.

As Million (1981, as cited in Young 1990 p. 101) suggests:

"The residuals of the past do more than passively contribute their share to the present…..they guide, shape or distort the character of current events. Not only are they ever present, then, but they operate insidiously to transform new stimulus experiences in line with the past".

Thus, it may be possible that the addition of a family-level component to intervention and prevention frameworks may not only be valuable, but a necessity.

CHAPTER SEVEN: GENERAL DISCUSSION

Preamble

This chapter provides a general overview of the impetus, aims and approach of this dissertation. A description follows of what the results contribute to the extant literature. Selected comments from the reviewers and an editor of the published papers (study one [*paper one*] and study two [*paper two*]) are included. Each of the three studies has already included: Implications and limitations of the results and future research directions. Therefore, only the future directions of the data collected from and problems encountered during the present research program will be addressed. A discussion involving the general limitations of the research and a final conclusion is subsequently presented.

Summary of the impetus, aims and approach of thesis

As Farrell and Barrett (2007) comprehensively highlight:

"Despite the advances in psychological treatments for childhood anxiety and depression, research indicates that most sufferers will not actually receive clinical intervention, and of the minority who do, many will terminate prematurely, fail to respond, or experience recurrent difficulties despite treatment".

This extract above, coupled with personal observations within school classrooms that students with internalising problems were under-identified, under-referred and thus much less

likely to receive the mental health services they need, were the impetus for this research. The overall aim of this thesis was to improve the evidence base for service delivery for South Australian adolescents experiencing internalising problems. As demonstrated throughout this thesis, no "one-way" approach exists to address such complex issues. Thus, a triple-pronged approach was employed in an attempt to achieve this aim:

The first "prong": To improve access to mental health services for young people experiencing internalising disorders by examining how to increase the current low referral rates by teachers in educational contexts (study one, *paper one*). In order to enhance the scientific rigour of study one, a mixed-methods research design was employed.

The second "prong": To improve the evidence base of the multiple determinants of internalising disorders in order to provide direction to funding initiatives for mental health services and to highlight an under-researched, yet high-risk rural adolescent population (study two, *paper two).* In order to enhance the scientific rigour of this study a theory-driven multi-domain framework was employed.

The third "prong": To improve the efficacy and effectiveness of intervention and prevention programs by the addition of theoretically-derived family-level factors to conceptual frameworks (study three). In order to enhance the scientific rigour of study three, four theoretically-derived parenting constructs from the Process Model (low parental acceptance and autonomy granting and high psychological control and overprotection) were applied to Young's clinically-derived TFO conceptualisations.

Contribution to knowledge

An overview of the new findings generated from this research will now be provided. Selected comments from journal reviewers, an editor and other sources are also included.

Study one (*paper one*)

Study one enhanced the existing literature by employing a simultaneous mixed-method research design to examine teachers' perspectives regarding how to increase the current low referral rates of students with internalising disorders. It was anticipated that such knowledge would facilitate the pathways to mental health services in educational contexts. The results demonstrated that school teachers in South Australia perceive they face an expectation to identify the symptoms of internalising disorders in their students; yet do not feel sufficiently capable to put this expectation into practice. The results support those of Rothi et al. (2008), which identified this trend that appears to have emerged since the education system's recognition of the importance of social-emotional wellbeing on learning outcomes, and a growing philosophy that schools have a duty of care to identify and prevent the development of mental health problems in students. This trend appears to be a global phenomenon.

The disparity between *expectation* and *capacity* is particularly problematic for students with internalising disorders, not only do teachers refer more students with externalising problems for mental health services in the first instance, but teacher referral is the most common pathway to treatment. The present study further examined possible reasons to explain and reduce this disparity. Based on the main results and the well endorsed suggestions (i.e., conducting a case-

study assessment and provision of a "well-being facilitator" [WBF]), a framework was presented (*Chapter Five*). In particular, the framework suggests: (1) increased training regarding how to identify internalising symptoms in their students during pre-service teacher education; (2) greater exposure to and awareness of the availability of supportive resources, such as MindMatters' *Practical Steps for an Effective External Referral System* (MindMatters, 2010). For instance, such resources could be introduced during pre-service training; and (3) increased access to mental health professionals i.e., psychologists.

The inclusion of a WBF, i.e., a person who a teacher could contact when they are concerned about the mental health of a student, be responsible for organising a referral, creating a mental health care plan, monitoring the progress of the student, and liaising with the relevant parties involved, was a particularly well received suggestion. The inclusion of a WBF could alleviate concerns raised by the APS regarding current government funding initiatives of a $222 million investment for the National School Chaplaincy Program as according to the APS, "chaplains are not professionally qualified to undertake this work (e.g., dealing with students experiencing anxiety and depression, alcohol and drug use, physical and emotional abuse and neglect, suicide and self-harm)". Study one (*paper one)* suggested that perhaps chaplains could be involved as WBF to participate in a supportive role and allow psychologists, who are "the most qualified professional group to provide early intervention services to students who are experiencing poor psychological health" (APS, 2010).

Reviewers' comments of *paper one*

Reviewer A: "The article represents what could be a potentially important contribution to the field. A major strength of this piece is the authors' incorporation of a range of public policy issues relevant to the topic at hand. Their discussion of the Australian Government's National School Chaplaincy Program and the response from the APS, along with statistics provided from the Joint Principal's Association Survey, and placed against the backdrop of an in-process implementation of a National Curriculum all provide this writing with a context that helps to underscore the pertinence of the results presented. Given the struggles of funding in educational systems around the world, and the small likelihood that governments will find the financial resources to address these needs anytime soon, important findings such as the ones presented in this article must be used to support exhortations to make changes in the area that seems most likely to change - the training institutions".

Reviewer B: "I felt the Introduction was extremely well written and organised; I think that it is an important study".

Paper one was selected to be included in the "Information for Practice" category, on a website (http://ifp.nyu.edu/) edited by Professor Holden from New York University. The site's mission statement is: "To help social service professionals throughout the world conveniently maintain an awareness of news regarding the profession and emerging scholarship".

The goals of this website include:

- To identify and deliver a selection of the highest quality research available in each category
- Regularly deliver an interesting mix of new information
- Create a more global sense of the profession for users from all locales.

Paper one can be located from the web link below:

http://ifp.nyu.edu/2011/journal-article-abstracts/it%E2%80%99s-not-just-the-squeaky-wheels-that-need-the-oil-examining-teachers%E2%80%99-views-on-the-disparity-between-referral-rates-for-students-with-internalizing-versus-externalizing-problems/

Study two (*paper two*)

Study two contributed to the extant literature by highlighting the under-researched, yet acknowledged high-risk rural adolescent population. Study two (*paper two)* employed a multidimensional conceptual framework to cross-sectionally examine individual (self-esteem), family (parental acceptance), and community-level (social capital) determinants of internalising disorders in order to build an empirical data base and to assist in providing evidence-based guidelines for establishing priorities for newly appointed Federally funded youth services in rural South Australia.

This study also aimed to dispel the myth of the "rural idyll", a perspective that the country is calm and serene and the people residing in it enjoy a slower pace of life. Such a view suggests that mental illness should be more problematic for the city dwellers in the proverbial "rat-race" environment. However, study two aimed to emphasise that living in the country in fact carries additional risks to mental health. For instance, 15 to 24 year olds living in rural areas in Australia have higher hospitalisation rates than those in metropolitan areas and the death rates of young males from accidents, injuries and suicide increases markedly with increasing geographical remoteness.

The results from this study revealed a concerning prevalence of internalising problems, with 13% of adolescents in the sample were considered to be above the clinical threshold, and 4% reporting experiencing severe symptoms. The results also highlight the predictive power of both lower levels of perceived parental acceptance and self-esteem in adolescents experiencing internalising problems. Those young people, who experienced a lower level of social capital within their communities, also experienced lower self-esteem. The linear contribution of parental acceptance, self-esteem and social capital were significantly related to internalising problems (approximately 33% of the variance; however, social capital was not a significant predictor of internalising problems). Although the findings from the present study cannot demonstrate causality, the results nonetheless may direct specific evidence-based guidelines for establishing priorities for newly appointed funds from the Federal government.

In light of the concerning rates of internalising problems demonstrated by the present study, coupled with the fact that young people from rural areas have not been considered in

previous National Mental Health Surveys, (despite young people living in rural and remote areas make up approximately 29% of the total Australian population), this research underscores the importance of including as many Australians as possible from rural and remote areas, in the approaching, subsequent National survey.

Editors & reviewers' comments of *paper two*

Editor: "The researchers' comprehensive approach makes a substantial contribution to the scant existing database on the mental health of rural adolescents in South Australia - an important but currently under-researched population" (Editor, *Rural and Remote Health*, 2010).

Reviewer A: "Helpful research, contributing well to a currently small evidence base – well done. I commend the authors for highlighting this area".

Reviewer B: "Overall a well written article with potential implications demonstrated in the Discussion to change policy and clinical practice".

Paper two has been selected to be catalogued in the Australian Institute of Family Studies (AIFS) library within the adolescent and parent relationships section): The website can be accessed below:

http://www.aifs.gov.au/afrc/bibs/adolescentsparent.php

Study three

Study three contributed to the existing literature as it was the first study to apply theoretically-derived parenting constructs to Young's clinically-derived TFO conceptualisations. Such environments are hypothesised to contribute to the development of specific EMS and psychopathology in childhood. Young's TFO and corresponding EMS conceptualisations have provided valuable clinical insight into the origins of EMS and psychopathology. This study has added some empirical support concerning the parental origins of EMS and internalising problems and the role EMS play in the development of internalising problems in adolescents. The findings from study three provide preliminary support for the proposition of Young's TFO conceptualisations and corresponding EMS. The results supported eight out of the 11 EMS hypothesised to corresponded to Young's TFO conceptualisations.

The results of study three highlight the importance of and provide some support for the inclusion of an evidence-based *parent*-level component to intervention and prevention frameworks. By ensuring that the foundation of a program consists of an evidence-based family-level framework will inevitably lessen the potential development of EMS and internalising problems in many young people. Programs designed to focus on enhancing the parent-child/adolescent relationship, addressing existing EMS and educating parents about, and the effects of the different parenting constructs, will enhance the efficacy and effectiveness of such programs. Thus, the results from the present study may be used to create a clinically and empirically-based exploratory family-level framework that may be incorporated into intervention and prevention initiatives.

The findings from study three were generally consistent with the cognitive-content specificity hypothesis (CCSH; Beck, 1987). In general terms, this hypothesis refers to the view that threat or danger cognitions are associated with anxiety, whereas hopelessness, past loss and failure distinguishes depression (Clark et al. 1989; Ingram, 1989; Partridge et al. 1994). In study three for instance, Emotional Inhibition (EI), Failure (FA), Emotional Deprivation (ED), and Unrelenting Standards (US) were the strongest predictors of depression, whereas, Emotional Inhibition (EI), Unrelenting Standards (US), Dependence/Incompetence (DI), and Vulnerability to Harm or Illness (VH) were the strongest predictors of anxiety. However, in-line with the tripartite model of anxiety and depression (Clark & Watson, 1991), Unrelenting Standards (US) and Emotional Inhibition (EI) were both associated with depression and anxiety in the adolescent sample. Such knowledge enables a more fine-grained approach to intervention and prevention programs.

Problems encountered during candidature

Embarking on a Doctor of Philosophy (PhD) and Master of Psychology (Clinical) program simultaneously was an enormous, yet empowering challenge. As I was not part of an existing project, the entire research process was conducted independently. On reflection, my research goals were unrealistic and an ambitious undertaking within the designated time-frame. Consequently the program completion date is approaching five years, instead of the expected four years. I have a great deal of data that has not yet been analysed (as shown in Tables 5 and 6 respectively). However, as will be discussed below, I aim to analyse much of this data in the near future.

The current research program included and conducted a total of *four* studies. However, due to time constraints, only three studies were presented in this dissertation. The fourth study aimed to investigate possible comorbid substance misuse patterns in older adolescents with internalising problems in order to determine service need regarding alcohol and/or drug support services for young people with internalising disorders. A total of 263 undergraduate first-year university psychology students; ages 17 to 20 years participated (see ethics approval letter from the University of Adelaide Ethics Committee in Appendix 18). This study will be prepared for publication in post-doctoral work and is explained in more detail below in Future research from present data.

Further, the intention at the beginning of my candidature included enhancing cognitive content-specificity between both the parenting constructs and the five separate anxiety disorder included in the RCADS i.e., SAD, PD, OCD, GAD, and SP (hence the literature review of each anxiety disorder in the Introduction [Chapter One]). However, with limited time remaining, I decided to combine the results of each separate anxiety disorder into a total anxiety score.I also underestimated the time and effort involved in a mixed-methods research design. In particular, the content analysis process was challenging and took a great deal of additional and unexpected time.

However, the major problem encountered throughout my candidature concerned statistical analyses. A statistical procedure often applied to research investigating predictors and multiple mechanisms of comparable problems is Structural Equation Modelling (SEM). The benefits of SEM and the analyses intended to be conducted during this research program are

addressed on page 237 - 239. Unfortunately I was not able to access appropriate training in this statistical method within the time frame of the thesis.

General limitations of present thesis

Despite the important contributions of the present studies, several general limitations merit reflection. For instance, although study one (*paper one*) focused on the educational environment as the pathway to mental health services for young people of school age, there are additional service providers in Australia. For instance, hospitalisation and other residential care units, hospital-based outpatient services and community mental health services, through to consultation with both specialists and General Practitioners (GP). There are also various other factors or barriers to accessing services than were investigated in this dissertation. For instance, structural issues include cost and distance to travel, and personal or social factors, such as stigma, concerns around treatment and diagnosis, confidentiality and self-perception have been reported (Jorm et al. 2006).

Although study two (*paper two*) employed a multi-developmental framework, there are numerous additional factors that have shown to play a role in the development of internalising disorders that were not considered in this research. For instance, vagal regulation (Hastings, Sullivan, McShane, Coplan, Utendale, & Vyncke, 2008), biological and/or genetic factors (Kendler, Walters, Neale, Kessler, Heath, & Eaves, 1995) and the relationship between temperament and personality (Hastings et al. 2008; Coplan et al. 2009). This thesis also only investigated one individual-level attribute, i.e., self-esteem in study two and EMS in study three as risk-factors. It is important to acknowledge that there are myriad of individual characteristics,

including self-efficacy, attributional and attachment style, which additionally may impact on developmental outcomes.

The analyses of the data employed also should be emphasised. Regarding *paper one*, although an inductive qualitative component can greatly enhance understanding or explanation of the phenomenon under investigation, interpreting participant responses can create issues due to the subjective nature of such an approach. Further, although prospective in design, the cross-sectional nature of *paper two* and study three reduces the strength of the results. Although cross-sectional data can provide information about the relationships that exist between variables, in order to gain further insight into the directions of potential causal pathways between such variables, longitudinal data are necessary to determine the temporal sequence of events.

Also, there are a number of possible explanations to account for *why* existing intervention and prevention programs have not been effective or efficacious i.e., not just because the framework did not include a *family*-level component. For instance, the delivery of an intervention was too brief, school personnel did not have sufficient training and supervision to ensure high levels of program fidelity, or the actually program was not empirically supported (Spence & Shortt, 2007).

Finally, not all adolescents exposed to negative parental styles and practices develop internalising problems. Knowledge regarding risk-factors is complimented by an understanding of protective factors which may buffer young people against risk-factors for internalising disorders. An understanding of how protective factors can be enhanced is invaluable, as a

strengths-based approach leads directly to the development of intervention and prevention programs.

Future research from present data

Although I included too many variables in the online adolescent survey and consequently ran out of time to analyse them all within the designated time-frame, I plan to analyse the outstanding data and prepare a number of papers for publication in post-doctoral work. Study three is nearing completion towards publication and additional plans for papers are discussed below.

I will continue to analyse the data collected from the university sample (N = 263). The impetus for study four came from the final segment of the extract by Farrell and Barrett (2007):

"….most suffers [of anxiety and depression] *will ..... experience recurrent difficulties despite treatment (Last et al. 1996;"* as cited in Farrell & Barrett, 2007).

It appears evident that despite treatment attempts, most "sufferers" will experience recurrent difficulties. Following reviews of the literature, not only was it apparent that the reported prevalence rates of internalising disorders increase in late adolescence to early adulthood, but the "recurrent difficulties" young people with internalising disorders experience frequently involve substance misuse. The results of the 1997 Australian National Survey revealed a considerable degree of comorbidity between substance use disorders and mental health problems (Sawyer, 2000). The epidemiology also demonstrated that comoribity is of

particular concern for young adults aged 15 to 24 years. Further, the Australian Burden of Disease and Injury (2003) study found that nine out of the ten leading causes of burden in young males, and eight out of ten leading causes in young females were substance use disorders or mental disorders. Thus, apart from the burden resulting from road traffic accidents, the disease burden in this group is predominately the result of alcohol dependence, suicide, bipolar affective disorder, depression, SP, and GAD.

Further, working as a tutor and senior tutor of first-year undergraduate psychology courses for a four-year period (2007 to 2010), the discussion topic of a tutorial session during the first semester was Mental Health, and the impact such issues can have on young people. During this period I heard various accounts of young people's "friends" who experienced intense anxiety and could not socialise without first drinking alcohol, a depressed friend who found alcohol helped "numb the pain" and students who took prescription medication to help with presentations for their university courses. Often such use incites a dependence on substances, which adds to the complexities of the existing disorder.

In light of such knowledge, I inquired about the existing drug and alcohol services on campus. There was no such information. Students could access counselling services, but these were scarcely advertised and focused on assistance for study-related problems. Preliminary analyses of the university data suggest that a relationship does exist between young people with internalising disorders and behaviours indicative of substance misuse. Moreover, the majority of university students surveyed agreed "to a large extent" that such services would be of assistance on university campuses.

I also aim to investigate possible cognitive content-specificity between both the four parenting constructs (and parental monitoring) and the five separate anxiety disorders included in the RCADS. It would also be interesting to compare the rural and urban data regarding the individual internalising problems, parenting constructs and EMS.

Qualitative data from both the Year nine students and first year university students were also collected. Students were asked to respond to the following question in their own words: "In general, can you think of three ways that parents can show their children they love them?" I aim to analyse and compare such responses and perhaps investigate potential patterns with parenting type – intrapersonal/individual factor - internalising disorder.

I also wish to analyse the results from study three with structural equation modelling (SEM) techniques. As theories in the social or health sciences frequently involve complex patterns of relationships or differences between a multitude of variables or groups, SEM allows the modelling and testing of complex patterns of relationships, including a large number of hypotheses simultaneously as a whole (including mean structures and group comparisons). Using other methods of analysis would often result in less clear conclusions, and/or would require several separate analyses (Kline, 2003). This was the case for study three whereby multiple separate regression analyses were conducted. SEM techniques would allow an investigation into the unique contributions of adolescents' perceptions of the four parenting dimensions, anxiety symptoms and depression, and 11EMS.

Although multivariate analyses were used, mediating statements which provide additional information cannot be stated in the present research. For example, although self-esteem (*paper two*) and the EMS (study three) significantly predicted internalising problems, the present research cannot state that the relationship between a particular parenting construct and an internalising problem was *through* self-esteem or a specific EMS. As Hadwin et al. (2006) states, the mechanism through which parenting contributes to the development of internalising problems is unclear. SEM will enable the investigation of complex mediational pathways in study three. Progressing from investigating *what* factors contribute to the onset of internalising problems, to examining *how* and *why*, or the underlying processes involved would be invaluable in terms of informing both theory and enable of more fine-grained approach to intervention and prevention programs.

For example, examining the interplay between EMS as mediators of the relationships between specific parenting factors and specific internalising problems. This could include investigating the potential role Unrelenting Standards (US) plays in the relationship between parental psychological control and OCD; whether Mistrust/Abuse (MA) accounts for the association between parental overprotection and PD; or the impact that Failure (FA) plays in the relationship between perceived parental acceptance and depressive symptoms. Such analyses may indicate that different parenting constructs may be associated with specific internalising problems via distinct EMS, thus enhancing understanding regarding cognitive content-specificity even further.

Final conclusions

It is unquestionable that internalising disorders are extensive mental health problems in adolescence, both in terms of direct morbidity, and the associated impact such problems present to psychosocial functioning across the life course. It is anticipated that the triple-pronged approach employed by this research program contributes to the improvement of the evidence base for service delivery for adolescents experiencing internalising problems. This approach primarily included (1) improving access to mental health services; (2) improving the knowledge base of internalising problems of adolescents from rural areas; and (3) improving the efficacy and effectiveness of programs by the addition of a parent-level framework. In the future, I look forward to observing the "quiet wheels" in school classrooms around Australia being identified and referred on to help, *before* they need the oil. If not, mental illnesses such as internalising disorders will continue to remain "the chronic diseases of the young" (WHO, 2002).

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APPENDIX 1

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This appendix is included on pages 279-280 of the print copy of the thesis held in the University of Adelaide Library.

APPENDIX 2

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APPENDIX 3

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APPENDIX 4

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APPENDIX 5

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APPENDIX 6

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APPENDIX 8

Teacher Questionnaire: Sections Two, Three, Four, and Five

Teacher Questionnaire

Section Two

Internalising problems refer to a range of difficulties "within the self," and thus tend to be directed inward toward the individual rather than being acted out in the environment. Examples include depression, social withdrawal, anxiety and somatic/physical complaints.

Externalising problems are characterised by a cluster of behaviours which are directed outward, typically toward other people. Examples include disobedience, aggression, delinquency, and overactivity.

To what extent do you agree with the following questions?

0 (*strongly disagree);* 1 (*disagree*); 2 (*agree*); 3 (*strongly agree*)

Q1. As part of your role as a teacher you are expected to identify students with internalising problems and refer them for appropriate assistance?

Q2. As a teacher you feel capable of identifying internalising symptoms in your students?

Q3. Your pre-service teacher training program sufficiently prepared you to identify students with internalising problems and refer them for appropriate assistance?

Q4. You have received sufficient training in identifying internalising problems in your students since working as a teacher (in-service training)?

Section Three

To what extent do you agree that the suggestions below would be beneficial for teachers?

Q5. Each school should be provided with a "well-being facilitator", i.e., a person who a teacher could contact when they are concerned about the mental health of a student, be responsible for organising a referral, creating a mental health care plan, monitoring the progress of the student, and liaising with the relevant parties involved.

Q6. More information should be provided regarding internalising problems and relevant help-seeking processes during teacher training at university.

Q7. It is important to be informed about internalising problems *before* teachers begin working with students.

Q8. During a supervised Professional Experience placement, conducting a case-study assessment on an at-risk student, (including identifying associated symptoms through to accessing appropriate help), would build confidence in new teachers.

Section Four

Q9. Are you aware of the MindMatters' *Practical Steps for an Effective External Referral System* for students experiencing high support needs in mental health?

Yes No

Q10. Are you aware of an *Educator's Guide to Children and Young People's Wellbeing*?

Yes No

Q11. Do you think there has been an increase in the accessibility of mental health professionals at your school?

Yes No

Q12. Does your school create a health care plan with the student which includes maintenance of school connections and learning and attendance requirements of the school?

Yes No Unsure

Q13. Does your school use and value some of the community protective factors like connection with a caring and competent adult role model and access to other opportunities and health care services?

Yes No Unsure

Q14. Does your school provide an advocacy or advisory role as required?

Yes No Unsure

Section Five

Please read the following statement and indicate whether or not you agree with it.

Teachers refer a lot more students with externalising problems for mental health services, compared to students with internalising problems.

Do you agree with the above statement?

Yes No Unsure

Q15. If you AGREE with the above statement, WHY do you think that teachers refer a lot more students with externalising problems for mental health services, compared to students with internalising problems? Please indicate reason(s) in the space below:

APPENDIX 9

Year Nine Students On-line Survey

Instructions

This survey is in 3 sections

The First Section asks some questions about you and your family's background.

The Second Section asks questions about you.

The Third Section asks questions about what your relationships with your main caregivers are like.

Caregivers are the main people who look after you while you are growing up, for example, your mother, foster parents, grandparents etc.

Please answer as honestly as possible.

There are no 'right' or 'wrong' answers and all answers will remain completely confidential.

If no answer seems to apply to you, just choose the answer that applies to you the most.

If you miss a question by mistake, you will not be able to continue.

You will need to scroll down the page until you find the question/s, and then you need to answer the question/s.

The unanswered question/s will have: 'This question is mandatory' next to them, indicating that you still need to answer the question/s.

NOW LET'S BEGIN.....

Section 1
Questions About You and Your Family's Background

Note: Response options are in bold

Before you start the survey, would you like to be entered into the draw to win one of two Gift Vouchers to the value of $25 each? **Yes No**

1. Are you male or female? **Male Female**
2. How old are you? **Under 13; 13; 14; 15; Over 15 years-old**
3. Do your parents live together? **Yes; Not anymore; Never lived together**

Section 2
The next section asks some questions about YOU.
If no answer seems to apply to you, just choose the answer that is MOST like you.

4. Do you drink alcohol? **Yes No**
5. If yes, how often? **I don't drink; Rarely; Occasionally; Often**
6. If you drink alcohol, how much do you drink in one 'session'?
   A standard drink is a unit of measurement. In the same way one metre measures a particular distance travelled, one standard drink measures a particular amount of alcohol consumed. A standard drink is any drink containing 10 grams of alcohol. For example, one 300ml bottle:
   I don't drink; 1 or 2 standard drinks; 3-5 standard drinks; 6-10 standard drinks; over 10 standard drinks
7. If you do drink alcohol, *why* do you think you drink alcohol?
   I drink alcohol because: it makes me feel more confident in social situations; it makes me feel less stressed; it helps me forget about my problems; I want to have fun; I want to get drunk; my friends do; it makes me feel more relaxed
8. Do you smoke cigarettes? **Yes No**
9. Do you take drugs? **Yes No**
10. If you do drugs, why do you think you do drugs?
    I take drugs because: they make me feel more confident in social situations; they make me feel less stressed; they help me forget about my problems; I want to have fun; I want to get wasted; my friends do; they make me feel more relaxed

CONT. **Section 2**

Below is a list of statements dealing with general feelings about yourself. Please indicate how much you agree or disagree with the following statements.

"Strongly Agree" "Agree" "Disagree" "Strongly Disagree"

11. I feel that I am a person of worth, at least on an equal plane with others
12. I feel that I have a number of good qualities
13. All in all, I am inclined to feel that I am a failure
14. At times I think I am no good at all
15. I certainly feel useless at times
16. I am able to do things as well as most other people
17. I feel I do not have much to be proud of
18. I take a positive attitude toward myself
19. On the whole, I am satisfied with myself
20. I wish I could have more respect for myself

Please select the word that shows how often each of these things happen to you. There are no right or wrong answers.

"Never" "Sometimes" "Often" "Always"

21. I worry about things
22. I feel sad or empty
23. When I have a problem, I get a funny feeling in my stomach
24. I worry when I think I have done poorly at something
25. I would feel afraid of being on my own at home
26. Nothing is much fun anymore
27. I feel scared when I have to take a test
28. I feel worried when I think someone is angry with me
29. I worry about being away from my parents
30. I get bothered by bad or silly thoughts or pictures in my mind
31. I have trouble sleeping
32. I worry that I will do badly at my school work
33. I worry that something awful will happen to someone in my family
34. I suddenly feel as if I can't breathe when there is no reason for this
35. I have problems with my appetite
36. I have to keep checking that I have done things right (like the switch is off, or the door is locked)
37. I can't seem to get bad or silly thoughts out of my head
38. When I have a problem, my heart beats really fast
39. I cannot think clearly
40. I suddenly start to tremble or shake when there is no reason for this
41. I worry that something bad will happen to me
42. When I have a problem, I feel shaky
43. I feel worthless

CONT.

Section 2

44. I worry about making mistakes
45. I have to think of special thoughts (like numbers or words) to stop bad things from happening
46. I worry what other people think of me
47. I am afraid of being in crowded places (like shopping centers, the movies, buses, busy playgrounds)
48. All of a sudden I feel really scared for no reason at all
49. I worry about what is going to happen
50. I suddenly become dizzy or faint when there is no reason for this
51. I think about death
52. I feel afraid if I have to talk in front of my class
53. My heart suddenly starts to beat too quickly for no reason
54. I feel like I don't want to move
55. I feel scared if I have to sleep on my own
56. I have trouble going to school in the mornings because I feel nervous or afraid
57. I have no energy for things
58. I worry I might look foolish
59. I am tired a lot
60. I worry that bad things will happen to me
61. I worry that I will suddenly get a scared feeling when there is nothing to be afraid of
62. I have to do some things over and over again (like washing my hands, cleaning or putting things in a certain order)
63. I feel afraid that I will make a fool of myself in front of people
64. I have to do some things in just the right way to stop bad things from happening
65. I worry when I go to bed at night
66. I would feel scared if I had to stay away from home overnight
67. I feel restless

Please rate how much you agree or disagree with the following statements.
"Strongly Disagree", "Disagree", "Slightly Disagree", "Slightly Agree", "Agree", "Strongly Agree"

68. It is important to be better than others at everything I do
69. No one understand me
70. It is more important to put other people's wishes and ideas before my own
71. People will be cross or upset if I say the things I really want to say
72. No one loves or cares about me
73. Other people are better than me
74. Others are out to get me
75. I need other people to help get me by
76. Bad things happen to me
77. I am a failure
78. I must not show my feelings to others

CONT.

Section 2

In the following questions please indicate the most appropriate response:

"Not at all"/"Not much" "Yes, Definitely"/"Frequently"

79. Have you attended a local community event in the past 6 months (church fete, school concert)?
80. Are you an active member of a local organisation or club (sport, craft, social club)?
81. Are you an active member of a local organisation or club (e.g., sport, craft, social club)?
82. Have you ever picked up other people's rubbish in a public place?
83. If you need information to make a life decision, do you know where to find that information?
84. If you disagree with what everyone else agreed on, would you feel free to speak out?
85. If someone's car breaks down outside your home, do you invite them into your home to use your phone?
86. Does your local community feel like home?
87. Does your area have a reputation for being a safe place?
88. If you were caring for a child and needed to go out for a while, would you ask a neighbour for help?
89. When you go shopping in your local area are you likely to run into friends and acquaintances?
90. Can you get help from friends when you need it?

Section 3

The final section of the survey asks questions about your main female and/or male caregivers.

Please indicate the extent to which the following questions relate to your main male caregiver and then to your main female caregiver where possible.

If you have one caregiver, just select 'does not apply' to me and answer the questions that relate to your main caregiver i.e., a female or male caregiver

(The terms "Mother" and "Father" are used to indicate female and male caregivers)

My main male caregiver is:

My: Father; Grandfather; Uncle; Step father; Foster father; Other male; Does not apply

My main female caregiver is:

My: Mother; Grandmother; Aunty; Step mother; Foster mother; Other female; Does not apply

CONT. **Section 3**

Please indicate how much the following are like or not like your Mother and then your Father (option of "Does not apply" [DNA] available)

My Mother/Father

"Not like her/him" "Like" "A lot like her/him" "DNA"

Reported separately for Mothers and Fathers

91. Smiles at me very often
92. Makes me feel like the most important person in her/his life
93. Often praises me
94. Makes me feel better after talking over my worries with him/her
95. Is able to make me feel better when I am upset
96. Enjoys doing thing with me
97. Cheers me up when I am sad
98. Gives me a lot of care and attention
99. Believes in showing her/his love for me
99. Is easy to talk to

Please indicate how much the following statements are like or unlike one or both of your parents:

One of my parents:

"Very unlike" "Moderately Unlike" "Moderately like" "Very like"

100. Feels I cannot look after myself unless she/he is around
101. Does not want me to grow up
102. Tends to baby me
103. Tries to control everything I do
104. Invades my privacy
105. Is overprotective of me
106. Tries to make me feel dependent on her/him

Please indicate how much the following statements are like or unlike one or both of your parents:

One of my parents:

"Very unlike" "Fairly unlike" "Fairly like" "Very like"

107. Emphasises that every member of the family should have some say in family decisions
108. Lets me make my own plans for the things I wanted to do
109. Emphasises that it is important to get my ideas across even if others don't like it
110. Says that you should always look at both sides of the issue
111. Talks at home about things like politics or religion, where one takes a different side from others
112. Keeps pushing me to think independently

113. When I get a good grade, my parent/s gives me more freedom to make my own decisions
114. Admits that I know more about some thinks than adults do

CONT. **Section 3**

Please indicate how much the following statements are like or unlike your Mother and then your Father (option of "Does not apply" [DNA] available)

My Mother/Father is a person who:

"Not like her/him" "Somewhat like" "A lot like her /him"

Reported separately for Mothers and Fathers

115. Always tries to change how I feel or think about things
116. Often interrupts me
117. Blames me for other family members' problems
118. Brings up past mistakes when she criticises me
119. Avoids looking at me when I disappoint her/him
120. If I hurt her/his feelings, stops talking to me until I please her/him again
121. Is less friendly with me if I don't see things her/his way
122. Changes the subject whenever I have something to say

This is the FINAL QUESTION!

In general, can you think of 3 ways that parents can show their children that they love them?

Thank you very much for answering all of these questions.

Your help is greatly appreciated

Good luck with the raffle!

Helpful Resources

Below is a guide to some resources that might help you deal with any concerns

you may have about your behaviour, health or emotional wellbeing.

Relevant websites and phone numbers for SA organisations have been provided.

Helpful Resources

Youth Health

The Youth Health line is a 24-hour, 7-day telephone service for young people aged 12 to 25 years in South Australia.
The youth Health line is staffed by health professionals who are trained and experienced in working with young people. It is a confidential service for all young people; particularly those who may want to talk to someone about what is going on in their life but feel more at ease with a telephone conversation than with face-to-face contact.
A telephone information service:
1300 13 17 19 (local call cost from anywhere in South Australia)
Mobile phone users should call (08) 8303 1691

Reachout!
Reachout is an on-line service and provides a range of helpful links and information concerning mental health and other related issues: www.reachout.com.au

headspace
headspace is Australia's National Youth Mental Health Foundation.
The headspace mission is to deliver improvements in the mental health, social wellbeing and economic participation of young Australians aged 12 to 25 years/
Telephone: (08) 8252 9444
http://www.headspace.org.au/
headspace is also on Facebook and MySpace

SUBMIT YOUR SURVEY

Thank you for completing this survey

APPENDIX 10
Department of Education and Children's Services (DECS) Ethics Approval Letter

Government of South Australia
Department of Education and Children's Services

Community and Tertiary Liaison
Education Centre
Level 15/31 Flinders Street
Adelaide 5000
South Australia

Tel: 8226 2154
Fax: 8226 1815

DECS CS/08/0255.10

26 August 2008

Ms Kate Papandrea
The University of Adelaide, School of Psychology
Hughes Building
NORTH TERRACE SA 5000

Dear Ms Papandrea

Thank you for your letter requesting approval for your project *"Factors influencing the Onset and Persistence of Internalising Problems in Adolescence."*

Your project has been reviewed by a senior DECS consultant with respect to protection from harm, informed consent, confidentiality and suitability of arrangements. Subsequently, I am pleased to advise you that after careful consideration, and upon the proviso that you also receive and forward a copy of your university ethics approval to DECS, your project has been **approved.**

Please find below the comments from the second review, made by the reviewer for your information along with the reviewer's contact details in order for you to clarify any queries or comments made.

"The document outlining responses to the identified issues and an updated list of helpful changes made in line with recommendations that you submitted were appreciated by the reviewer.

Concern remains around workload for teachers. The reviewer sees that the time taken to fill out the survey has been reduced by the deletion of the Depression Inventory and by teachers filling out the survey on one occasion. However, teacher time to hand out and collect information sheets and forms, to organise computer access and to supervise students while they complete the survey remains considerable. Teacher workload is an issue, in particular in the present industrial climate.

While the researcher suggests she is willing to assist teachers with this workload, the reviewer feels that she should point out that schools are spread throughout the state, making this impractical in many cases. To cover Teacher Release Time (TRT) would be a large expense. Therefore, the reviewer is not comfortable with supporting the research information being sent to all schools. If the researcher were to negotiate with individual principals and gain support to proceed in their school, it would seem more likely that her research would bring a favourable response."

Ms Jan Burgess, A/Program and Policy Officer, Learner Wellbeing and Drug Strategy, DECS. Phone: 8226 1287.

Please supply the department with an electronic copy of the final report, which will be circulated to interested staff and then made available to DECS educators for future reference.

I wish you well with your project.

Jennifer Stehn
DIRECTOR
COMMUNITY AND TERTIARY LIAISON

APPENDIX 11

Letter of Introduction to Heads/Principals of High Schools

Dear Principal/Head,

The School of Psychology at The University of Adelaide is conducting an important study entitled, "Factors influencing the onset and persistence of internalising problems in adolescence" and is inviting your School to participate in the project. This study is being conducted by Ms Kate Papandrea as a partial fulfilment of the degrees of Masters (Clinical Psychology) and Doctor in Philosophy (PhD).

As previous psychological research has primarily focussed on externalising (i.e., acting-out) problems in young people, our study is expected to provide new information regarding the prevalence rates and factors that influence the development of internalising problems, such as depression and anxiety. Such information will enable us to identify the contributing factors involved in an attempt to prevent or delay the possible onset which such problems create for young people in the future.

Parents/Caregivers of all Year 9 students will be informed of the study through an Information Sheet. All students from Year 9 will be invited to complete a 40 to 45 minute on-line survey which includes questions about students' mental health, emotions and behaviours.

Participation in the project is voluntary and students can withdraw from the study at any stage. Every effort to minimise onsite resources and to integrate with the schedule and arrangements of your school will be given. Similar school based mental health research has been incorporated into the Health curriculum and may be used as a catalyst to generate discussion. A list of helpful organisations will be provided for parents and students who experience any concerns about their behaviour or mental health.

In recognition of students' contribution to the study, each willing participant will be entered into a draw to receive a CD voucher. There will be two chances to win and each prize is to the value of $25.

Further, due to the documented lower rates of referrals for mental health services for internalising as opposed to externalising problems by teachers, the present research would also wish to ask all interested Year Eight to Ten high school teachers to answer some relevant questions, by completing a once-off 25-minute online questionnaire. Such information may be used to help more students to access mental health services.

This research has been approved by the Department of Children's Services (DECS), the Catholic Education Centre of South Australia and the University of Adelaide Ethics Committee. If you have any questions or concerns, please feel free to contact A/Professor Paul Delfabbro, Research Secretariat on 830 35694.

The researcher is happy to provide a summary of your school's individual results if desired.

Ms Kate Papandrea will contact your school by telephone in approximately one week and will arrange a time when we can discuss the study in more detail and answer any questions you may have regarding your school's involvement in the project.

Thank you very much for your consideration.

Yours sincerely,

Professor Helen Winefield

Ms Kate Papandrea

APPENDIX 12

Letter Declining Research Participation



IB world school
annesley college
a uniting church school for girls

August 18, 2008

Ms K Papandrea
Room 227
Hughes Building
School of Psychology
The University of Adelaide
ADELAIDE SA 5005

Dear Kate

Thank you for your letter of 8 August inviting Annesley College Year 9 students to participate in a survey related to *"Factors influencing the onset and persistence of internalising problems in adolescence."*

The students at Annesley College are currently participating in our own survey process and we feel that at this particular time, it would not be beneficial for them to take part in an additional questionnaire.

I hope that you will gain some useful information from the survey results on completion of your project.

Kind regards

MS LINDA DOUGLAS
Principal

A Uniting Church Day and Boarding School for Girls

89 Greenhill Road, Wayville, South Australia 5034 **Tel.** +61 8 8422 2288 **Fax.** +61 8 8272 0142
Email. enquiries@annesley.sa.edu.au **www.annesley.sa.edu.au**

APPENDIX 13

Study Information Sheet to Year Nine Students

Year 9 Mental Health Study

STUDY INFORMATION SHEET FOR STUDENTS

Dear Year 9 Student,

Helping young Australians to achieve positive mental health and wellbeing is essential for their later success and happiness in life. Ms. Kate Papandrea is currently undertaking Masters in Clinical Psychology and Doctor in Philosophy (PhD) degrees at the University of Adelaide and is conducting important research which aims to find out more about the factors that influence the mental health and wellbeing in young people. This information will enable us to provide more effective help for young Australians who may experience poorer mental health, or may assist in the prevention of mental health problems in the future.

All students in Year 9 are invited to complete an on-line survey which will include questions about students' mental health, emotions and behaviours. The survey should take approximately 40 to 45 minutes to complete.

In recognition of students' contribution to the study, each willing student will be entered into a draw to win one of two Coles/Myer Gift Vouchers, each to the value of $25.

Please be confident that the information you provide will be treated in the strictest confidence. All responses will be confidential and no identifying information will be used, for example,

identification numbers (ID) rather than names. The survey is completely voluntary and you may withdraw at any stage.

This research has been approved by the University of Adelaide Ethics Committee, the Department of Education and Children's Services (DECS) and the Catholic Education Centre of South Australia. If you have any questions or concerns, please feel free to contact A/Professor Paul Delfabbro, Research Secretariat on 830 35694.

Although no possible risks/inconveniences are anticipated, if you have any concerns about your mental health and wellbeing, a list of helpful resources will be made available to you at the end of the online survey.

Should you require additional information regarding this research, please contact Kate Papandrea on (08) 830 37464, kate.papandrea@adelaide.edu.au, or at the University of Adelaide, School of Psychology, Level 4, Hughes Building.

Thank you very much for your consideration.

Yours sincerely,

Professor Helen Winefield

Ms Kate Papandrea

APPENDIX 14

Study Information Sheet to Parents/Caregivers

Year 9 Mental Health Study

STUDY INFORMATION SHEET FOR PARENTS / CAREGIVERS

Dear Parent(s) / Caregiver(s),

Helping young Australians to achieve positive mental health and wellbeing is essential for their later success and happiness in life. Ms. Kate Papandrea is currently undertaking Masters in Clinical Psychology and Doctor in Philosophy (PhD) degrees at the University of Adelaide and is conducting important research which aims to find out more about the factors that influence the mental health and wellbeing in young people. This information will enable us to provide more effective help for young Australians who may experience poorer mental health, or may assist in the prevention of problems in the future.

All students in Year 9 will be invited to complete an on-line survey and includes questions about students' mental health, emotions and behaviours. The survey should take approximately 40 to 45 minutes to complete and will be supervised by a teacher.

In recognition of students' contribution to the study, each willing participant will be entered into a draw to receive a Coles/Myer Gift Voucher. There will be two chances to win and each prize is to the value of $25.

Please be assured that the information your adolescent provides will be treated in the strictest confidence. All responses from students will be confidential and students will not be identified in any way. The survey is completely voluntary and participants may withdraw at any stage.

This research has been approved by the Department of Education and Children's' Services (DECS), The Catholic Education Centre and the University of Adelaide Ethics Committees. If you have any questions or concerns, please feel free to contact A/Professor Paul Delfabbro, Research Secretariat on 830 35694.

Although no possible risks/inconveniences are anticipated, if you have any concerns about your adolescent's mental health and wellbeing, the contact details of a helpful organisation is attached to this Information Sheet. Students who complete the online survey will also be informed of similar resources available for them if required.

If you are prepared for your adolescent to take part in this research, Consent Forms are attached for you to sign. If you are willing to allow your adolescent to participate, please sign and return the Consent Forms to your adolescent's homeroom teacher.

Should you require additional information regarding this research, please contact Kate Papandrea on (08) 830 37464 or (08) 830 35693, or at the University of Adelaide, School of Psychology, Level 4, Hughes Building.

Thank you very much for your consideration.

Yours sincerely,

Professor Helen Winefield

Ms Kate Papandrea

APPENDIX 15

Study Information Sheet to Teachers

Teacher Study

STUDY INFORMATION SHEET FOR TEACHERS

Dear Year Eight to Ten High School Teacher,

Internalising disorders refer to a range of difficulties associated with problems "within the self", such as fears, physical complaints, worrying, shyness. Young people with these types of concerns tend to deal with them internally, rather than acting them out in the environment. As a result and as you would be aware, the inherent nature of many internalising disorders in adolescents present complex challenges for teachers to confidently identify the associated symptoms in their students.

The School of Psychology at The University of Adelaide is conducting an important study which aims to provide further insight into what factors contribute to the referral process to mental health services for students with internalising disorders. Such information may facilitate more students to receive the help they need, may reduce the educational difficulties associated with internalising disorders and ultimately may enhance the learning environment for all students within the classroom. The study is being conducted by Ms Kate Papandrea as a partial fulfilment of the degrees of Masters (Clinical Psychology) and Doctor in Philosophy (PhD).

All High School Teachers from both metropolitan and rural areas in South Australia are invited to complete a twenty-five-minute on-line survey. Such information may be used to develop an evidence-based informative set of guidelines to assist present teachers and teachers-in-training to more confidently identify such problems in their students. It is anticipated that by enhancing

such knowledge for teachers, referral rates for mental health services and consequently assistance for students with internalising problems may increase in the future.

Please be assured that the information you provide will be treated in the strictest confidence. No identifying information will be used and no questions regarding where you teach are asked. The survey is completely voluntary and participants may withdraw at any stage.

This research has been approved by the University of Adelaide Ethics Committee, the Department of Education and Children's Services (DECS) and The Catholic Education Centre. If you have any questions or concerns, please feel free to contact A/Professor Paul Delfabbro, Research Secretariat on 830 35694.

Should you require additional information regarding this research, please contact Kate Papandrea on (08) 830 37464, at kate.papandrea@adelaide.edu.au, or at the University of Adelaide, School of Psychology, Level 4, Hughes Building.

Thank you very much for your consideration.

Yours sincerely,

Professor Helen Winefield

Ms Kate Papandrea

APPENDIX 16

Year 9 Mental Health Study

PARENT/CAREGIVERS CONSENT FORM

1. The nature and purpose of the research project has been described to me on the attached Information Sheet. I understand it, and agree to my adolescent taking part.

2. I understand that my adolescent may not directly benefit by taking part in this study.

3. I acknowledge that the possible risks/inconveniences have been described to me as outlined in the Information Sheet.

4. I understand that while information gained in the study may be published, my adolesent will not be identified in any way and all information will be confidential.

5. I understand that my adolescent can withdraw from the study at any stage.

6. I understand that there will be no payment to my adolescent for taking part in this study, but if willing, will be placed in a raffle for the chance to win one of two $25 Coles/Myer Gift Vouchers.

7. I consent to my adolescent being involved in this project.

Adolescent's Name: …….....

Date of Birth: ……...

Adolescent's School: ……...

Dated: ……

Signed:……..

(Parent or Caregiver)

APPENDIX 17
List of Helpful Resources for Parents

Helpful Organisations for Parents

This is a guide to some resources that might help you deal with any concerns you may have about your adolescent's behaviour, health, or emotional well-being. Relevant websites and phone numbers have been provided.

If you do not have internet access at home, free access is available from your local library.

Child and Youth Health

The Children, Youth and Women's Health Services (CYWHS) Parent Helpline provides telephone information and support - 24 hours a day, 7 days a week, every day of the year.

- It is available to parents of children/young people from birth to twenty-five years who live anywhere in South Australia.
- It provides information about health, behaviour and relationships for parents.
- It is able to provide information to callers on where to go for further help.
- Calls are confidential and you don't have to give your name unless you wish to.
- Parent Helpline staff have an information database based on the latest research, so they can give you the most up-to-date information when you call.
- Staff are qualified nurses, social workers, community health workers and selected volunteers. All staff receive ongoing training and support.

Contact Details:

- **1300 364 100** (local call cost within South Australia)

Mobile phone callers in South Australia can reach the Parent Helpline on 8303 1555**.**
Please note that normal mobile phone rates will apply **for these calls**

APPENDIX 18

University of Adelaide Ethics Approval Letter

THE UNIVERSITY OF ADELAIDE
AUSTRALIA

School of Psychology

The University of Adelaide
Adelaide, South Australia, 5005
Telephone + 61 8 8303 5693
FAX: + 61 8 8303 3770

Human Research Ethics Subcommittee

Approval sheet

Date: 5/9/08

Dear HELEN

The members of the subcommittee have considered your application:

Code Number: 08/70 (INTERNALISING PROBLEMS IN ADOLESCENCE)

With [Student Name, if applicable]: KATE LACANDREA

I am writing to confirm that approval has been granted for this project to proceed.

Yours sincerely,

Dr. Paul Delfabbro
Acting Convener of the Human Research Ethics Subcomittee
School of Psychology
Ph. 8 303 ~~5744~~ 4934
Paul.delfabbro@psychology.adelaide.edu.au

APPENDIX 19
Paper One Published

Papandrea, K. & Winefield, H. (2011) It's not just the squeaky wheels that need the oil: examining teacher's views on the disparity between referral rates for students with internalizing versus externalizing problems.
School Mental Health, v. 3, pp. 222-235

NOTE:
This publication is included on pages 317-330 in the print copy of the thesis held in the University of Adelaide Library.

It is also available online to authorised users at:

http://doi.org/10.1007/s12310-011-9063-8

APPENDIX 20

Paper Two
Published

Rural and Remote Health
MEDLINE listed
ARMEN FRAME

ORIGINAL RESEARCH

Oiling a neglected wheel: An investigation of adolescent internalising problems in rural South Australia

K Papandrea[1], H Winefield[1], A Livingstone[2]
[1]*The University of Adelaide, Adelaide, South Australia, Australia*
[2]*Rural and Remote Mental Health Service of SA, Glenside Hospital, Glenside, South Australia, Australia*

***Submitted:** 17 May 2010; **Revised:** 8 September 2010; **Published:** 1 December 2010*

Papandrea K, Winefield H, Livingstone A

Oiling a neglected wheel: An investigation of adolescent internalising problems in rural South Australia
***Rural and Remote Health* 10: 1524. (Online), 2010**

Available from: http://www.rrh.org.au

ABSTRACT

Introduction: Despite a paucity of research, adolescents living in rural areas appear to have a heightened risk for developing a mental health problem compared with their urban counterparts. The main objectives of this study were to contribute to building an evidence base of prevalence rates and determinants of internalising problems of adolescents in rural South Australia. A multidimensional Process Model was used as theoretical framework to enable an investigation of the various determinants from individual, family and community domains; specifically, the contribution of self-esteem, parental acceptance and elements of social capital at an individual level (ie participation in the local community and proactivity in a social context represented structural social capital, and feelings of trust and safety, and neighbourhood connections represented cognitive social capital).
Methods: In this cross-sectional prospective study, a total of 388 Year 9 (2nd year of secondary school) students (208 females, 180 males) aged 13–15 years (mean age = 14.2 years) participated from 11 high schools within the Country Health South Australian area. These adolescents completed a battery of self-reported measures online at school.
Results: The results demonstrated that the adolescents experienced a 'normal' level of self-esteem and a 'moderate' level of perceived parental acceptance. The level of social capital was considered 'low' and the adolescents experienced a 'moderate' level of internalising symptoms. Based on the mean score of the Revised Child Anxiety & Depression Scales (RCADS), 25% of the adolescents experienced internalising symptoms ranging in severity from mild to severe, with no significant differences between males and females. Approximately 13% were considered above the clinical threshold, with 4% reporting experiencing severe

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Rural-and-Remote-Health
The International Electronic Journal of Rural and Remote Health Research, Education Practice and Policy

symptoms. Relationships between all measures were investigated using Pearson product-moment correlations coefficients and associations between self-esteem, parental acceptance, social capital, and internalising problems were assessed using multivariate linear regressions. Both parental acceptance and social capital were found to predict self-esteem. Parental acceptance was also significantly associated with social capital. The linear contribution of self-esteem, parental acceptance and social capital was significantly related to internalising problems. Approximately 33% of the variance in internalising problems could be accounted for by the combination of the three predictors; however, self-esteem and parental acceptance were the significant contributors to the prediction of internalising problems. Social capital was not a significant predictor of internalising problems.

Conclusions: The present study only begins to contribute to the lack of existing data on the mental health status of adolescents from rural areas of South Australia. Greater research is needed to enhance understanding of this overlooked population and also assist in providing evidence-based guidelines in establishing priorities for newly appointed Federally funded youth services in rural Australia. In light of the concerning rates of internalising problems demonstrated by the present study, coupled with the fact that young people from rural areas were not considered in previous National Mental Health Surveys, it seems timely to highlight the importance of including as many Australians as possible from rural and remote areas, in the approaching, subsequent National survey. This will provide a more accurate evidence-based representation of Australia's adolescent population to inform policy and facilitate the implementation of relevant strategies.

Key words: adolescence, internalising problems, parenting, rural South Australia, self-esteem, social capital.

Introduction

Research efforts investigating the mental health of Australians living in rural areas, in particular rural adolescents, have been scant[1-5]. An overview of rural health research in Australia in the period 1990–1999 revealed only a small number of published articles on adolescent mental health[6] despite the fact that, as Kilkkinen et al[7] highlighted, children and adolescents represent a higher proportion of the population in rural and remote areas compared with urban areas, and research needs to target these priority groups. The Australian National Health Policy also supported the need for greater research attention on the mental health of rural and remote Australians[8], and the rural health policy framework, 'Healthy Horizons', recognises 'mental health, suicide and attempted suicide as among the highest priorities for action in rural health'[9].

This paucity of research investigating rural adolescent mental health in Australia in particular, is of concern for a number of reasons:

- It has been empirically established that, in contrast to the overall health gains of world populations in recent decades, the burden of mental illness is mounting.
- Mental and behavioural health disorders are common, being present at any point in time in approximately 10% of the population, and affecting more than 25% of all people at some time during their lives[10].
- In 2002, depression accounted for 4.5% of the worldwide total burden of disease. It is also responsible for the greatest proportion of burden attributable to non-fatal health outcomes, accounting for almost 12% of total years lived with disability worldwide[10].
- It is estimated that by 2030, depression will be one of the leading causes of disease along with HIV/AIDS and heart disease[11].

Moreover, it has been reported that adolescents living in rural areas appear to be at a heightened risk for developing a mental health problem, compared with their urban

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counterparts. This is apparently due to a number of psychosocial factors:

- stressful life events, perceived control of life events[12]
- lack of access to mental health services
- the effect of the economic downturn on rural areas, and severe drought in a number of geographical regions.

In addition, the suicide rates are consistently higher in rural towns than in metropolitan areas; for example, the suicide rate of males aged 15-24 years in rural towns has been reported as approximately twice that of their city counterparts[13]. For young Indigenous males, the suicide rate is up to 40% higher than the national Australian average[14].

In response to such issues, The Australian Rural Mental Health Study[15] embarked on building an evidence base for the adult rural population. 'Proxy' (ie alternative) measures of child health and wellbeing have also been included in this study. The establishment of *headspace*[16], a federally funded youth mental health foundation service, in a number of rural areas of Australia has included two centres in South Australia. However, Boyd[1] suggests that while we are facing a period of mental health reform with such strategies:

> *...although assurances have been made that the needs of rural youth will be considered as part of a national strategy to transform youth mental health services, rural communities remain without vision or direction as to how this might be achieved.*

One possible way to achieve direction in order to address the needs of adolescents from rural communities may be to enhance the evidence base of this population. This may be achieved by investigating not only prevalence rates of adolescent mental health problems, but also by examining the individual, family[7] and community factors, or the determinants[17], of such problems. For it has been suggested that many large population-based studies have failed to include an assessment of such important factors associated with mental health problems[18].

A number of studies have reported that family processes, in particular the nature and quality of adolescents' relationships with their parents, contribute to the onset and maintenance of a range of negative developmental outcomes[19,20]. The nature of the interpersonal interactions children experience with their parents may influence the level of perceived acceptance from their parents, for instance, which may impact on a young person's developing sense of self and identity. If responses during interactions from significant others are disregarded and/or not recognised as important, a negative self-view is more likely, which may increase the risk for developing an internalising problem, such as depression or anxiety.

However, the challenge is to integrate variables of interest from multiple domains (ie individual, family, and community) into a theoretical framework capable of structuring and exploring the possible processes that influence specific developmental outcomes. Employing a theoretically derived framework for the basis of empirical research is essential, as the data generated is evidence-based and so more likely to effectively inform policy and, hence, interventions and/or preventative efforts.

The framework that formed the basis of this study is a Process Model[21] which consists of a number of theoretically-derived variables. A multidimensional blueprint such as this enables a dynamic investigation of Individual Processes (eg self-esteem; emotional security), Family Processes (eg parenting practices and styles); and inherent predispositions, such as gender. The potential value of such a framework is that it can address negative or positive outcomes, and examine risk or protective factors, at the child/adolescent and family levels. Each variable of interest may be assessed independently, or the interaction of numerous factors, moderators and/or mediators, may be examined.

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The investigation into the influence of community-related factors, teacher and peer relationships on individual and family processes, and developmental outcomes are also essential. Hence, for the purposes of the current study, a Community Processes dimension consisting of a number of core elements of social capital was added to the Process Model. Social capital consists of a small set of central features, including reciprocity, trust, and cooperation among members of a social network that aims to achieve common goals[22]. The concept can also be broken down into 'structural' and 'cognitive' social capital. Structural components or 'what we do' refer to roles, rules, behaviours, networks and institutions. Cognitive social capital or 'what we feel' describes the values, attitudes and beliefs that produce cooperative behaviour[23]. Although reviews investigating potential links between a range of social capital dimensions and mental health outcomes have revealed somewhat inconsistent findings[24-26], social capital has been shown to play a role in the incidence and prevalence of mental health outcomes[27,28].

The following variables from the Process Model were selected for use in this study (Fig1):

1. Individual Process: self-esteem.
2. Family Process: parental acceptance.
3. Community Process: the elements of social capital at an individual level of participation in the local community and proactivity in a social context represented structural social capital; whereas, feelings of trust and safety, and neighbourhood connections represented cognitive social capital.

The outcome focus was internalising problems, specifically, anxiety and depressive symptoms. Internalising problems were selected as the focus of the study primarily because by 2030, depression is estimated to be one of the leading causes of disease[10] and Australia's most recent National Survey of Mental Health and Wellbeing (2007)[29] revealed that anxiety disorders were the most common mental health problem reported in adults, considerably more prevalent that affective disorders, such as depression, affecting 14% (1/7) and 6% (1/16) of adults, respectively; however, current rates for adolescent populations are unknown. Moreover, important groups in the Australian population (ie rural, remote, and Indigenous) were not included the 1997 National Survey[1,30,31]. Consequently, current prevalence rates of adolescent mental health problems from rural Australia, in particular internalising disorders such as anxiety disorders, are not known.

Methods

In order to conduct research in government high schools, ethics approval was obtained from the South Australian Department of Education and Children's Services (DECS). A total of 28 non-government and government high schools were randomly selected within the Country Health South Australian area by each of the 7 existing health regions (Eyre Hills Mallee Southern, Mid North, Northern & Far Western, Riverland, South East, and Wakefield).

Each school was individually contacted and letters explaining the study were sent to the Heads (Principals) of each school. Eleven high schools agreed to participate, and from these a total of 560 Year 9 (2nd year of secondary school) students were invited to participate in the study. A total of 388 adolescents (208 females, 180 males) aged 13–15 years (mean age = 14.2 years) participated, a 69.3% response rate.

Information sheets and consent forms were provided to students and their parents and distributed by teachers. A list of South Australian organisations were also included to assist any parents who had possible concerns regarding their adolescent's behaviour, health, emotional wellbeing or issues regarding parenting. Students were also provided with a similar list. All participants were invited to enter a raffle for one of two $25 department store shopping vouchers. Once consent had been granted, students completed an online questionnaire at school under the supervision of a teacher, which took approximately 50 min to complete.

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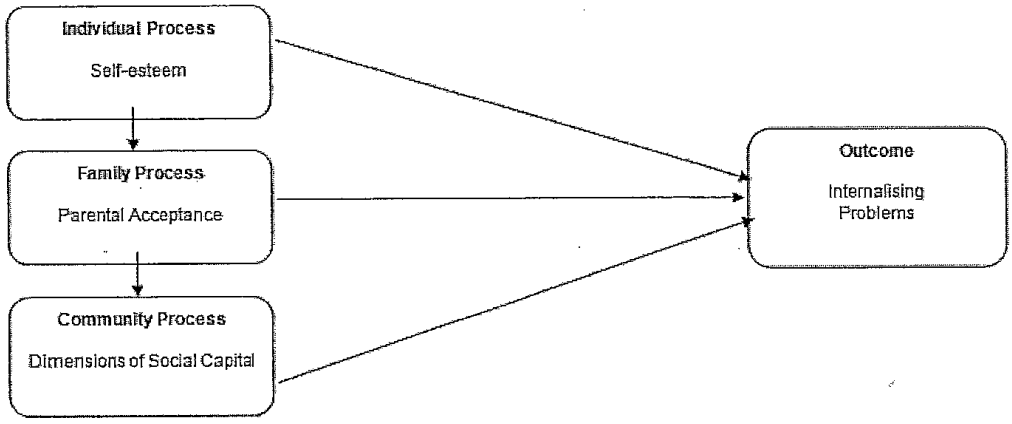

Figure 1: Selected variables to be investigated in the present study (self-esteem, parental acceptance, dimensions of social capital, and internalising problems).

Measures

Self-esteem: The Rosenberg Self-Esteem Scale (RSES) was used to assess self-esteem[32]. The RSES is a 10-item self-report uni-dimensional measure of global self-esteem, consisting of statements related to overall feelings of self-worth or self-acceptance. Scores range from 0 to 30, with higher scores indicating higher self-esteem. Scores between 15 and 25 are considered to be within normal range; scores below 15 suggest low self-esteem. Example questions include: 'I feel that I am a person of worth' and 'I feel at least on an equal plane with others'. In this study the internal consistency alpha (α) = 0.86.

Parental Acceptance: Parental acceptance was assessed using the Acceptance subscale from the revised Child Report of Parent Behaviour Inventory (CRPBI)[33]. This revised measure contains ten items designed to assess the adolescents' perceptions of the extent to which they feel accepted by their parent/s. Adolescents responded on a 3 point Likert-type scale from 1 (= not like her/him) to 3 (= a lot like her/him) as to how well items described their parent/s. Example questions include: 'My Mother/Father is a person who ...makes me feel better after talking over my worries with her/him' and '...tells me how much s/he loves me'. Higher scores indicated greater levels of parental acceptance as perceived by the adolescent. In this study α = .89.

Social Capital: A total of four measurable components of social capital were assessed via 12 questions selected from the Social Capital Questionnaire[34]. A total of 6 questions each representing structural and cognitive social capital were included.

Structural Social Capital

Participation in the local community - Example questions included: 'Have you attended a local community event in the past 6 months (church fete, school concert)?' and 'Are you an active member of a local organisation or club (sport, craft, social club)?'.

Proactivity in a social context - Example questions included: 'Have you ever picked up other people's rubbish in a public

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place?' and 'If you need information to make a life decision, do you know where to find that information?'

Cognitive Social Capital

Feelings of trust and safety - Example questions included: 'If someone's car breaks down outside your home, do you invite them into your home to use your phone?' and 'Does your local community feel like home?'

Neighbourhood connection - Example questions included: 'If you were caring for a child and needed to go out for a while, would you ask a neighbour for help?' and 'When you go shopping in your local area are you likely to run into friends and acquaintances?'

Responses ranged from: 'Not at all/Not much' (=1) to 'Yes, definitely/Frequently' (=4). Total structural, cognitive and combined scores were calculated. Possible combined total scores ranged from 12 to 48. Both structural and cognitive total scores each ranged from 6 to 24. Higher scores indicated greater social capital as reported by the adolescents.

Internalising Symptoms: Internalising symptoms were measured with the Revised Child Anxiety & Depression Scales (RCADS)[35]. The RCADS is a 47 item self-report questionnaire, with 5 scales corresponding to separation anxiety disorder (SAD), social phobia (SP), generalized anxiety disorder (GAD), panic disorder (PD), obsessive compulsive disorder (OCD), and 10 items for major depressive disorder (MDD). The RCADS has been shown to have clinical and research utility for young Australians up to the age of 19 years[36]. Items were scored on a scale from 0 to 3 and a total internalising score was calculated based on the total score of the RCADS. Total possible scores ranged from 0 to 141 with higher scores indicating more severe levels of anxiety and depressive symptoms. Respondents were also categorised into one of 3 symptom severity categories based on their total RCADS score: mild: 0–46; moderate: 47–94; and severe: 95–141. Adolescents scoring within the moderate symptom category indicate symptoms above the clinical threshold[35]. In this study $\alpha = 0.87$.

Results

Prior to analyses, variables were examined for accuracy of data entry, missing values and fit between the distributions and the evaluation of assumptions of multivariate analysis. All assumptions were considered to be met. Statistical analyses were completed using PASW Statistics 17.0 (SPSS Corp; Chicago, IL, USA: http://www.spss.com/). Relationships between all measures were investigated using Pearson product-moment correlations coefficients and associations between self-esteem, parental acceptance, social capital, and internalising problems were assessed using multivariate linear regressions.

As is shown, the mean level of self-esteem ($M = 19.89$) was considered in the 'normal' range (Table 1). A mean 'moderate' level of perceived acceptance ($M = 22.56$) by their parents was reported, and the total mean level of social capital ($M = 21.47$) was considered 'low' (a score of 22 and over was considered in the 'moderate' range). Based on the total mean score of the RCADS, the adolescents experienced a moderat' level of internalising symptoms ($M = 47.09$). No significant differences were found for males ($M = 46.02$, SD = 9.0) and females ($M = 48.17$. SD =11.2, t [386] = -.74, $p = .42$), two-tailed.

Based on the total mean score of the RCADS, 25% of adolescents experienced anxious and/or depressive symptoms ranging in severity from mild to severe (Table 2). Approximately 4% of adolescents reported experiencing severe symptoms.

The relationship between parental acceptance and self-esteem was moderate and positive (Table 3), indicating that adolescents who reported a higher level of parental acceptance also reported a greater level of self-esteem.

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Table 1: Means (standard deviations) of all measures for adolescents

Measure	Adolescents† M (SD)		
	Male	Female	Total
Self-esteem	18.34 (4.4)	21.44 (5.2)	19.89 (9.6)
Parental acceptance	21.51 (9.6)	23.62 (2.2)	22.56 (5.9)
Social capital	20.33 (2.4)	22.61 (3.3)	21.47 (5.8)
Internalising	46.02 (9.0)	48.17 (11.2)	47.09 (10.12)

†*N*=388.

Table 2: Total prevalence rates (%) of severity of internalising symptoms

Internalising symptoms severity	*N* (%)
No symptoms	291 (75)
Mild	47 (12.11)
Moderate	35 (9.02)
Severe	15 (3.87)
Total	388 (100)

Mild level: 0–46; moderate: 47–94; severe : 95–141.

Table 3: Correlations of measures for adolescents

Variable	1	2	3	4
1. Self-esteem	-	.40**	-.55**	.22
2. Parental acceptance	-	-	-.33**	.17
3. Internalising	-	-	-	-.07
4. Total social capital	-	-	-	-

N = 388.
Correlation is significant at *$p < .05$ (1-tailed); **$p < .01$ (1-tailed).

A moderate, negative relationship was found between parental acceptance and internalising symptoms, indicating that adolescents who reported that they felt accepted by their parents experienced lower symptoms of anxiety and depression. A moderate and negative relationship was found between self-esteem and the total internalising score, signifying that the greater level of self-esteem, the less internalising difficulties experienced by the adolescents.

The relationship between social capital and self-esteem were smaller, yet still significant and positive, indicating that adolescents who reported a greater sense of social capital within their communities, experienced higher self esteem.

The relationship between parental acceptance and social capital was very small and negative, yet significant, indicating that adolescents who perceived their parents to accept them reported higher social capital. The relationship between social capital and internalising problems was not significant.

Results from a linear regression demonstrated that parental acceptance was significantly related to greater self esteem, $F(1, 386), = 70.47$, $\beta = .393$, $p = .000$. Approximately 15% of the variance in self-esteem was explained by its relationship with parental acceptance ($R^2 = .15$). Parental acceptance also predicted social capital, $F(1, 386), = 11.68$, $\beta = .17$, $p = .001$. Approximately 4% of the variance in self-

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esteem was explained by its relationship with social capital ($R^2 = .04$).

Results from a linear regression demonstrated that social capital was significantly related to greater self esteem, F (1, 386), = 16.80, $\beta = .22$, $p = .000$. Approximately 4.2% of the variance in self-esteem was explained by its relationship with social capital ($R^2 = .04$).

A simultaneous regression analysis was conducted to evaluate how much of the variance in internalising problems could be explained by the level self-esteem, parental acceptance and social capital. The linear contribution of the three predictors was significantly related to internalising problems F (3, 384) = 58.33, $p = .000$. Approximately 33% of the variance in internalising problems could be accounted for by the combination of predictors, $R^2 = .33$.

Self-esteem and parental acceptance were the significant contributors to the prediction of internalising problems in the adolescent sample ($\beta = .52$, $p = .000$). Social capital was not a significant predictor of internalising problems.

Discussion

The present study contributes a small step towards building an evidence-base for the prevalence rates and determinants of internalising problems of adolescents from rural South Australia. Moreover, employing a multidimensional theoretical framework enables an investigation of the various determinants of mental health problems from individual, family and community domains.

Implications

Although the results from the present study represent adolescents from South Australia only, a number of implications are worth noting. For instance, based on the total mean score of the RCADS, the adolescents experienced a 'moderate' level of internalising symptoms. Further, approximately 13% of adolescents were considered to be above the clinical threshold, with 4% reporting experiencing severe symptoms. Although it is difficult to compare these findings with national figures (because young people were not included in the 2007 National Study, and anxiety disorders and young people from rural areas were not included in the 1997 National Study) such results must be of concern.

As a consecutive National Mental Health Survey is approaching, it is timely to highlight the importance of including as many Australians as possible from rural and remote areas, and in particular young people. This will produce a more accurate evidence-based representation of Australia's adolescent population, which will more effectively inform policy and ultimately facilitate implementation of relevant strategies.

Because this study was cross-sectional, causality cannot be demonstrated. Nonetheless, the findings demonstrate the importance of parental acceptance and may have implications for preventative and intervention programs for adolescents and their families. Not only did higher levels of parental acceptance predict lower levels of internalising problems, but they also predicted higher levels of self-esteem. Such findings may be applied to educate parents regarding the benefits of parental acceptance. To begin with, it is important to inform parents that 'acceptance' does not equate to agreeing with or accepting all of their adolescent's behaviours, but more to do with recognising, validating and demonstrating understanding of their experiences, thoughts and feelings, even during times of conflict.

Such an approach shows implicit and explicit interest and concern in the adolescent's perspective (which is especially important during times of conflict or disagreement), without creating a possible impression of disappointment. Thus, an adolescent is likely to internalise this acceptance, leading to a positive inner sense of self. This is particularly necessary when faced with the challenges inherent in the developmental years when an increase in autonomous functioning requires belief in one's self-worth.

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The results of this study showed that higher levels of self-esteem decreased the probability of experiencing internalising symptoms. Teaching parents relevant strategies to understand and display acceptance may not only help to strengthen the relationship with their adolescent, but further enhance their self-esteem, which may help to prevent or delay possible anxious or depressive symptoms from emerging.

Limitations and suggestions

There are a number of limitations worth noting. First and foremost, South Australia is merely one region in Australia and no rural district in Australia is homogenous[3,4] Heterogeneity within rural settings must be recognised as differences do exist. For instance, different rates of suicide have been acknowledged according to the degree of geographical remoteness[13]. Further, the findings from this study relied on adolescent self-reports and cross-sectional data. Thus, longitudinal data are required to establish causal relationships.

In the present study, social capital did not predict lower internalising problems. Perhaps such a result reflects the low social capital scores reported by the adolescents, rather than not being beneficial to mental health. It would be of interest to examine the outcomes of studies which report higher levels of social capital to explore the effects on mental health outcomes. However, social capital is such a multifaceted concept that it is not likely to be represented by any single measure[37].

Exploring potential comparisons between the prevalence rates and determinants of mental health problems of rural and urban adolescents[3,38] is also important. This is especially noteworthy when considering that potential differences between rural and urban populations may have been overlooked with the omission of rural populations included in national surveys[3,30,31].

Additionally, it may be useful to examine the role of other factors included in the Process Model[21] in the developmental outcomes of rural adolescents. For example, emotion regulation, parental autonomy granting, and/or a range of health indicators may be explored. By adopting a strengths-based approach, the determinants of mental health may also be investigated. This may include examining protective factors that could cushion the effects of adversity specifically to conditions which rural groups are more likely to encounter (eg the impact of drought)[39].

Finally, progressing from investigating *what* factors contribute to the onset of a particular developmental outcome, to examining *how* and *why*, or the underlying processes involved would be worthwhile. For instance, examining the interplay between various theoretically-derived individual processes as mediators of the relationships between specific family and/or community process factors. For instance, the potential role emotional security plays in the relationship between parental punitiveness and GAD; whether other aspects of social capital (eg social trust) account for the relationship between self-efficacy and PD; or the impact that self-control plays in the relationship between perceived teacher or peer support and depressive symptoms.

Conclusions

It has been suggested that in many rural and remote communities in Australia, mental health issues may be something of a 'sleeping giant'[3]. The challenge facing health professionals is to provide practical and evidence-based programs designed to address and/or strengthen a range of individual, family, and community factors - before the 'giant' begins to stir. Although the pathways to internalising problems are complex, it is anticipated that the knowledge gained from the current study may assist in preventing the development of mental disorders in rural youth, where local mental health services are often limited or unavailable.

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Acknowledgements

The authors acknowledge the cooperation from the Year 9 teachers and principals and sincerely thank the students and parents for their support and participation. The authors also thank Dr Victoria Gilliland for her assistance with the technical development of the online questionnaire. A version of this paper was presented at the Australian Psychological Society (APS) conference in Darwin, Australia in November 2009.

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