



**IDENTIFICATION AND MANAGEMENT OF
SOMATIZATION IN THE PRIMARY CARE SETTING, IN
TERMS OF ILLNESS BEHAVIOUR AND RISK OF
PSYCHIATRIC ILLNESS.**

Janice Patricia Scicchitano B.Hlth.Sc. Hons (Psychiatry)

Grad. Dip. Epidemiol.

**Departments of Psychiatry and General Practice,
The University of Adelaide.**

Submitted: June 2000

DISCLOSURE AND CONSENT

This work contains no material that has been accepted for the award of any other degree or diploma in any university or other tertiary institution, and to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

I give consent to this copy of my thesis, when deposited in the University Library, being available for loan and photocopying.

Signed:



J. Scicchitano

Date: 21. 08. 01.

DEDICATION

This thesis is dedicated to my husband, Raffaele, and my children, Beatrice, Eleanor, Madeleine and Bart. Without their encouragement, patience and continuing faith in me, this work would have been so much more difficult to complete.

ACKNOWLEDGMENTS

I would like to gratefully acknowledge my supervisors, Professor I. Pilowsky (Department of Psychiatry) and Professor J. Marley (Department of General Practice) for the unreserved time and effort they have given in the development, conduct and completion of the work of this thesis. I am grateful for the discussions we have had, and for their continuing patience and support throughout the work. I would also like to thank members of the staff of the Departments of Psychiatry and General Practice in the University of Adelaide for their unstinting encouragement, interest and patience during the time it has taken me to complete this work.

I owe an enormous debt of gratitude to the General Practitioners who participated in the study; Dr R. Pearce, Dr P. Lovell, Dr O. Frank, Dr P. Thompson, Dr A. Matto, Dr R. Srinivasan, Dr V. Hillier, Dr H. Sage, Dr M Hawkes, Dr G. Murphy, Dr L. Pisaniello, Dr T. James, Dr G. Beaumont, Dr P. Werchon, Dr F. Downey, Dr R. Turpin, Dr I Wilson, Dr B. Butcher, Dr G Yuen, Dr M. Chiew, Dr A. Awwad, Dr R Narendranathan and Dr R. Menz. I would like to thank them and the Nursing and Receptionist staff in each practice for their cheerful interest and support, and for the comments and ideas they offered in the time I spent with them.

Finally, I am grateful to all of those patients who took the time to participate in the study, when at times it must have been a troublesome thing to do. Thank-you.

PUBLICATIONS AND PRESENTATIONS

PUBLICATIONS

Scicchitano J, Lovell P, Pearce R, Marley J, Pilowsky I. Illness behaviour and somatization in General Practice. *J. Psychosom. Res.* 1996; 41: 247-254.

Scicchitano J, Marley J, Pilowsky I. Illness behaviour, somatization and psychiatric morbidity in General Practice. (Submitted). *J. Psychosom. Res.* (2000)

PRESENTATIONS.

Development and Administration of a Quality Assurance and Practice Assessment points programme on Somatization in Primary Care for General Practitioners in Adelaide. Conducted in the General Practitioners practices and in The Department of Psychiatry, Royal Adelaide Hospital, Adelaide. 1995

Oral Presentation. Somatoform Disorders in Primary Care, to General Practitioners in the Adelaide Central and Eastern Division of General Practice. Wakefield Clinic. 1999.

TABLE of CONTENTS

DISCLOSURE AND CONSENT	ii
DEDICATION	iii
ACKNOWLEDGMENTS	iv
PUBLICATIONS AND PRESENTATIONS	v
TABLE OF CONTENTS	vi
LIST OF ABBREVIATIONS	xiii
LIST OF TABLES	xv
ABSTRACT	1
1 INTRODUCTION	5
2 LITERATURE REVIEW	11
2.1 INTRODUCTION OF THE TERM SOMATIZATION	12
2.1.1 The Neurasthenia Epidemic	13
2.1.2 Growth of the Concept of Psychosomatic Medicine	15
2.1.3 Current Understanding of the Term Somatization	19
2.2 ILLNESS BEHAVIOUR	20
2.2.1 The Concept of the Sick Role	22
2.2.2 The Concept of Illness Behaviour	23
2.2.3 Perceptual Factors in Illness Behaviour	24
2.2.4 Recognition of Symptoms	25
2.2.5 Denial of Symptoms	26
2.2.6 Perceptual Style	29

2.2.7	Evaluative Factors in Illness Behaviour	30
2.2.8	Tolerance	31
2.2.9	Information Gathering	32
2.2.10	Negative Affectivity	33
2.2.11	Factors in Responding to Symptoms	34
2.1.12	Attributional Style	35
2.2.13	Disruption of Daily Activities	36
2.2.14	Sociodemographic and Structural Factors	36
2.2.15	Perceived Outcomes	37
2.2.16	The Role of the Doctor in Illness Behaviour	38
2.2.17	Abnormal Illness Behaviour	41
2.3	MODELS OF SOMATIZATION	45
2.3.1	Early Models of Somatization	47
2.3.2	Current Models of Somatization	51
2.3.3	Functional Somatization	52
2.3.4	Hypochondriacal Somatization	54
2.3.5	Presenting Somatization	56
2.3.6	Relationship between Somatization and Psychiatric Illness	57
2.4	PREVALENCE STUDIES	60
2.5	AETIOLOGY AND ANTECEDENTS OF SOMATIZATION	64
2.6	IDENTIFICATION OF SOMATIZING PATIENTS	67
2.7	TREATMENT STUDIES	74
3	AIMS AND HYPOTHESES	77
4	METHODS	80

4.1	SUBJECTS	81
4.2	RATING INSTRUMENTS	84
4.2.1	Demographic Data	84
4.2.2	Illness Behaviour	84
4.2.3	Risk of Psychiatric Illness	87
4.2.4	Structured Interview	88
4.3	TREATMENT	89
4.3.1	Protocol	89
4.3.2	Re-attribution	89
4.3.3	Problem-solving	91
4.4	PROCEDURES	92
4.4.1	Recruitment of Subjects	92
4.4.2	Clinical Assessment by the General Practitioner	94
4.4.3	CIDI Interview	95
4.4.4	Treatment	96
5	RESULTS OF A PRELIMINARY STUDY OF ILLNESS BEHAVIOUR AND SOMATIZATION IN GENERAL PRACTICE.	98
5.1	INTRODUCTION	99
5.2	METHODS	102
5.2.1	Patients	102
5.2.2	Procedures	102
5.2.3	Statistical Analysis	104
5.3	RESULTS	104
5.3.1	New Inceptions of Illness	105
5.3.2	Longstanding Illnesses	106

5.4	DISCUSSION	109
6	ILLNESS BEHAVIOUR OF PATIENTS IN PRIMARY CARE WITH ORGANIC ILLNESSES, PSYCHOLOGICAL PROBLEMS AND MEDICALLY INEXPLICABLE PHYSICAL SYMPTOMS: A COMPARATIVE STUDY.	114
6.1	INTRODUCTION	115
6.2	METHODS	118
6.2.1	Patients	118
6.2.2	Procedures	119
6.2.3	Doctor's Assessment	119
6.2.4	Questionnaires	120
6.2.5	Statistical Analysis	121
6.3	RESULTS	121
6.3.1	Group Classification	122
6.3.2	Age and Gender Characteristics of the Groups	123
6.3.3	GHQ-28 Results -Differences between the Presentation Groups	125
6.3.4	IBQ Results - Differences between the Presentation Groups	127
6.3.5	Gender Differences on the IBQ between the Three Groups	131
6.3.6	Gender Differences on the IBQ within each Group	131
6.4	DISCUSSION	134
6.4.1	Affective Distress in the Three Presentation Groups	134
6.4.2	Risk of Psychiatric Illness	135
6.4.3	IBQ Results	135
6.4.4	Group Differences in Illness Perceptions and Attributions	137
6.4.5	Illness Behaviour in Primary Care Populations	139
6.4.6	Conclusions	140

7	PREVALENCE OF PSYCHIATRIC MORBIDITY AND ABNORMAL ILLNESS BEHAVIOUR IN PRIMARY CARE PATIENTS WITH ORGANIC ILLNESSES, PSYCHOLOGICAL PROBLEMS AND MEDICALLY-INEXPLICABLE PHYSICAL SYMPTOMS.	144
7.1	INTRODUCTION	145
7.2	METHODS	150
7.2.1	Patient Classification	150
7.2.2	Statistical Analysis	151
7.3	RESULTS	151
7.3.1	Age and Gender Characteristics of the Presentation Groups	152
7.3.2	Non-caseness/Caseness in the Presentation Groups	155
7.3.3	GHQ-28 Results	157
7.3.4	IBQ Results	159
7.4	DISCUSSION	165
8	THE RESULTS OF A PRELIMINARY STUDY OF A REATTRIBUTION AND PROBLEM-SOLVING TREATMENT PROTOCOL FOR PATIENTS WITH SOMATIZATION IN THE PRIMARY CARE SETTING.	172
8.	INTRODUCTION	173
8.2	METHODS	178
8.2.1	Patients and Procedures	179
8.2.2	Doctor's Assessment	180
8.2.3	CIDI Interview	180
8.2.4	Randomization	181
8.2.5	Treatment Protocol	182
8.2.6	Questionnaires	182
8.2.7	Outcome of Treatment Assessments	183

8.2.8	Statistical Analysis	184
8.3	RESULTS	184
8.3.1	Recruitment for the Treatment Programme	184
8.3.2	CIDI Data	186
8.3.3	GHQ-28 Results	187
8.3.4	IBQ Results	188
8.3.5	Other Outcome Measures	191
8.4	DISCUSSION	192
9.0	CONCLUSIONS	199
9.1	THE DEFINITION OF SOMATIZATION	200
9.2	THE IDENTIFICATION OF SOMATIZATION	203
9.3	SOMATIZATION AS A FORM OF ILLNESS BEHAVIOUR	206
9.3.1	Differences in Experiential (Perceptual) Factors	207
9.3.2	Differences in Cognitive Factors	208
9.3.3	Differences in Behavioural Factors	209
9.3.4	The Role of the Doctor's Findings in Somatization	209
9.4	THE TREATMENT OF SOMATIZATION IN THE PRIMARY CARE SETTING	211
9.5	CONCLUSIONS	212
9.6	RECOMMENDATIONS FOR FUTURE RESEARCH IN SOMATIZATION	215
10	APPENDICES	217
10.1	THE ILLNESS BEHAVIOUR QUESTIONNAIRE	218
10.2	THE SCALED 28-ITEM GENERAL HEALTH QUESTIONNAIRE	223
110.3	LETTER FROM AUTHOR TO DOCTORS	228

10.4	INFORMATION SHEET	229
10.5	CONSENT FORM	230
10.6	DOCTOR'S DATA SHEET	231
11.	BIBLIOGRAPHY	232

LIST OF ABBREVIATIONS

AI	Affective Inhibition
AD	Affective Disturbance
AS	Affective State
CIDI	Composite International Diagnostic Interview
D	Denial
DA	Disease Affirmation
DC	Disease Conviction
DF	Discriminant Function
DIS	Diagnostic Interview Schedule
DSM-III-R	Diagnostic and Statistical Manual of Mental Disorders, Third Edition
ECA Study	Epidemiologic Catchment Area Study.
GH	General Hypochondriasis
GHQ-28	General Health Questionnaire - 28-item Scaled Form
Group O	Patients with medically explicable physical symptoms
Group P	Patients with psychological problems
Group S	Patients with medically inexplicable physical symptoms
I	Irritability
IBQ	Illness Behaviour Questionnaire
ICD-10	International Classification of Disease
NIMH	National Institutes of Mental Health
NSS-6	Non-specific Symptoms Screen
P/S	Psychological versus Somatic focusing
PSE	Present State Examination

TAS-20	Toronto Alexithymia Scale
SMR	Standardized Morbidity Rate
SPPI	Standardized Polyvalent Psychiatric Interview

LIST OF TABLES

- Table 5.3.1 Age and Gender Composition of Group I (Non-somatizing patients) and Group II (Somatizing patients).
- Table 5.3.2 Comparison of IBQ Scores for Males in Group I (Non-somatizing) and Group II (Somatizing).
- Table 5.3.3 Comparison of IBQ Scores for Somatizing Patients with “Longstanding” Illnesses and Somatizing Patients with “New Inceptions” of Illness.
- Table 6.3.1 Age and Gender Composition of the Presenting Groups.
- Table 6.3.2 Summary of Significant Differences in Age between Patients in the Presenting Groups.
- Table 6.3.3 Comparison of the GHQ-28 Scores between Patients in the Presenting Groups.
- Table 6.3.4 Summary of Significant Differences in GHQ-28 Scores for Patients in the Presenting Groups.
- Table 6.3.5 Mean Scores on the IBQ Scales for Patients in the Presenting Groups.

- Table 6.3.6 Summary of Significant Differences on Scores for the IBQ Scales between Patients in the Presenting Groups.
- Table 6.3.7 Mean Scores on the IBQ Scales for Males and Females in the Presenting Groups.
- Table 6.3.8 Summary of Significant Differences between Males and Females in the Presenting Groups on Scores for the IBQ Scales.
- Table 7.3.1 Age and Gender Composition of the Presenting Groups by “Caseness”.
- Table 7.3.2 Summary of Significant Differences in Age between Patients in the Presenting Groups.
- Table 7.3.3 Comparison of Scores on the GHQ-28 by “Caseness” for Patients in the Presenting Groups.
- Table 7.3.4 Summary of Significant Differences in GHQ-28 Scores between Patients in the Presenting Groups.
- Table 7.3.5 Mean Scores for Scales of the IBQ by “Caseness” for Patients in the Presenting Groups.
- Table 7.3.6 Summary of Significant Differences on Scores for Scales of the IBQ between ‘Non-case’ Patients in the Presenting Groups.

- Table 7.3.7 Summary of Significant Differences on the IBQ Scales between ‘Case’ Patients in the Presenting Groups.
- Table 7.3.8 Summary of Significant Differences on Scales of the IBQ between ‘Case’ and ‘Non-case’ Patients in the Presenting Groups.
- Table 8.3.1 Age and Gender Characteristics of the Randomized Groups.
- Table 8.3.2 CIDI Diagnoses in the Treatment and Control Groups.
- Table 8.3.2 Mean GHQ-28 Scores for Control and Treatment Groups at Randomization and at Six Months following Randomization/Treatment.
- Table 8.3.3 Mean Scores on the IBQ Scales for Control and Treatment Groups at Randomization and at Six Months following Randomization/Treatment.

ABSTRACT

This doctoral thesis presents a study of the phenomenon of 'somatization' as it occurs in the primary care setting. The 'somatization' phenomenon was studied in terms aspects of illness behaviour and risk of psychiatric morbidity. The first purpose of the study was to investigate and compare aspects of the illness behaviour and risk of psychiatric morbidity in patients who present to General Practitioners with physical symptoms associated with an organic illness, with psychological problems, and with physical symptoms for which no adequate organic explanation could be established. Secondly, the study proposed to develop and evaluate the efficacy of a treatment protocol for somatizing patients, suitable for administration by General Practitioners.

The first study in this thesis reports the results of a pilot study of illness behaviour and risk of psychiatric morbidity in two groups of patients attending General Practitioners: namely, patients presenting with physical symptoms for which an adequate medical explanation could be established, and patients presenting with physical symptoms for which there was no adequate medical explanation. The primary aim of this study was to assess the feasibility of conducting such a study in the primary care setting. The results of the study showed that, while male patients presenting with physical symptoms for which an adequate cause could be found differed on several aspects of illness behaviour from male patients with physical symptoms for which there was no medical explanation, there were no comparable differences between female patients presenting with physical symptoms with or without organic pathology. It was found however, that with some minor modifications, a study of this nature could be conducted in the primary care setting, without causing a major disruption to the doctor's practice

The second study therefore presents the results of a much larger project in which 23 General Practitioners participated. In this study, comparisons in the illness behaviour and risk of psychiatric illness were made between three groups of primary care patients; that is, patients presenting with physical symptoms with or without organic pathology, and patients presenting with psychological problems. The results showed that the groups differed in the risk of having a psychiatric disorder, with patients presenting with medically explicable physical symptoms being at a significantly lower risk of psychiatric illness than patients presenting with psychological problems or with medically inexplicable physical symptoms. Patients in the latter two groups were found to be at an equivalent risk of having a psychiatric illness. Patients in the three presenting groups were also found to be distinguishable on several aspects of illness behaviour. Most strikingly, somatizing patients with inexplicable physical symptoms were found to be characterized by a significantly stronger belief that the symptoms were attributable to the presence of a physical disease, and more strongly denied having any psychological stressors in their lives, in comparison with patients in the other two groups.

The third study presents the results of an examination of patients at risk of having a psychiatric illness in each of the three patient groups, in terms of the illness behaviour of each group. This study addresses the difficulty of detecting psychiatric morbidity in the primary care setting, where psychiatric disorders are generally less severe than those in the general hospital or psychiatric hospital setting, frequently occur in patients with concomitant physical illnesses, or are commonly presented in terms of physical symptoms rather than as psychological problems. It was found in each presentation group, patients at low risk of psychiatric morbidity could be distinguished from patients in the group at an increased risk of psychiatric illness by

their beliefs and attitudes about the symptoms. These beliefs were characteristically associated with illness phobias and inability to be reassured by the doctor.

The fourth study presents the preliminary results of the administration of a treatment protocol for somatizing patients. Because of the preliminary nature of the study, the results are tentative. However, this study highlighted the difficulties of conducting such projects in the primary care setting, and these are discussed further.

In conclusion, it is suggested that abnormal illness behaviour in the form of somatization may be an important factor in the non-recognition of mild non-psychotic psychiatric illnesses in the primary care setting, resulting in disproportionate costs in the management of somatizing patients, to the health care system in financial terms, and to the patient in terms of disability and suffering. The results of the study indicate that an assessment of the patients' attitudes and beliefs about symptoms and an exploration of psychosocial issues may lead to a better understanding of why the patients has sought medical help, and may lead to early identification and appropriate treatment of somatizing behaviour and the psychiatric morbidity underlying such behaviour.

CHAPTER 1

INTRODUCTION



1 INTRODUCTION.

The term 'somatization' is a relatively recent addition to the medical lexicon. An 'invention' of the twentieth century, its use has been influenced considerably by the extraordinary burgeoning of knowledge that has occurred not only in the medical, but also in the psychological and social sciences during this century. So much so, that as the century draws to a close, the term 'somatization' has come to take a meaning rather different to that attributed to it, when it was first introduced at the beginning of the century. In the intervening years, 'somatization' has been the subject of discussion and research in a range of disciplines including medicine, sociology, psychology and anthropology. As a result, several different models and explanations of the concept of 'somatization' exist. However, the theme common to all theories of somatization is that of the presence of psychological distress and psychiatric illness, and regardless of the many ways in which it has been conceptualised, the term 'somatization', as it always has done and as Fabrega states:

connotes psychiatric morbidity and the illusion of general medical morbidity. (1)

The phenomenon of somatization has increasingly become a focus of medical research in the past twenty years, particularly in the primary care setting. Since the early work of Shepherd et al in general practices in London (2), a considerable body of evidence has grown that supports their findings that psychological distress and mild psychiatric illnesses are highly prevalent in general practice populations. Although estimates of the true prevalence of these illnesses vary, the general consensus of world-wide epidemiological studies suggests that approximately 30% of patients who consult a general practitioner are suffering from a clinically well-defined mental disorder. (3-9) Such is the extent of mental health problems in this sector, that it has

been referred to as the “*de facto mental health care system*” (10), with consistent reports that up to 50% of patients with mental disorders seek help from general practitioners rather than from practitioners in specialised mental health services. (11)

The significance of these figures lies in the costs associated with them. The real costs of mild psychiatric illness and psychological distress in the community and in the primary care setting are largely inestimable. In fiscal terms, they are staggering. A study in the United Kingdom based on 1985 prices calculated the annual cost of management of mental disorders in the primary care setting was almost double the combined costs for patients in specialised mental health services and those in psychiatric institutions (12), exceeding the overall costs for example, for management of hypertension. (7) Direct costs for diseases of the nervous system in terms of medical and psychiatric diagnosis and treatment account for 20% of the health care budget in the European Union, with the direct costs associated with depression alone in the United Kingdom estimated at 420 million pounds sterling annually. Similar figures are reported from the United States. (13) Even higher, however are the indirect costs associated with mental health problems. These include increased utilisation of health care services for other medical complaints in terms of consultations and investigations, prolonged hospitalisations, absenteeism and loss of productivity from work and, in the worst case, premature death from suicide. (13) For example, findings from the Whitehall II study (14), a longitudinal survey of work absenteeism in London-based civil servants aged between 35-55 years showed that psychiatric disorder, in the form of neurosis and neurosis ‘ill-defined’ was the third most common cause of long spells of absenteeism in women and the fourth most common cause in men. Psychiatric disorders have been shown to be an increasing cause of sickness absenteeism in the United Kingdom, accounting for a significant portion of the annual

13 billion pound sterling cost of absenteeism to British business. (14) Finally, costs related to mental disorders that are largely incalculable are those associated with individual suffering and their adverse impact on quality of life. (15) However, the evidence suggests that untreated psychological distress is a major clinical problem, with reports of a significantly increased risk of mortality (16,17), ongoing illness (18) poor role-functioning and low well-being of many patients. (19-21)

A significant factor in the estimation of the costs of mental disorders in primary care resides in the fact that they are frequently undiagnosed and untreated. Many illnesses remain undetected because between 10% and 25% of persons at risk of having a mild non-psychotic psychiatric illness do not seek help. (22) While it seems that persons in the community often recognize the presence of psychiatric disorder, misconceptions concerning mental illness and the appropriate source of treatment of it persist. (23) Rogers and Pilgrim (24) refer to "an apparent disjuncture" in lay thinking about mental illness: where, on one hand there is a tendency to attribute disorders of mental health to external environmental factors such as unemployment and economic constraints, while on the other hand, focusing on the utilization of personal characteristics such as self-reliance and autonomy as the appropriate way of dealing with threats to psychological stability. Such discrepant attitudes and beliefs about mental abnormality and antisocial behaviour are often most strikingly found in the outcomes of court cases, where juries convict persons they find to be of a sound mind, while medical evidence strongly suggests the presence of psychopathology. (25)

An area of greater concern in the primary care setting however, is non-recognition of mental disorder. Research findings show that figures for undetected minor psychiatric morbidity in the primary care setting are as high as 50%. (26-28)

Some dispute these figures. Methodological short-comings that do not take into account the fact that although mental disorder may be recognised, it may not be recorded in the patient's notes (6), or that many illnesses are missed because they are mild in severity and frequently remit spontaneously without treatment or sequelae (26,29-34), are cited as misleading estimates of non-recognition and non-treatment of these illnesses. However, it is generally recognized that undiagnosed and untreated psychiatric illnesses in primary care constitute a major health care problem. (35)

Several reasons have been proposed to account for this failure to detect psychiatric morbidity in primary care. Doctor-related issues include inadequate medical training (36,37), tacit collusion between doctor and patient (38), time constraints, and the presence of co-morbid physical illnesses where symptoms may be shared by organic and psychological disorders. (30) Patient-related issues include the mildness of the symptoms (30,31,33,34), no previous history of psychiatric illness (29), and patient ethnicity. (39) However, the factor that has been described as the single most important reason for the non-detection of psychiatric illness in the primary care setting is that of the mode of presentation employed by patients who consult doctors. (40) This refers to the particular tendency of patients with mild psychiatric illnesses to present to doctors with physical complaints for which no adequate organic explanation can be found. This phenomenon is known as somatization. A universal phenomenon, somatizing behaviour crosses geographic, cultural and social borders; and in the medical lexicon exists as an uneasy and ambiguous link between the domains of biological and psychosocial medicine.

This thesis seeks to promote further understanding of the phenomenon of somatization by examining the attitudes and beliefs towards illness which patients use

to rationalize their decision to seek medical help. The thesis comprises four studies. The first of these is a pilot study, in which data was collected from a minimum of 100 patients in each of three general practices, with the principal purpose of determining the feasibility of carrying out such a project in the primary care setting. The second study presents the results of the major project, in which data was gathered from patients in 23 general practices, in order to determine how attitudes and beliefs towards illness may differ between, a) patients who seek help for explicable physical symptoms, b) patients who seek help for psychological problems, and c) 'somatizing' patients who seek help for inexplicable physical complaints. The third study is concerned with an evaluation of the numbers of patients at an increased risk of psychiatric disorder in each of the three above-mentioned patient groups; and an assessment of differences in illness behaviour between patients at no risk or at an increased risk of psychiatric disorder in each of the patient groups. Finally, the fourth study presents the results of a preliminary study of the administration of a psychotherapeutic treatment designed to help patients who somatize psychological distress, to develop strategies for dealing with any psychosocial problems which lie at the base of their psychological distress.

CHAPTER 2.

LITERATURE REVIEW.

2.1 INTRODUCTION OF THE TERM SOMATIZATION.

The introduction of the term 'somatization' to the medical literature is credited to Viennese analyst, William Stekel. Stekel was one of the four original members of Freud's inner circle and was a prolific writer on a broad range of psychiatric disorders. That Stekel was the author who first introduced 'somatization' to the literature (41), may have been because his practice in a working class area made him more aware of the several forms of somatization which has been said to be commoner in lower socio-economic status groups. (42) Stekel defined 'somatization' as:

a deep-seated neurosis akin to the mental mechanism of conversion (43),

based on Freud's early belief that repressed neurosis may be expressed as a physical symptom. Stekel used the term 'somatization' on several occasions: in one instance, to describe "an interesting somatization" in which he recounts the case history of a bank director who lost his position, became depressed and developed a terrible and inexplicable pain in his hip and thigh. (44,45) Stekel gives no indication of whether, or in what way somatization differed from conversion. However, in the sense that it was used at the time, somatization was regarded as a psychopathological state, and as such, diagnosis and management of it lay within the province of psychiatry. It was considered an uncommon and atypical disorder, with mention of it restricted to textbooks on psychiatry and in psychiatric ward settings. (46)

This may account to some extent, for the scarcity of references to 'somatization' in the years immediately following Stekel's introduction of the term. It might also have been the case that 'somatization' was a clinical picture more likely to be seen in non-psychiatric medical settings, especially neurology, and was a term restricted to and peculiar to psychoanalytic practice in the German-speaking world - a

practice which met with considerable opposition in other countries when first introduced at the beginning of the century. (47) By the time 'somatization' reappeared in medical literature published during World War II, much had changed in the disciplines of medicine and psychiatry, including the context in which the term 'somatization' was used, and the meaning attributed to it - in hindsight, a change foreshadowed by Stekel's definition in which he describes somatization both as a psychopathological state and as a mechanism, or process. -

2.1.1 The Neurasthenia Epidemic.

Two developments were of particular relevance to the change in the understanding of somatization. The first was the demise of the diagnostic term 'neurasthenia'. Neurasthenia, or 'nervous exhaustion' was proposed by the American neurologist George M. Beard in 1869 as a diagnostic entity encompassing a wide variety of "*slippery, fleeting and vague*" symptoms. (48) Attributed to the pressures on daily lives associated with the dramatic social, scientific and technological advances made in the latter half of the nineteenth century, use of the diagnosis of neurasthenia reached its zenith at the turn of the century. By this time, in spite of considerable opposition, neurasthenia had become an accepted medical condition. Use of the diagnosis of neurasthenia had spread from the 'comfortable classes' of American society, to being widely used throughout Europe and was as frequently made in working class patients as in others. Beard's insistence that neurasthenia was a 'real' disease with genuine somatic symptoms provided patients with an acceptable label for a host of distressing, but not life-threatening symptoms. At the same time, it relieved the doctor of the dilemma of managing such symptoms; that is, the physician was able to treat neurasthenic patients in a manner that was essentially psychotherapeutic, while

the problem of psychological distress was addressed in the guise of attention to physical problems. (49)

The decline in the use of neurasthenia as a diagnosis was largely brought about by advances in medical knowledge and technological expertise. Improved diagnostic methods gradually dispelled Beard's contention that neurasthenia was an organic illness. Increasingly it was argued that the illness was more appropriately the concern of psychiatrists rather than neurologists. This argument was supported by the distillation from the plethora of symptoms previously attributed to neurasthenia not only of several organic illnesses such as anaemia, lead poisoning and various endocrine disorders but also of recognizable mental disorders such as obsessive compulsive disorder by Janet, and anxiety neurosis and hysteria by Freud. (50) Similarly, as the concept of depression became more clearly defined (51), its frequent association with the occurrence of neurasthenia, albeit in a mild and non-psychotic form was recognized. (52-55) Finally, as it became apparent that neurasthenia could be diagnosed as readily in patients from the lower working classes as in the upper professional classes, and in the regular enlisted soldiers as often as in the commissioned officers of World War I, the term 'neurasthenia' fell into disrepute. Today, while neurasthenia retains a place in the International Classification of Disease (ICD-10) (56), due to its continuing use in some European countries such as Germany (57), Holland (30), the former Yugoslavia (58) and the Soviet Union (59), and more frequently in China (60-62), in the English speaking countries of the Western world, it has become rather a rare and idiosyncratic diagnostic label. (63)

In the history of medicine, the neurasthenia episode was a strikingly interesting one, which had significant consequences for the practice of medicine in general, and

for social psychiatry in particular. Firstly, in hindsight, it provided early evidence that psychological distress which was severe enough to result in medical help-seeking was highly prevalent in community and general practice populations. Secondly, it showed that these illnesses were most commonly presented to the doctor in the form of physical symptoms. Thirdly, a diagnosis of neurasthenia recognized the physical suffering of the patient; and at the same time provided doctors with a way of managing psychological problems that were distressing but which were not severe enough to be labelled as hysteria or hypochondriasis. As Sicherman writes, a diagnosis of neurasthenia allowed physicians alternatives to "*inaction and incarceration*". (49) Finally, the advent of neurasthenia provided psychiatrists and the discipline of psychiatry with a pathway out of the isolation of the asylums to which they had previously been confined, into the area of general medical practice. It became apparent that psychiatrists could contribute usefully not only to the management of patients with psychotic illnesses, but also with "*the smallest diseases and the minutest defects of the mind*" (49), and that in an era concerned with mental hygiene, there was a compelling need for the understanding and skills of the psychiatrist.

2.1.2 Growth of the Concept of Psychosomatic Medicine.

The second event in medical history that had a marked effect on changes in the understanding of the term 'somatization' was the re-emergence of the discipline of psychosomatic medicine. Since the introduction of the term 'psychosomatic medicine' to medical literature in 1922 by Felix Deutsch, a physician and psychoanalyst, use of the term has been accompanied by ambiguity and controversy. However, its use in the twentieth century may be regarded as a re-emergence, because the precepts of psychosomatic medical care had been advocated long before the term was introduced.

Since the earliest writings of Plato and Aristotle, the notion has existed that mind and body are inseparable and mutually dependent, and that the patient must be examined and treated accordingly. An holistic approach to patient care has never been dominant in Western medical practice. Furthermore, such practice was dealt a considerable blow by medical interpretations of “Cartesian theories” of mind and body, and by the biological direction taken by medical science following Virchow’s discoveries in cell biology. Nevertheless, the ideal of psychosomatic medicine has always wound as an unbroken thread through medical writing and practice, and by the 1920’s, argument for the consideration of psychological as well as biological factors in the aetiology of disease began to receive increasing support. Theories of psychosomatic medicine were particularly promoted by Flanders Dunbar (64,65), with her assertion that:

your mind is your body and vice versa ... this is the meaning of psychosomatic medicine (65),

Dunbar sought the advancement of the discipline in an organized manner, using scientific principles and methodologies, rather than anecdotal evidence to promote its ideals.

The experiences of doctors during the social and economic upheavals of the Great Depression of the 1930’s, and to an even greater extent of the two World Wars served to heighten the awareness that explanations for the aetiology of illness and disease could not be drawn exclusively from biological theories. In a paper written in the early years of the Second World War, Colonel GWB James, a psychiatrist at St Mary’s Hospital in London recalls the experiences of military medical personnel in the First Great War of:

the many cases with rather mysterious physical complaints which were eventually correlated with anxiety. (66)

James suggested that these illnesses arose out of a conflict between the instinctive drive of self-preservation and the herd drive associated with duty and discipline, and he warned that the problem of such complaints would certainly recur in the current conflict. Thus prepared, doctors noted that these “*antipodal emotional and neurotic responses*” (67) to the conditions of war were often short-lived, provided they were recognized early and treated appropriately. (68) In the British literature such cases of functional organic complaints were referred to as “anxiety neurosis”, a term that gradually replaced that of neurasthenia. (66) In the United States, Menninger used the term “somatization reactions” to refer to such cases. (69) Noting that they were specific conditions within the discipline of psychosomatic medicine, Menninger further observed that, while in the larger than life theatre of war, these conditions occurred with greater frequency, they were no different in nature to similar conditions in civilian life. (69)

Consensus on the meaning of the term ‘psychosomatic medicine is far from being reached. For example, Lipowski and others contend that the term is ambiguous and misleading, affirming the mind-body dualism that the discipline seeks to deplore. (70) However, evidence continued to accumulate that related the aetiology of disease and illness not only to biological states, but that these states were also strongly influenced by psychological (64,65), environmental (66) and social factors (71,72). In Britain, for example, Halliday’s study (71) of the prevalence of “*apparent physical diseases*” presented as debility, gastritis, cardiac debility, tachycardia and fibrositis found these complaints to be twice as common in coalminers compared to non-miners. Halliday attributed the difference to the miners’ appalling working conditions in conjunction with the constant presence of danger in which the coalminers spent their every working day. Furthermore, that the highest incidence of these illnesses found in

younger men was thought to be associated with the mechanization of the mining industry. This resulted in miners becoming "*mere shovellers*" of coal, any pride or tradition in their skills being lost as machines took their place. Working conditions became worse than ever because of the noise of the machines, while social position was lost as the miner's task became a more demeaning one. (71) Thus, argument for consideration of these factors as the source of patients' illnesses was strengthened; and as the re-emergence of the discipline of psychosomatic medicine was being welcomed by the mid-century (73), Menninger wrote:

It is hoped that the recent emphasis on the term (psychosomatic medicine) will re-awaken an interest in the sick person, instead of merely in his disease: and that it will bring an awareness of the man's daily struggles as having as much (or more) to do with the way he may feel as bacteria or bullets. (69)

The significance of the re-emergence of the discipline of psychosomatic medicine was that it signalled the reappraisal of those patients who present to doctors with somatic symptoms for which no organic cause could be established, and who had long taxed the ingenuity and patience of their doctors. Furthermore, in Great Britain, the advent of National Health Services which treated the patient without charge, made it mandatory to treat appropriately; for example, not to be investigating and treating somatic symptoms which were a consequence of a psychological problem, because this was ineffective and expensive. It was therefore timely that the social, psychological and environmental aspects of illness and disease should receive greater emphasis both in making diagnostic decisions and in administering appropriate treatments.

2.1.3 Current Understanding of the Term Somatization.

As the century draws to a close, the term 'somatization' is still used as a diagnostic entity. It retains a place in the DSM-IV and ICD-10 classifications of diseases where criteria for its diagnosis are based upon counts of a lifetime history of inexplicable somatic symptoms. In some instances, the term is used interchangeably with such terms as 'hysteria', 'hypochondriasis' and 'conversion disorder'. (74). In order to account for subsyndromal presentations, others have proposed the use of such terms as "abridged somatization" (75): while the phrase "functional somatic symptoms" (76) is also used as a general description of the presentation of physical symptoms without organic pathology. As a clinical entity, clarification of the term 'somatization' has been confounded by the vagaries of psychiatric terminology and nosology: and understanding the nature and basic mechanisms of the illness continues to be a baffling problem for physicians.

Currently, the term 'somatization' is more widely understood to describe the **process** of help-seeking for physical complaints for which no adequate organic cause can be established. Lipowski defines somatization as:

..a tendency to experience and communicate somatic distress and symptoms unaccounted for by pathological findings, to attribute them to physical illness, and to seek medical help for them. (77)

This broad descriptive definition has been criticized on the grounds that it fails to take into account the role of the doctor in the medical help-seeking of somatizing patients who experience and present somatic rather than psychological problems. However, in this definition Lipowski refers to somatization as '*a generic concept*' (77) which describes a range of phenomena which do not necessarily imply the presence of psychiatric disorder. That is, while this definition is thus contrary to more recent

clinical definitions of somatization, it describes a common human tendency which only becomes a problem when persons persist with the belief that their symptoms are indications of the presence of physical disease despite physicians' reassurance that there is no pathological evidence for such an illness.

Far from being atypical and uncommon, in the primary care setting, the process of somatization is the norm. Epidemiological studies conducted over the past twenty years show somatizing behaviour and presentation of non-specific, ill-defined symptoms such as abdominal pain, chest pain, cough, fatigue, breathlessness, back pain and dizziness are common in this setting. In Britain, Bridges and Goldberg (27) found that of the 30% of patients with diagnosable psychiatric disorders in primary care, more than half presented with somatic complaints. Results of the 1980/1981 National Ambulatory Medical Care survey conducted in the United States (78) found 72% of patients diagnosed with a psychiatric disorder presented to the doctor with a somatic symptom as their primary concern. Similar figures are reported from Australian studies of psychological distress in general practice. (79) It follows, that as a reflection of the manner in which a patient responds to feelings of ill-health and seeks medical help, the study of the phenomenon of 'somatization' fits well within the ambit of illness behaviour.

2.2 ILLNESS BEHAVIOUR.

In their book "States of Health", Davis and George comment that:

While much medically inspired literature operates with a model of human beings that takes

rational illness behaviour to be the adoption of the biomedical model as the appropriate explanation for illness, and correct and prompt use of appropriate services, this can at best produce a partial explanation of how people actually get to see a doctor". (80, p.226)

How people actually get to see a doctor has been the focus of a considerable research effort during the past four decades. Knowledge of this aspect of the course of an individual's illness has significant implications for the provision of health care services. An understanding of factors which determine medical help-seeking may highlight not only needs for structural arrangements such as appropriate and accessible facilities with specialized personnel, but might also determine areas in public education about disease processes and appropriate help-seeking that are lacking, and may promote the value of medical school curricula which place an appropriate emphasis on the sociological and psychological aspects of disease similar to that currently given to biology and pathology.

In response to considerations of this nature, medical sociologist David Mechanic proposed the concept of illness behaviour as a basis for the study of:

the influence of a variety of norms, values, fears and expected rewards and punishments on how a symptomatic person behaves. (81)

Mechanic defined illness behaviour as:

the ways in which given symptoms may be differentially perceived, evaluated and acted (or not acted) upon by different kinds of persons. (81)

A study of characteristics of the individual which inform their behaviour when ill was seen as providing a link between studies of the aetiology of symptoms and the treatment of them. For although an individual's pattern of illness behaviour may be established to some extent by previous illness experiences, each new occurrence of

symptoms precipitates an episode of behaviour that in turn determines in what manner, when and if treatment is sought.

2.2.1 The Concept of the Sick Role.

Mechanic's formulation of the concept of illness behaviour can be usefully related to the theories and premises of Talcott Parsons' construct of the 'sick role'. (82) The notion of a specific sick role was developed by Parsons in order to distinguish persons who were unable to fulfil the normal role expectations of a stable social system because they were incapacitated by illness, from other forms of destabilizing social behaviour such as that of the criminal. Parsons delineated four institutionalized societal expectations for persons to be defined as ill. These included two rights/privileges and two duties/obligations. Thus, the sick person:

- (1) has the right to be exempted from normal role expectations,
- (2) has the right to be considered as not responsible for his/her illness,
- (3) has a duty to recognize that the state of illness is undesirable, and
- (4) has a duty to seek professional help, and to comply with prescribed requirements necessary for a return to good health.

The concept of the sick role was a controversial one. It was said to be applicable only to urban industrialized Western societies (83), the context in which Parsons developed his theories. (84) Others argued that the concept was only useful in the case of stabilized chronic illnesses, and not for trivial health problems, illnesses stigmatized by society or in the case of handicapped persons. (85,86) Further, the implication that sick persons were 'helpless' and needed to be 'cared for' was rejected by some; and others resented the empowerment of the doctor to whom was given the

sole responsibility for making the decision as to whether or not a person was eligible for admission to the sick role and its associated privileges. (83) However, in spite of this dissension, much of which was founded on the sometimes ambiguous nature of the theory (83); taken within its intended meaning, the concept of the sick role provided an important base from which to consider the behaviour of persons who see themselves as ill. Importantly, it recognized the considerable influence of sociological factors on illness behaviour.

2.2.2 The Concept of Illness Behaviour.

The value of Mechanic's concept of illness behaviour was that it changed the context of illness behaviour study from that of society as a whole, to that of its constituent individuals. (87) Mechanic's construct was seen as a way of accounting for the considerable individual variability in illness behaviour, an aspect not fully addressed by Parsons' theory. A number of studies have shown that while up to 90% of persons in the general population experience symptoms such as tiredness and lack of energy, muscle aches and pains, colds, "flu", sore throat and menstrual problems in a two week period, medical help is sought for approximately only one fifth of these incidents. (88-91). Parsons' construct of the sick role does not explain why different individuals in the same situation behave differently in response to the same symptoms. In contrast, Mechanic's construct, which focused on the individual's unique values, fears and attitudes towards illness as the possible source of an explanation for his/her peculiar behaviour when ill, thus added a further dimension to the study of how people come to consult doctors. (81)

Earliest research on illness behaviour studied community and social groups. These studies took the form of dispositional studies, epidemiological surveys and studies of the structure and organization of the health care system. Several large multivariate studies such as that of Anderson et al (92), which were based on a model of predisposing, enabling and illness needs variables, and of Antonovsky (93) which explored socio-cultural and social-psychological issues were at best able to explain a modest 16-25% variance in doctor utilization. Thus, while such studies produced a large volume of data examining interpersonal factors in doctor utilization, their cross-sectional nature limited interpretation of the results and prohibited causal explanations for individual illness behaviours. Mechanic concluded that at best:

it appears symptoms and distress are triggers that initiate the patient's search and evaluation process.. (88, p 5)

2.2.3 Perceptual Factors in Illness Behaviour.

The decision to seek medical help is the final step in a complex and sometimes lengthy process, which is undertaken in the majority of cases by persons in a non-medical context. Perceptual factors influencing illness behaviour are those concerned with realizing symptoms are actually present. In some cases, patients may simply not be aware that they have the signs and symptoms of a disease. In the case of diseases such as multiple sclerosis, the onset of symptoms may be a gradual, almost imperceptible process, interspersed with lengthy latent periods between a minor initial symptom and the subsequent development of characteristic signs and symptoms. In other cases, patients may not recognize more obvious signs and symptoms for what they are, particularly if they appear to be minor exacerbations of normal bodily functioning, for example, a slight increase in menstrual bleeding. A study of the persons who made use of a mobile health screening clinic in London found almost

57% of over 3000 people who made use of the service required referral to a doctor for further investigation and possible treatment for symptoms and health conditions which had not previously been brought to the attention of a doctor. Among the referrals, doctors subsequently found cases of cervical cancer, breast cancer and tuberculosis. (94)

2.2.4 Recognition of Symptoms.

Mechanic has suggested that signs and symptoms of illness may be recognized by a number of characteristics which may be observed by the individual, by the individual's immediate social group and by the community at large. These include the visibility of the illness, the frequency with which it occurs (ie. its commonality) and the familiarity of the signs and symptoms to the individual and to the members of his/her groups. (81,88) In a non-medical context, these characteristics combined are found to both aid and prevent recognition of signs and symptoms as indicative of illness. Thus, in an early study of a mining community's health, Koos (95) found that among the working class people symptoms of backache were regarded as normal, since they were a common feature in the everyday lives of these people.

Similarly, diseases such as some cancers may not be detected until they have become widespread because early signs and symptoms appear to be mild and innocuous. The familiarity and commonality of these signs may also play a part in the patient's dismissal of them. For example, Miss G. presented late one evening to her general practitioner complaining of back pain. Miss G. was a quiet, shy 42 year old woman who had never married and lived alone. She was neatly dressed and had taken care of her appearance over the years. She had lived all her life in a large country

town, where she worked as a private secretary in a small business. Unable to draw any conclusions from her history and the ill-defined and diffuse nature of the symptoms as Miss G described them, the doctor explained that he would like to admit Miss G. to hospital for further investigations. Miss G agreed to this plan, and as she was leaving the surgery asked the doctor if, while she was in hospital the nurses might be able to help her clear up a sore she had had for a while. When the doctor asked to see the problem, Miss G removed her blouse and bodice to reveal a clean dressing covering a gaping wound where a tumour had necrosed away a third of her right breast. Although she was hospitalized immediately, and was transferred the next day to a treatment centre in the city, Miss G. died three weeks later of breast cancer with bony metastases in her spine. When asked why she had not seen her doctor earlier about the sore, Miss G. explained that it was just a sore and that everyone has sores from time to time.

2.2.5 Denial of Symptoms

It is possible that a second factor; namely, denial played a part in Miss G's delay in consulting a doctor. Denial is a complex construct often associated with concepts such as 'insight/lack of insight' and 'self-deception'. Goldbeck suggests that there are subtle differences in the use of these terms; so that 'lack of insight' is regarded as an integral part of psychiatric illness, while use of the terms 'denial' and 'self-deception' is more often applied to physical illnesses and implies a motivated response in mentally healthy individuals directed at protecting their psychological health. (96)

A considerable volume of research exists describing the use of denial of physical symptoms in heart disease, cancer, renal disease, neurological disorders and diabetes. In a comprehensive review of studies of denial in physical illness, Goldbeck (96) defines denial in terms of five frameworks; viz. the psychodynamic view, a cognitive framework, an organic framework, an interpersonal framework and a clinical framework. In terms of the psychodynamic framework, denial is viewed as it was originally construed by Freud (97) as a defence mechanism in which the reality of an unpleasant situation is replaced by a new reality. Thus, denial was regarded as part of a psychotic illness, in which an immature or ill-prepared ego is protected from overwhelming life situations. While this view is generally accepted by psychoanalytic writers, Sperling (98) has suggested a modification which differentiates between complete denial of symptoms (psychotic illness) and a form of denial in which there is rejection of the meaningfulness of symptoms rather than the reality of their presence (neurotic illness). Thus, while Miss G. acknowledged the presence of her sore and actively treated it, she may have rejected what its presence meant, ie. cancer.

Authors who have defined denial based on a cognitive framework suggest that processing of data from a noxious external stimuli may be disrupted by inhibition of memories of previous experience or information about the stimulus, may involve the substitution of more pleasant stimuli for the noxious event, or may be subject to long delays as data from the external stimulus is integrated into the individual's cognitive schema. Organic theories of denial are based on observations that localized brain damage, particularly in the parietal and frontal lobes can result in non-recognition of signs and symptoms (agnosognosia); while denial viewed in terms of an interpersonal framework takes into account that not only the patient, but medical staff and members of the patient's social group may also deny the presence of an illness. In this

framework, it is noted that denial is not described by the patients, but is a term applied to the patient's behaviour by the doctor, whose use of it is influenced by the doctor's own beliefs and expectations.

In the clinical setting, denial has been described in a variety of forms, indicative of the complex nature of this phenomenon. Broadly speaking, it has been categorized as illness focused or behaviourally focused. Thus patients may use denial in a manner which minimizes the meanings and implications of their illness, or they indicate denial of signs and symptoms by refusing to comply with treatment protocols. Alternatively, as denial is regarded as a coping strategy for dealing with psychological stressors, Levine et al (99) propose denial of illness may usefully be conceptualized as taking two distinct forms: ie denial of cognitions and denial of affects, based on the premise that use of denial as a coping measure involves both cognitive and emotional factors.

It has been suggested that in some instances, denial is not necessarily a dangerous phenomenon. In the short term, denial may be a part of an adaptive process which reduces the risk of depression in psychologically disturbing situations. (100,101) For example, Esteve et al (102) showed that in a sample of patients suffering from their first myocardial infarction, high deniers reported less anxiety and depression than low deniers, while hospitalized and at 1 month after discharge. At 12 months follow-up there was no difference between high and low deniers on measures of these illnesses. Lazarus (103) suggests that in its most benign form, denial overlaps with positive thinking and an optimistic attitude in the face of challenging situations. However, in the long-term, persistent denial may indicate a maladaptive response to a health condition, and is more likely to be associated with adverse outcomes. As

Lazarus suggests, the presence of denial must be qualified in terms of its effect on the patient's health and well-being as it may prevent adaptation to and effective management of illnesses. In the case of more significant maladaptive denial, Strauss et al (104) propose the inclusion of such a phenomenon as a sub-type of adjustment disorder would lead to clarification of what is meant by 'denial' in its various forms and to improved clinical care. Certainly, a long term study of persistent denial of psychological stressors by male patients with demonstrable heart disease has been shown to be associated with the more frequent experience of adverse events, including death. (17)

2.2.6 Perceptual Style.

A further factor in the perception of illness is referred to as the individual's perceptual style. Evidence from studies of cardiac illness shows that while on one hand, approximately 70% of ischaemic episodes in patients with coronary artery disease, and 30% of acute myocardial infarctions appear to be asymptomatic, on the other hand between 10 and 30% of patients complaining of chest pain have no obvious cardiac pathology on catheterization. (105) Interestingly, the latter figures are neither new; nor have they changed in spite of the considerable advances made in diagnostic procedures in cardiology since reports of similar observations were made over half a century ago. (106,107) Observations of this nature have led Barsky to propose that this may reflect a spectrum of sensitivity to visceral stimuli, with hyposensitive patients at one end of the spectrum and hypersensitive patients at the other extreme. (105) Such a notion is supported by evidence from studies conducted by Frasure-Smith (108), in which it was found that the degree of coronary artery occlusion correlated inversely with self-reports of sensitivity to bodily sensations. From these

results, the author concluded that patients with chest pain but no evidence of coronary artery disease were more sensitive to cardiac sensations than those patients with pain and coronary artery disease. In a similar vein, Idler and Benyamini (109) reviewed 27 community studies of self-rated health and mortality, in which it was consistently found that self-rated health was a strong and independent predictor of mortality. The authors suggest that a possible interpretation of these findings may be that an individual's self-rated health report takes into account the complete picture of his/her health status, including symptoms of undiagnosed disease which are present in a preclinical or prodromal phase.

2.2.7 Evaluative Factors in Illness Behaviour.

In a study in which a sample of women kept a diary of symptoms they experienced and how they dealt with them, it was found that the perceived seriousness of the symptoms largely determined whether or not they sought help from a doctor. Thus, symptoms such as 'tiredness' and 'lack of energy' resulted in no medical help-seeking, one experience of headache in 74 such experiences led to a medical consultation, and one in nine experiences of sore throat led similarly to medical help-seeking. (110) Thus there is considerable variability in how individuals evaluate symptoms as serious, nothing to worry about, or as requiring specialized medical help.

Mechanic has proposed that there are three classes of variables that are integral in the evaluation of symptoms; viz. tolerance thresholds, the information, knowledge, understanding and cultural assumptions of the evaluator and the extent to which the symptoms disrupt everyday living. (88)

2.2.8 Tolerance.

While in experimental situations, tolerance thresholds for pain, for example do not appear to vary greatly from individual to individual, in everyday situations there is no clear relationship between the objective extent of an injury and the discomfort experienced. (111) In evaluating symptoms, and determining how bearable they are, patients take into account their significance in their current life situation. A striking example of this was recorded by Beecher (111), who observed that in wartime conditions, the reactions of wounded soldiers to their injuries differed markedly to the reactions of civilians with similar injuries. Beecher explained the difference in reactions by suggesting that the significance of injuries incurred by the soldiers during combat, meant possible discharge from military service and a return home from the fighting, and therefore the injuries of the soldiers were almost life-saving, rather than life-threatening.

Barsky argues that some individuals possess a perceptual style which amplifies bodily sensations so that they become more intense and disturbing than might normally be the case. Thus, innocuous somatic sensations such as muscle cramps and tiredness are seen as severe and signifying the presence of serious disease rather than as being the result of over-exertion or a series of late nights. (112,113) This perceptual style is seen to be associated with hypervigilant attention to the body, selectively focusing on sensations that confirm the individual's worst fears, and responding with affects such as anxiety that are accompanied by their own somatic sensations which further intensify the individual's belief of the presence of disease. For example, in a study of patients attending a general medical out-patient clinic, Barsky found somatosensory amplification accounted for 31% of the variance in hypochondriasis and 12% of the

variance in somatization, both disorders characterized by a tendency to seek medical help for physical symptoms not adequately explained by organic pathology. (113)

2.2.9 Information Gathering.

Patients seek information and knowledge about symptoms from a variety of sources before approaching a doctor. Suchman (114) found approximately three quarters of patients spoke to another person before seeking medical help. So prevalent are these "*lay consultations*", that a considerable body of research has sought to examine the patterns and effects of social and kinship networks on medical utilization: but while it is generally agreed that the lay culture to which an individual belongs has a considerable influence on how illness is defined, on interpreting what is wrong and in determining whether or not professional help is sought (115), many of the findings are contradictory and difficult to interpret. (80) What is apparent is that, in spite of the volume of information about illness and symptoms that is presented in the media, for example; traditional cultural beliefs that inform lay consultations are enduring. As Edman and Kameoka (116) found in a study of illness schemas in American and Filipino women, modern education may modify traditional illness beliefs, but it does not eliminate them completely.

While beliefs about illness may determine how individuals evaluate symptoms, similarly beliefs about what constitutes good health may also play a part in this process. Barsky demonstrated how such beliefs influence symptom evaluation and medical help-seeking in a study which compared the health beliefs of hypochondriacal and non-hypochondriacal patients.(117) Hypochondriacal patients demonstrated a faulty cognitive schema, identifying significantly more of a list of 24 common and

ambiguous symptoms to be indicative of serious illness than did non-hypochondriacal patients.

A further consideration in symptom evaluation is concerned with the meaning of symptoms to patients. Studies of patients with moderate to severe pain, for example have shown that the strongest impact of pain, and developing ways of dealing with it was made by the meaning attributed to the pain. (118) Lipowski (119) developed a list of eight categories of illness meanings which proscribe ways in which patients may evaluate symptoms and act upon them. Thus patients may regard symptoms and illness as a challenge to be mastered; as an invading enemy which inspires the will to fight or which may overwhelm the patient; as a punishment which may be associated with guilt; as a weakness implying failure and shame; as a relief signifying release from normal roles and responsibilities; as a strategy for gaining the attention of others; as a loss; or as of some value in the it may help the person to grow in some way.

2.2.10 Negative Affectivity.

Finally, while people may interpret symptoms in the light of their knowledge and understanding about them, and according to social mores and traditions, a considerable body of research implicates psychological states as integral factors in the cognitive processes of symptom evaluation. One such state is that of the construct of negative affectivity, a mood factor characterized by a perceptual style which is introspective, apprehensive, negativistic and vigilant. (120) Although what constitutes negative affectivity remains a point of continuing discussion (120,121), there is a considerable body of evidence which supports a relationship between both a transient state of depression and an enduring trait of neuroticism and symptom reporting in both

patient populations (122-125) and in normal healthy student or employee populations. (126, 127) These studies show that persons with high state or trait negative affectivity are more likely to evaluate even innocuous symptoms as serious, threatening and indicative of disease.

2.2.11 Factors in Responding to Symptoms.

The manner in which individuals respond to symptoms is substantially determined by conclusions reached during the evaluation of the symptoms. During what has also been termed the "*appraisal phase*" (128), patients may adopt a "*wait and see*" approach to symptoms. This may result in delays in medical help-seeking, and may only change if the symptoms change or if life circumstances change. For example, as a young woman, Mrs M married a widower with three small children. In addition to these children, the couple proceeded to have a family of their own. Soon after the birth of their first child, a lump appeared on Mrs M's breastbone. The lump was approximately the size of an egg, but Mrs M delayed in seeking medical advice because she felt she was too busy with her small family to do anything about it at the time. For the next twenty years Mrs M continued to care for her family, but that the presence of the lump was never far from Mrs M's mind was shown by the fact that the day after her youngest child left home, she presented herself to her doctor to have the lump examined and treated.

A frequent activity during the appraisal phase of an illness or the appearance of symptoms is the search for a causal explanation for the symptoms. (129,130) Robbins and Kirmayer suggest three forms of causal attributions for common somatic

symptoms as important determinants of illness behaviour; namely, psychological, physical and normalizing. (131)

2.2.12 Attributional Style.

Most commonly, trivial symptoms are normalised to situational and environmental causes such as overexertion, dietary indiscretions or to pre-existing conditions. When such explanations are unsatisfactory, dispositional factors such as disease or anxieties are considered. Robbins and Kirmayer suggest that whether common somatic symptoms are attributed to physical or psychological causes is determined by a moderately enduring attributional style. That is, individuals with a psychosomatic cognitive schema are more likely to acknowledge a link between worries and stress and physical symptoms, while persons with a somatic style more consistently attribute symptoms to physical causes. These authors suggest attributional style may be largely determined by previous experience; so that persons with a history of acute and chronic physical illnesses are likely to attribute new symptoms to a physical cause, while persons with a history of psychiatric problems are more likely to attribute symptoms to psychological causes. (131)

Evidence suggests that making causal attributions is precipitated by uncertainty. (132) In the case of patients with serious illnesses, casual attributions may be made in between 70 and 95% of cases. (132) Many of these attributions may be highly complex and may change as the illness progresses. In less severe illnesses, attributions may be much simpler (133), but are said to be an important part of an adaptive process in which the patient is concerned with gaining mastery over the situation (134-136) with a view to determining what course of action to take. (135)

Mis-attribution of symptoms may occur and persist as a maladaptive response to symptoms and is the basis of the subject of this thesis; that is where symptoms of psychological distress are attributed to a physical disease.

2.2.13 Disruption of Daily Activities.

When symptoms are normalized to situational and environmental causes, medical help-seeking is less likely to occur. In the case of psychological and physical causal attributions, help-seeking is influenced by two factors: namely, the perceived seriousness of the symptoms and by the degree of disruption to daily activities they cause. (137) For example, a study of the help-seeking behaviour of patients with low back pain found the patients who did not consult a doctor reported less sleep disturbance, took fewer sleeping tablets, participated more frequently in sporting activities and lost fewer days off work because of pain than did the group of patients who had consulted a doctor. That is, the lifestyle of the non-consulting group was less disrupted than that of the consulting group of patients, although the consulting and non-consulting groups of patient reported similar pain levels, (138)

2.2.14 Sociodemographic and Structural Factors.

A number of sociodemographic and structural factors have been shown to predict utilization of medical services in response to symptoms. Most frequently, age and gender variables are influential, so that women are consistently shown to seek medical help more frequently than men. A number of explanations for this have been proposed, but no definitive conclusions have been reached. (88) Utilization has been shown to increase with age, arguably because the potential for medical problems

increases with age. (139) However, there is also evidence that elderly persons use medical services more efficiently. That is, they do not delay in consulting a doctor when symptoms arise as much as younger, middle-aged persons do. (140) Structural factors that have an impact on consulting a doctor include financial barriers, accessibility and availability of appropriate and adequate services. (80) Obviously, the lack of appropriate services influences illness behaviour by discouraging medical help-seeking that might occur if a service was available. That appropriate services are important has been shown by the results of two Australian surveys of community views about the quality of general practice and practitioners commissioned by the Commonwealth Department of Human Services and Health in 1995 and 1996 (141,142). The surveys found consumers identified accessibility to the general practitioner and the practice as a major concern and as the most important factor in providing quality care. Other factors included interpersonal skills, information sharing, technical competence, length of consultations, costs and availability of other health services at the practice. Groups of patients such as those with chronic illnesses, disabilities and those from lower socio-economic or non-English speaking backgrounds were particularly in need of appropriately structured medical services. (143)

2.2.15 Perceived Outcomes.

A final consideration that determines whether or not patients seek help from a doctor for symptoms is that of the patient's knowledge of outcomes for treatment. This is most noticeable in patients with mental illnesses. Several authors have shown that mental illness is recognized by persons in the community, however help is less often sought for these illnesses than for physical illnesses. A major factor in this is that

people tend to distrust psychiatric treatments, including medications, and feel that they are more harmful than helpful. (23-25)

2.2.16 The Role of the Doctor in Illness Behaviour.

At the completion of the complex and sometimes lengthy process, during which individual's assess and decide what to do about symptoms lies a final determinant of illness behaviour: that is, the authority of the doctor. In accordance with Parsons' theory of shared goals in treating illness, the doctor's role is pivotal, for it is the doctor's professional opinion that finally determines whether or not the individual's state of health legitimately warrants admission to the sick role. Bloor and Horobin (144) contend the authority of the doctor may place patients in a double-bind: on the one hand concerned not to bother the doctor with a complaint that in the end has a simple explanation, at the same time wondering how trivial the symptom may be. Thus, Davis and George (80) comment that there is a potential for consultations to result in blaming patients for attending too quickly with minor complaints or too late with serious illnesses.

Both the regard with which the medical profession is held, and the role of the doctor as it is perceived by the medical profession and the community have been shown to affect the illness behaviour of individuals in the community. In the former case, the medical profession has travelled almost full circle in the course of this century. While reports in late 19th century newspapers depicted doctors in critical and derogatory terms, by the mid 20th century, doctors were held in high esteem. This is largely attributable to the wealth of biological, pharmacological and technical knowledge and skills gained in the course of the 20th century. These advances have

led to the eradication/control of many of the infections that previously took a heavy toll in human life, while highly sophisticated procedures such as organ transplantation and the ability to implant mechanical devices have led to the relief of suffering and the prolonging of life.

However, such gains have come at the cost of further distancing doctors from their patients who are without such knowledge and skills, and who too often are unable financially to avail themselves of the newer drugs and surgical treatments. Furthermore, many chronic illnesses and illnesses associated with aging and impaired mental functioning continue to frustrate doctors and patients alike, as they remain intractable problems. Thus, Barsky describes the "*paradox of health*" where, in spite of advances in medical science, people report higher than ever rates of disability, symptoms and dissatisfaction with their state of well-being. (145) As a result, as the century draws to a close, a note of scepticism has crept back into the public's regard for medicine and its practitioners (41,146,147), shown by increasing numbers of people seeking help in areas of alternative medicine. (148)

The second issue, concerned with the perceived role of the doctor has also been redefined as the century has progressed. In 1963, a report of the quality of medical care and education as surveyed in two Canadian provinces was presented to the Canadian College of General Practitioners. (149) It contained the following conclusion:

In these days, much emphasis is put on "comprehensive" care, "holistic" medicine, dealing with the "whole" patient, giving attention to social and psychological factors, etc. At the risk of seeming to advise a backward step, we wish to sound a note of caution. Awareness of the importance of these new areas of action should not make us forgetful of the physical part of medicine, which should be the central area of medical practice. We say that the

physical should be at the centre of medical practice because no-one else but the physician is trained to deal with the physical aspects of illness, whereas there are others, including social workers, clergymen and lawyers who can deal with some of the other areas with which medicine is tending to concern itself. (149, p.513-14)

Similar sentiments were found in a study of both doctor's and patient's beliefs about the appropriateness of discussing family matters with general practitioners, which found increasingly that both parties felt such discussions were inappropriate. (150) Recent Australian studies show that while most doctors agree that dealing with marital problems and emotional and neurotic disorders should be part of their practice, 19% felt that migrant health problems, poverty and social issues were not their concern. (151) Given such prevailing attitudes, people are less likely to consult doctors with problems of this nature.

More recently, in Australia, several attempts have been made to define the role of general practice and its practitioners in the community. Understandably, definitions vary according to their source. That is, while the Medicare definition associated with the funding and payment for services is concerned with differences between specialist and non-specialist services, (152) the definition used for research and evaluation purposes describes the structural organization of general practice. (153) In terms of the nature of the service conceptualized as that to be offered by general practitioners, the Royal Australian College of General Practitioners established a Task Force in 1995, who, after consulting with academic departments, a large group of practicing general practitioners and organizations with an interest in general practice developed the definition that general practice was:

that component of the health care system which provides primary, subsequent and continuing medical care and co-ordinates services to individuals, families and

communities. It integrates current biomedical, psychological and social understandings of health issues. (143, p. 109)

It remains to bring general practitioners, the institutions responsible for their training and the community at large to this understanding.

2.2.17 The Concept of Abnormal Illness Behaviour.

The concept of Abnormal Illness Behaviour was introduced by Pilowsky in 1969 (154) in an attempt to clarify highly problematic diagnostic issues associated with such disorders as 'hysteria' and 'hypochondriasis'. Drawing on the sociological concepts of Parsons' 'sick role' (82) and Mechanic's concept of 'illness behaviour' (81), 'abnormal illness behaviour' was proposed as a bridging concept which linked the sociocultural and the psychopathological factors that are inherent in making a diagnosis of these disorders. (155)

In developing the concept of abnormal illness behaviour, Pilowsky defined illness as:

an organismic state which fulfils the requirements of a relevant reference group for admission to the sick role. (156)

Not only does this definition take into account social and cultural differences which influence what may be considered an illness, but it also makes provision for changes that occur in a society's beliefs about conditions that may be regarded as such. Notably, while alcoholism has only relatively recently come to be regarded and managed as an illness, in contrast, for a time many people suffered greatly from attempts to 'cure' them of their homosexuality. Illness then, refers to the patient's

perspective and understanding of changes in their health status, and it is informed by the individual's past experiences, beliefs, and attitudes. In consideration of these factors, Pilowsky expanded Mechanic's definition of illness behaviour to take into account not only responses to symptoms, but also actions taken by individuals to avoid illness. Thus, illness behaviour is more broadly described as:

the ways in which individuals experience and respond to those aspects of themselves which they are predisposed to evaluate in terms of an illness-health frame of reference. (157)

Disease, on the other hand refers to the 'objective' phenomena which professional personnel use as evidence to prove whether or not the individual is ill. Admission to the sick role has been described as analogous to an exchange of currency. In this exchange, the patient negotiates with the doctor for health goods and services, using 'sick role units' to which the doctor ascribes a value based on medical expertise. (158) Given the high costs sometimes associated with such exchanges, both the doctor and patient need to be fully informed of all relevant information concerning the transaction. Thus, the doctor's valuation of the patient's 'sick role units' must be informed by every aspect of the patient's illness; and in order to reach a settlement agreeable to both parties, the doctor must be able to provide a clear explanation to the patient of the rationale for the evaluation of the patient's illness.

The term 'illness behaviour', then refers to a normal human process undertaken by every individual who becomes aware of changes in the state of well-being. Normal illness behaviour refers to an adaptive process, which leads to appropriate help-seeking and a successful transaction between the doctor and patient which results in compliance with treatment protocols and the achievement of expected outcomes. (159)

Abnormal illness behaviour refers to the process when it is maladaptive and inappropriate. It becomes apparent when the doctor and patient fail to reach agreement on the medical value of the patient's 'sick role units'. Pilowsky defined abnormal illness behaviour as:

the persistence of a maladaptive mode of experiencing, perceiving, evaluating and responding to one's own health status, despite the fact that a doctor has provided a lucid and accurate appraisal of the situation and management to be followed (if any), with opportunities for discussion, negotiation, and clarification, based on adequate assessment of all relevant biological, psychological, social and cultural factors. (160)

This comprehensive definition takes into account several aspects of the doctor patient consultation. That is, it makes note of the fact that illness behaviour refers not only to the overt behaviours of patients, but also to the subjective experience of their state of well-being. Similarly, it addresses the issue of medical reassurance, the necessity for negotiation and communication between doctor and patient; and emphasizes that the clinical evaluation must include an assessment of all aspects of the patient's functioning. (158,161) Illness behaviour that is maladaptive is associated with achieving goals other than a return to healthy functioning. Rather, it seeks the primary gain of relief from stress by avoiding having to deal with an underlying stressor; and may also achieve secondary gains in the form of solicitous care from friends and relatives or financial compensation, as well as tertiary gains, where others may also benefit from the situation.

Abnormal illness behaviour has been classified according to processes by which illness is affirmed or denied, whether it is somatically or psychologically focused, and whether the processes are conscious or unconscious. (158,161,162)

While it must be remembered that abnormal illness behaviour refers to a process rather than a diagnostic entity, several psychiatric syndromes are characterised by abnormal illness behaviour, which is in fact the principal component of these illnesses. That is, the group of illnesses known as the somatoform disorders, which includes somatization disorder and hypochondriacal disorder may be regarded as forms of abnormal illness behaviour which are unconscious, illness affirming and somatically focused.

The introduction of the concept of abnormal illness behaviour was not accepted without controversy. (163) Primarily, researchers were concerned that doctors might not always be accurate in their clinical evaluation, and that the idea of abnormal illness behaviour presumed the existence of the 'ideal doctor'. In response to this, one must be mindful that abnormal illness behaviour is not a diagnosis in itself, and that where a suspicion of abnormal illness behaviour is held, it is then necessary to elucidate further the nature of the patient's problem. Over time, this may become more apparent, whether the problem is biological or psychological. Not only does the definition of abnormal illness behaviour stress the necessity that the clinical evaluation of the patient must be thorough, its purpose is also to make doctors more reflective and cautious in making diagnostic decisions. Secondly, it has been suggested that by defining 'abnormal illness behaviour', particular behaviours associated with being ill may come to be regarded as abnormal. However, experience suggests that doctors understand that illness behaviour is a normal and human response to changes in health status, not a cause in itself, of suffering. The greater danger is that the term 'abnormal illness behaviour' may be mistakenly applied to difficult cases of inexplicable physical symptoms, or to cases where these symptoms are the physical concomitants of anxiety and depressive disorders. That is, there may be a danger that use of the term 'abnormal

illness behaviour' will become another pejorative label, along with 'hysteria' and 'hypochondriac'. (163)

In spite of concerns about the efficacy of concepts such as illness behaviour and abnormal illness behaviour (164), their introduction to both clinical and research settings in medicine have provided further dimensions and theories with which to clarify and add to the understanding of the many and varied ways in which individuals seek medical help when ill.

2.3 MODELS OF SOMATIZATION.

The term 'somatization' is derived from a hybridization of Greek and Latin roots: ie. New Latin from Greek; **somat-**, **soma** - meaning *body*: Late Latin **izare** from Greek **izein** - meaning *action or process of causing to be, become, conform to or resemble (something specified)*. (165) That is, in literary terms, 'somatization' refers to the action or process in which a person translates an apprehension that there has been a change in his/her internal state of well-being into a bodily or physical manifestation of this change. Each and every person (consciously or unconsciously) undertakes such actions frequently. Anthropologists suggest that such actions are a way in which sense is made of and meaning is given to daily experiences; as Laderman writes:

in a way that helps us to believe that the cosmos itself has meaning, that things connect, that life has an aim and that human beings, at least to some extent can acquire knowledge to deal with the workings of an orderly universe. (166, p)

In traditional Western medicine, the term 'somatization' may be seen to sit on the hyphen in the phrase 'mind-body dualism'. It serves as a link between the individual's subjective experience of *illness* and the physician's detectable evidence of the presence of *disease*. While the individual's reaction to illness may be subject to and influenced by physiological dysfunction, psychological anxieties and social expectations, the physician is informed by a theory of disease that is functional and ontological. That is, disease may be seen as functional in the original sense of the word (167), in which disease states are associated with changes in the body's physiological and biochemical processes causing dysfunction; and ontological in the sense that a disease may be regarded as a stable entity in its own right, having a natural history with directional and temporal distinctions separate from those of the host. (168) It is the physician's expectation that changes in the body's organic functioning caused by disease will lead to sickness, and that disrupting the natural course of the disease with a medical intervention will alleviate/cure the symptoms. In such an epistemology, priority is given to the treatment of the disease. From society's point of view, an individual's illness is not generally acknowledged without medical validation. It is only when this is given that a person's impaired functioning and behaviour is accepted as reasonable or understandable, and deserving of the sick role.

The concept of somatization is introduced when the expectations of the patient do not coincide with those of the physician. It is notable that although the phenomenon of somatization is common in persons across all cultures, only in those cultures where medicine is practised according to the modern European tradition is somatization recognized as a diagnostic entity or a clinically significant process. In Eastern cultures, for example the Ayurvedic medicine of India or the Chinese "*medicine of systematic*

correspondence” where no distinction between mind and body is made, the term ‘somatization’ has no meaning and does not exist. (61,62,168-171)

2.3.1 Early Models of Somatization.

Several models of somatization have been proposed. In an early review of theories of somatization existing at the time, Kirmayer described seven such models. These models were not confined to a clinical context, but were drawn from the whole expanse of human experience and included biological, psychological, social and cultural interpretations of the phenomenon known as somatization. (172)

The first model viewed somatization as a bodily/physical expression of emotion. This view coincides with the anthropological perspective that argues in terms of the concomitant somatic sensations of emotional activity as being “*the physical/emotional embodiment of nerves*”. (173) In the anthropological view, to describe these physical sensations in terms of symptoms, that is to medicalize them is to obscure the person/body/experience relationship by medicalizing the nervous expression of lived experience. The language used by persons to describe such sensations may be highly metaphoric, drawing from other life experiences and reflecting loss of control; eg. ‘shaking like a leaf’ (173,174) That some persons are more bothered by these sensations has been explained by the existence of premorbid factors such as hypochondriacal and neurotic traits. These persons may have a heightened bodily awareness (175), may amplify physical sensations (74), or are people with heightened states of emotional arousal and sensitivity to autonomic sensations. (176)

A second model of somatization extended the relationship between emotion and somatization to construe somatizing behaviour as an inability to verbally express emotion. This view derives from findings that persons who express their emotions readily, display a reduced autonomic reactivity compared with that of persons who do not do so. (177) In a clinical context, Sifneos (178) developed the concept of *alexithymia* to describe the association between an inability to verbally express emotion and physical symptoms. However, studies of relationships between somatization and alexithymia reveal conflicting results and question the validity of the concept of alexithymia. (179,180) While early studies show no link between these two concepts, more recent work provides some evidence of a link between alexithymic patients and a proneness to functional somatic complaints associated with symptoms of emotional disturbance. (180) Similarly, while early research of alexithymia was hampered by inadequate measures of the construct, recent work by Bach et al (181), using the Toronto Alexithymia Scale (TAS-20) has shown that alexithymia and somatization are separate and independent constructs which may occur simultaneously. The authors suggest there may be a temporal relationship between the two constructs so that persons with alexithymic features may be more likely to develop somatoform disorders, than persons more able to verbally express unpleasant and disturbing emotions. (181) The data, however are not conclusive; and it has been argued that a patient's failure to express emotional concerns may be because their concern with their physical state is more urgent than that of their psychological distress. Similarly, several authors have also described cultural factors that prohibit the verbal expression of psychological distress (182,183), where attention is diverted from unalterable emotional and social stressors and is focused on the physical manifestations of emotional distress which are treatable.

A third model of somatization describes the phenomenon in terms of self-directed attention and attribution of physical sensations. This model takes into account environmental factors and social context as influential in the manner in which individuals appraise and explain bodily sensations. Bodily sensations are particularly noticeable when they are new or novel. By their unusual nature, such sensations increase self-focused attention (184); and this in turn has been shown to increase somatic symptom reporting. (185) The individual's explanation for such symptoms may be strongly influenced by current life circumstances. Thus, as Pennebaker has demonstrated, individuals cough when others around them do so (186), suggested to be attributable to increased awareness of throat sensations. Other well-known examples of the influence of social circumstances on the causal attribution of physical sensations are that of medical student hypochondriasis (187), and Couvade syndrome in the husbands of women who are pregnant. (188,189)

The fourth model of somatization which views this phenomenon as a form of communication suggests that persons use physical symptoms as a way of telling others that they are distressed. In this model, symptoms may be used consciously or unconsciously as a means of gaining control over others. (172) Family studies, in particular have shown that in this close social setting, use of physical symptoms may be a particularly effective way of communicating distress; and may be reinforced by the solicitous reactions of family members or significant others. (190) Somatization, conceptualized in this way, that is, as a form of communication was vividly described by Kliger in an essay on the illness experiences of members of a strict religious cult, in which the members of the cult were subjected to extreme intrapsychic and social control, and lived under constant surveillance and the threat of punishment if they expressed views contrary to the philosophy of the cult. (191) The expression of

psychological distress in the form of physical illnesses was the only manner in which members of the cult were able to communicate their distress. This model stops short of suggesting the use of symptoms to gain entry to the sick role - but is simply a way of gaining the attention of members of the sufferer's social group.

A fifth model of somatization, that it is an idiom of distress focuses in a broader sense on communications of distress in ways that are bounded by cultural norms. It is a meaning-centred approach directed by the languages of cultures, particularly those which do not have words to describe psychological distress. In this circumstance, symptoms are described using words which may be understood as physical to metaphorically convey the meaning of an experience which cannot be expressed verbally. (40) For example, the 'wind illness' of the Vietnamese culture, which appears in Western civilization to describe somatic symptoms, in the Vietnamese tradition also carries spiritual, emotional and interpersonal meanings which are inseparable from the physical experience of the symptoms. (174,192)

The sixth model of somatization reviewed by Kirmayer is concerned with its usefulness in gaining entry to the sick role and the privileges and responsibilities particular to this role. In accordance with Parsons' theory, persons with legitimate illnesses may be seen as rewarded for responsible and appropriate illness behaviour by accepting care and attention from their social group, professional treatment for their symptoms, release from their social obligations and in the process may gain financial remuneration for their suffering. However, it is apparent across all cultures that while physical/organic illnesses are readily legitimized, psychological illnesses are less often so, and are likely to be the source of stigmatization and discrimination. Therefore, this model proposes that persons seeking admission to the sick role use the more

acceptable and readily sanctioned form of physical complaints to do so. In some cultures this is even seen to be reasonable, since physical complaints are more easily treated than psychological illnesses. (40)

The final model discussed by Kirmayer is that which views somatization as a response to the structure and organization of the health care system. This is particularly (but not only) relevant to Western countries, where the medical tradition is characterized by a predominant biological approach. Such an orientation reinforces the perception that illness is related to an altered body state associated with the presence of a biological disease; and treatment constitutes the use of pharmacological, procedural and technological interventions directed at the physical body. Thus, when the health profession is seen as the only source of help, patients may use physical symptoms as a way of negotiating treatment and care. This system lends itself to the situation where the process of somatization is recognized only after all avenues for a possible biological cause for illness are exhausted: ie. by a process of elimination. (193)

2.3.2 Current Models of Somatization.

More recent models of somatization have been drawn specifically from the clinical experience of this phenomenon. They reflect the recognition of a link between somatization as an appeal for help in the presence of psychological distress and psychiatric morbidity; but are associated with disagreement between patient and doctor on the nature of the problem. (194) Thus, psychological distress may be unrecognized as a physiological expression of an emotion, suppressed because the person is unwilling or unable to verbally describe it, misinterpreted and wrongly attributed to bodily dysfunction, communicated to the social group in ways that will gain the

group's attention or in ways that are sanctioned by the culture of the individual or the subculture of the practice of medicine, or it may be lost in the economic and methodological structures of the health care system. (195) As a result, the phenomenon of 'somatization has been credited as the single most important factor in the non-recognition of psychiatric morbidity in primary care. (40)

Contemporary models of somatization are derived from a greater focus on the clinical aspects of the phenomenon, and are largely based on the results of epidemiological studies in psychiatric morbidity. In this context, confounded by taxonomic uncertainties and methodological inadequacies (77,196), the question of somatization has been referred to as "*one of medicine's blind spots*" (197), and the somatizing patient as "*the pariah of modern medicine*". (198)

In an attempt to clarify the situation, Kirmayer and Robbins suggest three distinct forms of somatization. From the results of a study of patients attending two family medicine clinics, these authors proposed operationalized criteria for each form which they found to be distinguished by sociodemographic and illness behaviour characteristics, and which they therefore suggest may be the result of three distinct pathological processes. (196,199)

2.3.3 Functional somatization.

The first of model, defined as '*functional*' somatization refers to the lifetime count of inexplicable somatic symptoms over multiple body systems. In the extreme case, this form becomes DSM-III somatization disorder. Along with its earlier forms, hysteria and Briquet's syndrome, it has been described as a well-validated diagnostic

entity (200,201), although others are reportedly more circumspect about such reports. (202,203) In general however, this form is characterized by onset before 30 years of age, and a lifetime history of chronic inexplicable somatic symptoms totalling 14 for females and 12 for males from a list of 37 characteristic symptoms. DSM-III-R altered this requirement to a count of 13 symptoms for both men and women to meet the criteria for somatization disorder. Using these criteria, somatization disorder is a relatively rare occurrence in primary care populations, with a prevalence, for example of between 0 and 0.7% in the NIMH Epidemiologic Catchment Area (ECA) studies. (204,205) It was apparent, however that by using such stringent criteria, many cases of patients with fewer but still inexplicable somatic symptoms were presenting to doctors. Thus, Escobar proposed a subsyndromal, less severe form of somatization, termed '*abridged*' somatization which required counts of 6 medically inexplicable symptoms for females and 4 for males. (75,206-208) According to these criteria, somatization occurs with a prevalence of 4% of the general population. Subsequently, these thresholds have been reduced to 6 symptoms in the ICD-10 and 8 symptoms in the DSM-IV classification systems.

Efforts to account for the large numbers of patients presenting to doctors with medically inexplicable somatic complaints led to speculation that somatization could be viewed as a discrete disorder which exists as a continuum. In a study of distressed high utilizers in two primary care centres, Katon et al (209) found that a number of psychological problems were present in patients who did not meet full criteria for DSM-III-R somatization disorder. These authors suggest that somatization could usefully be viewed as a continuum, in which the severity of the disorder increases as the number of symptoms increases, and is associated with higher levels of distress and disability. (209) The mechanism for this form of somatization is similar to that of

Stekel's original concept, based in psychoanalytic theory: that is, it is an unconscious intrapsychic process in which psychological distress is transformed into somatic distress and consciously manifested as physical symptoms. (43)

2.3.4 Hypochondriacal somatization.

The second form of somatization proposed by Kirmayer and Robbins is concerned with bodily preoccupation and illness worry exceeding that which might be expected from the symptoms presented. The authors define this form as '*hypochondriacal*' somatization (196,199), and base their definition upon studies of hypochondriasis and clinical illness behaviour. (155,210) Hypochondriasis has been conceptualized in four ways: ie. as an independent, discrete psychiatric illness, as a psychodynamic process associated with aggressive drives and defence mechanisms, as a particular cognitive and perceptual style and as a learned anomalous illness behaviour associated with primary and secondary gains. (73) However, as a singular form of somatization, Kirmayer and Robbins characterize hypochondriacal somatization in terms of preoccupation with bodily functioning, illness worry and resistance to medical reassurance, since it is in those terms that hypochondriasis has most often been described and measured. (209-212)

This conceptualization is drawn from evidence that deficits in perceptual and cognitive processes are associated with hypochondriasis. Barsky et al (213,214) propose that hypochondriacal patients believe good health is synonymous with being symptom free, that they amplify innocuous bodily sensations so that they are perceived as noxious and disturbing, and that these sensations are then misinterpreted as indicative of a serious disease. (112,215) In a similar vein, Lipowski views

hypochondriasis as a form of somatization associated with varying degrees of attention to health and somatic symptoms. (77)

In support of this conceptualization, Pennebaker et al (185) have shown that when attention is focused on the self or body, perception of bodily sensations is enhanced. Studies of joggers running repetitively around a running track report more somatic symptoms of exertion than those running cross-country through an ever-changing environment. (215) Subjects asked to concentrate on a particular body part or whose attention is drawn to a disease by the media, for example, report more symptoms associated with the body part or the disease. (76, 216) Personality traits such as introspectiveness and negative affectivity are thought to be integral in the perceptual and cognitive processes associated with symptom reporting. Notably, introspectiveness, associated as it is with heightened bodily awareness and increased levels of autonomic reactivity has been shown to be correlated with symptom reporting. (185,217,218) Similarly, negative affectivity (120,219), a construct which describes a personality characterized by negative mood and low self-esteem, and which has been shown to correlate with self-absorption, illness memories and illness worry, and a pessimistic view of one's state of health correlates with symptom reporting. (120,126,199,220-222) Thus, while there is some overlap between criteria for functional and hypochondriacal somatization, Kirmayer and Robbins suggest they are different entities. They suggest the mechanism for this lies in errors in the perceptual and cognitive processes associated with symptom reporting, which in hypochondriacal somatization are found to be particularly characterized by illness worry and hypochondriacal fears and beliefs about one's state of health and disease in general, unlike functional somatization in which these beliefs and attitudes are less apparent. (199)

2.3.5 Presenting somatization.

Kirmayer and Robbins term the third form of somatization as *presenting somatization*. This form represents patients who present to doctors with somatic complaints who are also found to have an underlying psychiatric illness. Kirmayer and Robbins define four groups of presenting somatizers: viz.

- (i) psychosocial presenters, who acknowledge at least one psychosocial complaint,
- (ii) initial presenters, who spontaneously relate their somatic symptoms to psychological distress on questioning,
- (iii) facultative presenters, who accept a relationship between psychosocial pressures and their somatic complaints, and
- (iv) true somatizers who continue to reject a relationship between psychosocial issues and the somatic complaints. (199)

This form of somatization is similar to that studied by Goldberg et al. (40) Following along the thoughts of Rosen et al (223), who described somatization in terms of its course as chronic, subacute and acute, Goldberg et al differentiated chronic forms of somatization such as the somatization disorders of DSM-III from a subacute form, defined as a new episode of illness for which help had not been sought in the previous twelve months. (27,40) Goldberg and Bridges first described 'facultative' somatizers as patients who acknowledge that their physical symptoms may be related to psychological distress during their consultation, although they do not initially present these problems; and distinguished them from true somatizers who continue to reject such a proposal. (27) These authors developed four operational criteria to describe true somatizing patients. They are:

- (i) the patient seeks help for somatic complaints, not psychological problems,
- (ii) the patient attributes the complaints to the presence of a disease,
- (iii) the patient may be diagnosed as having a psychiatric illness according to diagnostic research criteria, and
- (iv) treatment of the psychiatric illness results in alleviation or cure of the somatic complaints. (27)

The distinguishing characteristic of true presenting somatizers is their tendency to attribute their somatic complaints to physical/disease states and their determined rejection of a possible relationship between somatic symptoms and psychological distress. (40,199) While Kirmayer and Robbins found true presenting somatizers scored lowest on an emotional worry scale, indicating these patients were least likely to attribute fluctuations in feelings to the presence of emotional problems (199), Goldberg and Bridges found true somatizers expressed greater hostility towards mental illness and would be less likely to seek help for psychological distress than others. (40) It is suggested then, that this form of somatization has a blame avoidant function, or serves as a defensive coping mechanism so that these patients do not have to acknowledge or deal with a current psychologically disturbing issue in their lives. (40)

2.3.6 Relationship between Somatization and Psychiatric Illness.

A criticism of definitions of somatization that it is “*an idiom of distress in which patients with psychosocial and emotional problems articulate their distress primarily through physical symptomatology*” (224), or more succinctly that it is “*the expression of personal and social distress in an idiom of bodily complaints and*

medical help-seeking" (225) is that while they speak of physical symptoms, there is no mention of affective symptoms. (27) However, the operationalized criteria for subacute or presenting somatization require that patients have symptoms for a psychiatric illness. (27) Thus, in Kleinman and Kleinman's study of 100 patients diagnosed with neurasthenia in Hunan, China, the authors found 93% of patients met diagnostic criteria for a major depressive illness or other depressive disorders. (225) Similarly, a study of primary care patients in Manchester found between 50 and 80% of patients with diagnosable psychiatric disorders presented to the doctor primarily with physical rather than psychological complaints (27,40), while Kirmayer and Robbins found 29% of patients in their study with high scores on the Centre for Epidemiologic Studies Depression (CES-D) scale, indicative of the presence of a depressive disorder presented with one of the four forms of presenting somatization they describe. (199)

A relationship between somatizing behaviour and mild psychiatric illness has also been demonstrated in studies of patients in middle-eastern countries. Thus, a study of Saudi patients with functional abdominal pain demonstrated a correlation between the presence of this condition and a higher frequency of anxiety and depressive disorders. (226) Similarly, a study of patients attending primary care practitioners (227), which classified somatizing patients according to Bridges and Goldberg's operationalized criteria (27), identified cases of mixed anxiety and depressive disorders, generalized anxiety disorder, and mood and adjustment disorder in these patients. In this study, the prevalence rate of somatizing patients was 12%. This was higher than that reported in a similar Spanish study (9.4%) (228), and in Kirmayer and Robbins reported rate of facultative somatizers in their Canadian study (8%) (199); however the prevalence rate of somatizing patients among the identified

cases of psychiatric disorder (48.2%) was similar to that of Goldberg's Manchester study (27,40) and to other similar studies. (3,79) A Spanish study which compared psychiatric morbidity in somatizing patients and psychologizing patients showed psychiatric morbidity was less severe in somatizing patients, particularly in the case of generalized anxiety disorder, recurrent depressive disorder and for dysthymia.; and that somatization disorder in the somatizing group, defined according to ICD-10 criteria was uncommon. (229)

Depressive illnesses and anxiety disorders, as well as obsessive-compulsive disorder, schizophrenia and personality disorders are also found to occur in association with hypochondriacal somatization. (230) Using the Whiteley Index, Barsky (231) found 24% of patients with high scores had a history of a major psychiatric illness compared to 3% of low scorers, while Kirmayer and Robbins found significantly more patients with hypochondriacal somatization (36%) had a lifetime history of anxiety or depressive illness than non-somatizers (21%). (199) Again, depressive illnesses are one of the most common psychiatric disorders. (231-233) So much so, that some authors suggest the co-occurrence of hypochondriasis and anxiety and depression is so frequent that the existence hypochondriasis as an independent clinical entity is questionable. (234)

In the most severe case of functional somatization; that is, as a DSM-IV somatization disorder, functional somatization may be considered to be a discrete psychiatric disorder in its own right, determined by lifetime symptom counts. However, because of the varying cut-off points that have been used over time to distinguish this disorder, it remains unclear if it may be an independent entity, or if it may be viewed as a continuum which relates number of symptoms to severity of

pathology. (199) In this form of somatization, further work needs to be carried out on perceptual and cognitive processes that may delineate differences between functional somatization and subsyndromal forms such as presenting somatization.

2.4 PREVALENCE STUDIES.

Accurate assessment of the prevalence of somatization in primary care is hindered by the disparate ways in which somatization may be conceptualized. Early studies were primarily focused on chronic forms of somatization, such as DSM-III somatization disorder, as it was seen in specialized settings by psychiatrists. Such representations, therefore were likely to be skewed, the patients highly selected and not representative of the more common behaviour of patients who present to general practitioners with somatic complaints for which there is inadequate or no medical explanation. (40,235,236) In the latter setting, patients who present with inexplicable somatic complaints comprise a heterogeneous group, whose history might include a lifetime of such complaints, a preponderance to worry unreasonably about disease and minor symptoms, and patients whose somatic presentation may be seen as an expression of psychological distress. The distillation of distinct forms of somatization as functional, hypochondriacal or presenting somatization (196), or taking into account differences between chronic and subacute/acute forms (27) with proposed operational diagnostic criteria for each form has greatly enabled a more accurate estimation of the prevalence of this phenomenon and has clarified discrepancies in earlier findings.

In its most severe form, that is as DSM-III somatization disorder, somatization occurs relatively rarely in the primary care setting. Using the strict criteria for DSM-III, estimates of somatization disorder vary between 5% (236) and 7.1% (238). These estimates are higher than figures from data in the ECA program which evaluated community prevalence of somatization as approximately 0.2% (239,240), largely because these patients are over-represented in the primary care setting where they frequently present with inexplicable somatic complaints. Results from the ECA programme found almost 70% of patients with somatization disorder sought medical help, in 49.4% of cases from non-specialist health services. (241) Using abridged criteria for somatization, Escobar et al (206) found an increased prevalence of 4.4% in the general population of Los Angeles and 18-20% in Puerto Rico. (75) Similarly, Miranda et al (242), using abridged criteria estimated a prevalence of 25% in a low income inner city sample of medical patients. Using a broader definition of functional somatization, where DSM-III somatization disorder is the most extreme case, Kirmayer and Robbins' study of patients attending a primary care service showed a prevalence of 1% for patients meeting DSM-III criteria for somatization disorder, and 17% meeting the abridged criteria. (199) That the DSM-III figures are lower than those of deGruy (237) and Katon (238) may be because patients with hypochondriacal characteristics were included in the two latter studies. Kirmayer and Robbins, while acknowledging an overlap between functional and hypochondriacal somatization, distinguish between these forms in their study. (196)

The results of epidemiological studies showed somatization disorder was found more frequently in women, unmarried persons, persons with low incomes and lower levels of education, non-whites, Hispanic patients, older persons and urban dwellers. (204-206, 208,243) Kirmayer and Robbins found similar sociodemographic

factors associated with functional somatization with the exception that there was no age difference between somatizers and non-somatizers in their study population. (199)

Hypochondriacal somatization associated with unreasonable fears and illness worry occurs more frequently in the primary care setting. While definitions of hypochondriasis vary, making prevalence estimations difficult, Kellner's review of studies of hypochondriasis (76) found prevalence rates reported as ranging between 3% and 13% of the population in general. Figures from studies in the primary care setting are generally replicated with prevalence rates of 9% (244), 4-6% (245) and 8%. (199) Sociodemographic factors do not appear to greatly influence the presence of hypochondriacal states. While there is some evidence that more men than women report higher levels of illness worry and disease conviction (246), these findings are not supported by the results of other studies. (199,227,247) Kirmayer and Robbins study, with greater statistical power than earlier studies found small statistically significant differences between hypochondriacal somatizers and non-somatizers, where somatizers were more likely to have lower levels of education, lower incomes or were more likely to be unemployed or immigrants to North America. (199)

Presenting somatization as defined by Kirmayer and Robbins (196,199) is the most commonly-occurring and most frequently studied form of somatization in the primary care setting. Many studies confirm that patients with psychiatric illnesses who seek help from medical services frequently do so by presenting to general practitioners with somatic complaints. (27,78,248-251) Reports indicate that between 50% and 80% of psychiatrically ill patients present in this manner (27,40), and that psychological presentations are atypical in primary health care settings. (252) While a number of these patients will acknowledge that their physical symptoms are related to

psychological stressors in their lives, either spontaneously or following careful questioning by the doctor, many reject such explanations and remain firmly convinced that their symptoms are attributable to the presence of a physical disease. (27,199) Estimates of somatization in this form in primary care settings using the criteria of Bridges and Goldberg (27) vary between 3% of consecutive attenders (or 20% of new illnesses) (27,251,253), 9.4% (228) and 11%. (199)

Somatization in this context and form has been associated sometimes more frequently with women (228,254) and sometimes with men. (199) A review of research to date of gender differences and somatization finds a consensus that women do tend to report more functional symptoms than men, but emphasises that some studies are flawed, and in view of changes in medical literature no firm conclusions may yet be drawn on this issue. (255) While there is also some evidence that presenting somatizers come from backgrounds of lower socioeconomic and educational levels (256), or from urban localities (257), other studies find little or no evidence of sociodemographic factors such as age, income and educational levels, marital status and employment in somatization. (199,227) Similarly, the question of cultural differences and prevalence of somatization remains unanswered, with conflicting and ambiguous reports. Racy (256), for example found no racial differences, while other studies of immigrant and refugee populations showed evidence of somatization in different cultural groups. However, this may have been more a reflection of difficulties and anxieties related to the process of acculturation, rather than deriving directly from cultural differences. (257-260)

2.5 AETIOLOGY and ANTECEDENTS OF SOMATIZATION.

Despite a considerable research effort, the aetiology of somatization remains unclear. In the case of chronic forms of somatization, such as somatization disorder and hypochondriacal somatization, much of the early research was conducted in specialist mental health settings, with the result that the patient sample was highly skewed and unrepresentative of somatizing patients in the community and in primary care. Furthermore, chronic forms of somatization may be considered as discrete psychiatric disorders in their own right, and distinctly different phenomena to that form of somatization most frequently found in primary care. (199) In a review of this work and of somatizing patients in primary care, Goldberg and Bridges suggest that this early research provided information about factors related more to the perpetuation of somatization rather than to how it all began. (40)

Considering the two most common psychiatric illnesses associated with somatization in primary care; viz. anxiety and depression, it is noteworthy that in recent literature, conceptualization of these disorders is changing. For example, Kleinman (261) suggests that anxiety disorder and depressive illnesses are “*non-specific forms of bodily distress*” with:

biological as well as social correlates. These correlates are often labelled psychiatric disorder, but they have been reconceived by social scientists as the psychobiological sequelae of social pathology and human misery generally. (261)

This conceptualization is supported by argument for a bio-social model of common mental illnesses, proposed by Goldberg and Huxley. (7) These authors contend that human beings respond to psychological distress in a limited number of ways; that is, with anxious symptoms, with depressive symptoms or a combination of

both. The manner in which persons respond to these feelings may be as diverse as are individuals themselves in society. Most commonly, their response is associated with symptoms which range from full acceptance of responsibility for the situation accompanied by feelings of guilt and self-blame, to avoidance of responsibility for the situation and complete denial that it exists, or varying degrees in between.

Several studies have been conducted that show a relationship between psychiatric disorder and environmental stressors such as recent life events and economic conditions in the community. For example, Madianos and Stefanis (262) follow-up study of changes in the prevalence of depression between the years 1978 and 1984 in four geographical areas of Greece found a substantial increase in depressive symptoms in all areas, which they attribute to the economic instability in Greece at the time. Dalgard and Tamb's (263) ten-year follow-up study of five neighbourhoods in Oslo found a marked improvement in mental health in a previously poorly-functioning unit, which had undergone considerable development and improvement during the study. Similarly, high levels of depression in community studies have been found to be associated with rapid socio-cultural changes (264,265), specific community problems such as poverty, racism, unemployment, domestic violence (266) and with recent life events. (267,268) In the latter studies, while the debate about the influence of social support on the incidence of depressive symptoms remains unresolved, many of these illnesses seem to be generally attributable to individual community dissatisfaction, with community support having no significant bearing on the problem. (269-275)

When considering the aetiology of psychiatric disorders, there is some evidence that genetic factors play a part in the most severe forms of depression and in

some hypochondriacal states (276). However, in a study of 4000 twin pairs, Kendler (277) found genetic factors operated in a non-specific way to affect psychiatric symptoms, while environmental factors strongly influenced anxiety symptoms. In general, genetic factors do not seem to play a part in the incidence of depressive illnesses and anxiety disorders as they occur in primary care. Thus, as mild depressive illnesses and anxiety disorders in primary care may be conceptualized as a form of personal distress, and somatization in primary care may be seen as a mechanism for dealing with psychological distress, the aetiology of this form of somatization has been argued as lying in behaviours and attitudes learned from childhood experiences. Goldberg and Huxley suggest, the manner in which persons respond to psychological stressors is a function of their vulnerability to destabilizing situations and their ability for restitution in the face of emotionally overwhelming life events and situations. (7)

There is evidence that medical help-seeking behaviours may be acquired from early childhood (88), and that the attitudes of over-protective mothers to risk-taking and time off from school is associated with adults who are fearful of illness and who are frequent attenders in general practice (88,278) In contrast, results of the South London Somatization study (253) showed a link between childhood experience of illness and lack of care, with adult somatizing behaviour. Other studies have shown a link between children in families, one member of which has a serious illness and the risk of somatization in adulthood (279-281), while Bridges et al (282) found adult somatizers were more likely to have a childhood history of hospitalization for investigations and treatment, than were adults with physical illnesses.

2.6 IDENTIFICATION of SOMATIZING PATIENTS.

General practitioners are all too familiar with the feelings of “*despair, anger and frustration*” (283) associated with the diagnosis and treatment of the significant number of patients who present to them with inexplicable, non-specific somatic complaints. (284-287) That these patients attract such pejorative labels as ‘heartsink’, ‘hypochondriacs’, ‘crocks’ and even ‘hateful patients’ (288) is an indication of the depth of the consternation evoked by them in their doctors. Others contend that the most common single diagnosis in general practice is non-sickness. (289)

The high prevalence of these patients in general hospital and specialist medical services has been recognized for many years. Cabot’s review in 1907 (290) of the records of 5000 patients who had attended the Massachusetts General Hospital found almost half of the patients had no organic pathology, but rather were cases of ‘functional’ illness. Similarly, patients with inexplicable somatic complaints are found in specialist medical clinics including neurology (291,292), gastroenterology (293,294), dermatology (295), genito-urinary medicine (296), gynaecology (297-299), pulmonary (300) and cardiology clinics. (301-304) In other instances, an association has been found between psychiatric illnesses such as depression and anxiety and specific organic illnesses such as irritable bowel syndrome (305-308), chronic abdominal pain (309), food allergies (310), headaches (311), syncope (312) and fibromyalgia. (313,314)

The most common physical symptom presented by somatizing patients in primary care is pain. The pain may occur in the form of headaches, backache, chest pain, abdominal pain and other regional pains, and may be of varying quality and

duration. Other common physical symptoms presented by patients with psychological disturbance include vegetative symptoms such as sleeplessness, tiredness, palpitations and loss of appetite. Bass (304) reports the ten most common symptoms presented by psychologically distressed patients with inexplicable chest pain are: breathlessness, chest pain, palpitations fatigue, nervousness, sweats, faintness and giddiness, sighs, paraesthesia and syncope. A cross-cultural study of specific characteristics of the somatic presentation of psychological distress found the most frequently seen symptoms of somatization were: sleep disturbances, tension headaches, back pain, dizziness and dyspepsia. Symptoms most suggestive of somatization included feelings of heaviness or lightness in the head, epigastric discomfort, tension headaches, palpitations and difficulty swallowing. (315)

That many of these symptoms also occur in depressive illnesses or may be physical signs of autonomic arousal associated with anxiety disorders serves to confuse the problem of diagnosing these illnesses, particularly in the primary care setting. Following Goldberg's paper of 1979 (316), many studies have shown that the physical presentations of these illnesses is frequently the main focus taken by doctors and a major factor in the non-detection of mild non-psychotic psychiatric illness in primary care. (7,26-29,317-325) Although several studies have been conducted to try to identify clinical features that might distinguish patients with depressive illnesses from patients with organic illnesses, it has not been possible to do so. (326,327) Kathol and Petty (328) found the only difference between patients with depression only and non-depressed patients with organic illnesses was that the former patients had more symptoms and were more severely ill; while Wesley et al (329) found that, while the cognitive/affective symptoms measured using the Beck Depression Inventory and

the Hamilton Psychiatric Rating Scale distinguished between chronic low back pain patients with and without depressive illnesses, the somatic symptom scales did not.

Thus, in terms of symptoms or the clinical picture, the recognition of somatizing patients becomes a process of exclusion of possible organic explanations for the symptoms. That this may be a costly and sometimes lengthy process has been well-documented. (330-334) Diagnosis by exclusion has also been deemed irrational, for the biomedical investigations that are used may be inappropriate or insensitive to pathological changes. (335) Wickramasekera has proposed that a diagnosis of inclusion which excludes pathophysiology and identifies psychosocial factors that induce or amplify somatic symptoms is more sensible. This author identifies three predisposing psychosocial factors; namely, hypnotic ability concerned with cognitive information processing, and two personality factors, catastrophizing and negative affectivity. In a study of somatizing patients, Wickramasekera found these factors together predicted somatizing behaviour in the event of critical life events and minor hassles, unless their effect was modified by social supports and appropriate coping skills. (335)

In the busy general practice setting however, elucidation of psychosocial and personality variables may be time consuming, and the instruments used to assess them, unwieldy. In response to these considerations, Srinivasan and Suresh (336) have developed a screening method based on non-specific symptoms, characteristic of somatizing patients. Their method has been tested for sensitivity and specificity and feasibility in a clinical setting similar to that of primary care. The Non-specific Symptom Screen (NSS-6) comprising 6 symptoms (fatiguability, insomnia, forgetfulness, giddiness/dizziness, general aches and pains and weakness) was found

to be both highly sensitive for identifying cases and highly specific for non-cases. The predictive value of the NSS-6 was found to be 100% when all six symptoms were present in populations where the morbidity rate of psychiatric illnesses is 51.5%. The advantages of using this screening method included its simplicity and brevity, and the ease with which the questions might be inserted into the history taking during a consultation. Its limitations were that symptoms had to be present for a minimum of three months, and that the method was less successful in identifying psychiatric illnesses that were uncommon in the community, such as obsessive-compulsive disorder, hysteria and personality disorders. (336)

In a similar vein, Chaturvedi et al (337) used the Disease Affirmation scale of the Illness Behaviour Questionnaire (IBQ) to detect abnormal illness behaviour such as somatization in the out-patient clinic of the National Institute of Mental Health and Neurosciences in Bangalore, India. This second order scale is comprised of two first order scales from the IBQ: the first scale, Disease Conviction measures the strength of the patient's conviction that a physical disease exists, combined with his/her ability to be reassured by a doctor; while the second scale, Psychological versus Somatic Focusing indicates the patient's tendency to attribute symptoms to either a psychological or a somatic cause. Using a cut-off score of 7 from a possible total of 11, the scale identified somatizing patients with a sensitivity of 86%, a specificity of 83% and a hits positive rate of 0.7537. As above, because of the brevity of the scale, the authors suggest it may be useful as a screening instrument for identifying possible cases of somatization in the primary care setting, who may subsequently be investigated more fully. (337)

Recent literature has focused less on the nature of the symptoms presented by somatizing patients, and more on the manner in which they are presented. That is; physical symptoms presented by somatizing patients are frequently described as 'non-specific', 'vague', 'diffuse' and 'multisystemic'. (286) In other instances, verbal presentations may be in 'colourful and exaggerated terms' (DSM-IV), or in the case of somatizing patients with chest pain, breathlessness and tachycardia may be acute and dramatic and requiring medical intervention for what appears to be a life-threatening condition. (338,339) Although these descriptions have not been validated by empirical studies, recent qualitative research in the form of literary analysis of the content and speech patterns of doctor-patient consultations have shown differences between somatizing and non-somatizing patients. For example, in a video-taped study of initial encounters between patients and primary care physicians, Elderkin-Thomson et al (340) found somatizing patients, in contrast with non-somatizing patients presented their symptoms in terms of a thematic rather than a chronological development and were unable to provide a contextual history or a temporal frame for the symptoms. In a similar study of the non-verbal behaviours of somatizing patients, these authors have also shown that somatizing patients' non-verbal behaviour, in contrast with their 'flamboyant and colourful' verbal behaviour (340) is over-controlled, emotionally distant and detached. (341,342)

Several studies have examined identification of somatizing patients in terms of their utilization of medical services. Thus, Escobar et al (207,208) found somatization was associated with frequent use of medical services and functional disability. Similarly, Katon et al (345) found 51% of patients in a study of 767 high utilizers of medical care were identified as distressed patients, 20.2% of whom met criteria for somatization disorder and 73% of whom met criteria for Escobar's abridged definition

of somatization. The distressed high utilizers in this group made an average of 15 medical care visits and 15 telephone calls to health care facilities in the 12 months prior to the study. In a study of patients attending two primary care practices in Finland, Karlsson et al (344) found the prevalence of psychiatric illness was significantly higher in the patients defined as frequent attenders (54%) compared to the control group; and that recognition of psychiatric morbidity in the frequent attender group, approximately half of whom suffered from mixed physical-psychiatric symptoms was delayed or missed because of the physical presentation of these patients. Similarly, Portegijs et al (254) in a study of frequent attenders in 80 Dutch general practices found 45% of these patients met criteria for somatization as this group defined it namely, patients with a threshold of 5 physical complaints related to depressive illnesses and anxiety disorders. Somatizing patients in this group of frequent attenders reported histories of back, neck or abdominal complaints and had consulted their doctor on a minimum of 12 occasions in the three years prior to the study. This pattern of frequent consultations with doctors resembles that of medical help-seeking by patients with psychiatric illnesses. Namely, a series of studies of patients attending general practices in Iowa found depressed patients differed from non-depressed patients by reporting significantly more consultations, hospitalizations, complaints of pain with an undetermined aetiology in a wide variety of sites, ill-defined functional complaints and anxiety symptoms in the period of 7 months before their psychiatric illness was diagnosed. (345,346)

Finally, considering Goldberg and Bridges' view (40) that somatization is "*a common and important human mechanism involving both doctor and patient*", several studies have examined recognition of somatization from the aspect of characteristics of the doctor and the patient in the consultative process. Balint believed a large number of

patients in general practice are not looking for a prescription or a test for their physical symptoms, but for a genuine interest and empathy. (347) There is evidence that this continues to be the case. (348,349) For example, when patients are interrupted early in the consultation, they fail to offer any further important clinical information. (350)

An early study of doctor-patient interactions conducted by Marks et al (351), showed that the manner in which patients were interviewed during a consultation was of considerable importance in the recognition of somatizing behaviour and the psychological disturbance underlying it. Interviewing technique was also found to be related to personality factors in the doctor, so that the more conservative doctors were, the less likely they would be to ask patients directly about psychiatric symptoms. (352) Goldberg et al (353) identified skills in five knowledge domains as necessary for recognizing somatizing patients. These included, a) acceptance of the biopsychosocial model of medicine, b) the ability to elucidate psychosocial issues during the medical interview, c) thorough knowledge of the diagnosis and management of psychiatric illnesses such as anxiety and depressive disorders, d) the acquisition of specific interviewing and management skills for somatizing patients, and e) skills in managing countertransference.

The necessity for such knowledge and skills has been demonstrated in several studies that have shown doctors who more frequently identified psychiatric illness and somatization showed greater concern for the patient, expressed greater interest and skills in psychiatric medicine, asked more psychologically oriented questions and responded to emotional cues appropriately, and finally, managed disruptive and difficult patients better at interview. (354,355) Several studies have examined cues indicative of emotional distress, such as movement, vocal, postural and verbal cues

and their relationship to doctors recognition of psychological distress. Thus, doctors with a high 'identification index' for psychological disturbance seemed to encourage cues of emotional distress from patients, and more ably followed up on such cues. Low 'identification index' doctors, in contrast seemed to suppress the expression of emotional cues, leading to missed diagnoses. (355-358)

2.7 TREATMENT STUDIES.

A recent report from the World Bank revealed that neuropsychiatric disorders account for more than 9.5% of the total burden of all diseases, measured in terms of Disability Adjusted Life Years. Furthermore, mental disorders cause more disability than any group of malignancies and are comparable to the burden of respiratory and cardiovascular diseases worldwide. (359) In view of this and of the psychosocial costs related to the phenomenon of somatization, the development of efficacious treatment strategies has assumed considerable importance. However, while a considerable research effort has been successful in adding new knowledge and insights concerning the nature of somatization, comparable studies of treatment strategies have been less productive. (360) Proposed treatments of somatization have included behaviour therapy (361-363), cognitive behaviour therapy (364,365), exploratory psychotherapy (366) and group therapy. (367,368) However, these studies have been experimental in nature and have frequently been conducted in highly selected patient populations with specific functional somatic syndromes such as irritable bowel syndrome or non-cardiac chest pain. Furthermore, the treatments have required the expertise of specialists with skills that are not generally available in the primary care setting.

Early reports of treatment of somatization in the primary care setting took the form of anecdotal and observational studies of the experiences of sole practitioners. The most dramatic of these settings were the military medical field stations in the Second World War. In these difficult circumstances, military physicians were frequently overwhelmed by cases of servicemen with 'anxiety neuroses' and 'war neuroses'. Several published reports describe treatments undertaken by military physicians in an effort to return men to active duty or to ensure that if they were discharged, the men received adequate and appropriate treatment so that they would be able to return to a useful civilian life. One such paper published by Blair (369) describes in detail a treatment programme which foreshadowed many of the elements found to have a beneficial effect in current treatment, including the writing down by each of the men a history of their lives and in particular about events that might have affected their mental health. Because of the difficult conditions and large numbers of cases, Blair's treatment took the form of group therapy in which a series of 10 one hour lectures were provided for the men. The sessions addressed the stigma attached to mental illness, the relationship between the mind and the body, subconscious and conscious reactions, instincts, basic anatomy and physiology, sentiments and mental conflicts, the stages of mental life, fear, and self-treatment in the form of realizing the true origins of the symptoms. In spite of his "trepidation" at commencing these lectures, Blair found the men "appreciated the general gist and implications" and the attention and explanations they received.

An early general practice study (370) conducted in an English family practice allocated 200 patients with inexplicable physical symptoms to one of two treatment streams. In one stream patients were managed actively by 'symptomatic diagnosis and medication', while the second group of patients were told there was no evidence of a

disease process and that no treatment was necessary. While much was unspecified in this study, it was found that the outcomes between each treatment group were similar, and it was concluded that in many cases of patients with inexplicable symptoms, explanation and reassurance were appropriate and sufficient treatment.

While the cost of treatments such as those described by Blair (369) would be prohibitive in current general practice, it is apparent that in the case of persistent somatization, reassurance and explanation are generally inadequate treatment. Current treatment methodologies of somatization in the primary care setting have therefore focused on techniques which are practicable in general practice, and which are acceptable to patients. Programmes such as that devised by Goldberg et al (371) propose a three stage process in which firstly, the patient's physical symptoms are acknowledged by the doctor, secondly, the doctor changes the agenda from somatic problems to psychological problems and finally, brings the patient to the realization of a link between the two. This programme has been found to be feasible in general practice. (372,373). However, such treatment, while effective in dealing with the process of somatization is insufficient by itself. Further processes are necessary to deal with underlying psychological distress. Problem-solving has been tested as such a process, based on evidence that psychological distress results from inability to deal with and solve emotionally overwhelming life stresses. Preliminary studies of this method in depressed patients show that these techniques are as effective as taking medications, but the numbers in the preliminary studies were too small to be able to draw any firm conclusions. (374)

CHAPTER 3

AIMS AND HYPOTHESES.

This thesis presents the results of an observational study of the psychological status and illness behaviour of patients attending general practitioners in the community.

The aims of the study were:

1. To determine whether or not a large scale study of this nature would be feasible in the primary care setting. (Study 1: Chapter 5)
1. To assess and compare the psychological status of three groups of patients who presented to the general practitioner with (i) physical symptoms for which there was an organic explanation, (ii) psychological problems, or (iii) physical symptoms for which no organic explanation could be found. (Study 2: Chapter 6)
2. To assess and compare aspects of illness behaviour of patients in the three presentation groups described above. (Study 2: Chapter 6)
3. To assess and compare aspects of illness behaviour of patients within each patient group who are at no risk or at an increased risk of having a psychiatric illness. (Study 3: Chapter 7)
4. To look for and examine possible changes in illness attitudes and beliefs in 'somatizing' patients, before and at six months after administration of a psychotherapeutic treatment protocol designed to help patients realize the link between psychosocial distress and physical symptoms. (Study 4: Chapter 8)

It was hypothesized that:

1. Patients with psychological problems and patients with medically inexplicable physical symptoms would report higher levels of psychological disturbance than patients who presented with physical symptoms, for which there was an organic explanation.
2. Patients with physical symptoms for which no organic pathology could be found would differ from patients with medically-explicable physical symptoms, and patients with psychological problems, by demonstrating maladaptive attitudes and beliefs about the symptoms associated with abnormal illness behaviour.
3. Patients within each patient group, at an increased risk of psychiatric disorder would differ from those at no such risk, by demonstrating a stronger tendency towards abnormal illness attitudes and beliefs about their illness.
4. “Somatizing” patients who received the psychotherapeutic treatment would be more likely to report lower levels of anxiety and depression than ‘somatizing’ patients who did not receive the treatment at six months follow-up.
5. ‘Somatizing’ patients who received the psychotherapeutic treatment would be more likely to have modified their illness beliefs and attitudes than ‘somatizing’ patients who did not receive the treatment at six months follow-up.

CHAPTER 4

METHODOLOGY

4.1 SUBJECTS

The study was conducted in metropolitan general practices in Adelaide, South Australia. Adelaide, with a population of approximately 1.5 million persons is the capital city of this southernmost and driest state in Australia. Almost half of the state is arid desert and sparsely populated. Although the state supports mining, agricultural and fishing industries, three quarters of the population live in metropolitan Adelaide and its suburbs. The city has a reputation as a university city and a centre for the arts. Its population is described as "*multicultural and multi-racial without serious communal tensions*". (375) The largest centre of employment is the inner city central business district, which is also where two of the city's three universities and its largest general teaching hospital are located. Approximately 14% of the workforce are employed in manufacturing ventures, the largest of which is the car industry. While all areas of employment, and the state's economy in general suffered considerably during the recession of the late 1980's and early 1990's, Adelaide remains

a safe place in the sun with a congenial climate of four distinct seasons, average summer temperature on the coast around 28 degrees and in winter 15 degrees, dry but with sufficient rainfall. Pollution is minimal, and the environment protected." (375)

The study was conducted with the co-operation of 23 General Practitioners. These included 7 female practitioners and 16 males. With the exception of two part-time female practitioners, all worked full-time as general practitioners and performed a range of duties including consultations, home visits and hospital visits. One doctor (male) also assisted at surgical sessions in a small community hospital on an occasional basis. No solo practitioners took part in the study. According to the General Practice Evaluation Programme's Technical Advisory Group (376), the practices were classified as either small group practices with 2 to 4 partners (15 practices) or large

group practices with 5 or more partners (7 practices). On 3 occasions, more than one doctor from a single practice took part in the study.

The practices were all urban, located in three of the four Divisions of General Practice into which Adelaide is divided. The Divisions of General Practice were organizational structures introduced into Australian general practice in the 1990's to encourage doctors in each division to work together within each community to meet specific local health needs, to implement specific local preventative care programmes and to be able to respond quickly to health care needs particular to each community. Each division is directed by a management committee whose members are drawn from doctors in the division. Since their inception, the divisions have provided for the continuing education of their members, and have helped provide doctors with skills that in recent years have been ceded to specialists and other health care providers, such as obstetric and counselling. (377) The median population of the 118 Divisions established in Australia is 152,920 persons. (378)

The divisions involved in this project were the Western, the North Eastern and the Central and Eastern divisions of Adelaide. Each of these divisions is served by a major teaching hospital. The divisions covered areas which ranged from beach suburbs and the port area of Adelaide in the west, to the hills surrounding Adelaide in the east. Subjects were drawn from practices located in a range of sociodemographic areas. They included old (inner) and newly-developed (outer) suburbs, suburbs comprising a high density of government subsidised Housing Commission dwellings, as well as suburbs in low income industrial areas. Areas varied between those where the majority of homes were fully owned (up to 48%) to where the majority of dwellings were rented (up to 42%). The number of individuals from non-English

speaking backgrounds in the practice locations varied between 7 and 29%. In most areas, the majority of adults were aged between 25 and 45 years (up to 43%) or between 45 and 65 years (up to 39%). The largest number of retired persons (more than 65 years) in any area was 29.2% of the adult population. (379)

Recruitment of subjects took place between April, 1995 and April, 1997. Every patient attending each participating general practitioner over a period of 2 consecutive weeks was screened for the study. When more than one doctor from a single practice participated in the study, patients were screened on separate occasions for each doctor respectively, in time periods usually separated by 2 to 4 weeks.

Criteria for entry to the study were as follows:

- (i) aged more than 18 years
- (ii) sufficient command of English to be able to give an informed consent and complete two self-report questionnaires
- (iii) absence of an organic brain disorder, alcohol or drug dependence, mental retardation or a major psychiatric illness.

Subjects who were consulting the doctor for routine procedures such as a physical examination for a Driver's licence, influenza injection at the beginning of Winter or a routine pregnancy check-up, and who were asymptomatic at the time of their consultation were excluded from the study population.

4.2 RATING INSTRUMENTS.

4.2.1 Sociodemographic Data.

Data for two sociodemographic variables were collected; namely, age and gender. The reasons for studying these two variables were that epidemiological reports indicate differences in general practitioner utilization between males and females and between younger and older persons, while data on other sociodemographic factors tend to vary. In Australia, Medicare and Veteran's Affairs data for the years 1994-95 showed that the highest number of patients in primary care were within the 25-44 years and 45-64 years age groups (approx. 29%). However the number of consultations per patient increases with age with a bias towards females, while female consultations also exceeded male consultations in the 15-24 years and 25-44 years age groups. (380) Similarly, previous research in the primary care setting showed utilization of general practitioners was predicted by increasing age and was associated with aspects of illness behaviour which differed between males and females. (247,381,382)

4.2.2 Illness Behaviour.

This construct was measured using the Illness Behaviour Questionnaire (IBQ) (383) (Appendix 10.1) Developed by Pilowsky and Spence, the IBQ is a self-report instrument comprising 62 Yes/No items. Not all of the items are scored when analyzing the questionnaire. The instrument incorporates the 14-item Whiteley Index of Hypochondriasis (WI) (209), and provides a measure of individuals' attitudes and beliefs about their illness, their perceptions of the reactions of significant others (including doctors) to themselves and their illness and an evaluation of their

psychosocial situation. In developing the questionnaire, factor analysis of the responses of 100 patients with intractable pain problems yielded seven meaningful dimensions from which subscales were constructed (see below) on which individual differences in illness behaviour may be measured. (384) The robustness of the seven first order scales of the IBQ has been demonstrated in a replication study of a much larger population. (385) Two second order factors derived from factor analysis of the seven first order dimensions illness behaviour are concerned with patients' affective state and with the degree of somatically focused illness affirmation. (161) The screening ability of the IBQ was tested by derivation of discriminant functions from an analysis of the responses to the questionnaire by patients in a pain clinic, and in a family practice. The results showed that the IBQ was highly sensitive (97%) and slightly less specific (73.5%) for cases of abnormal illness behaviour. (386) Wyshak et al (387) showed that the items of the IBQ comprising the Whiteley Index of Hypochondriasis may be a useful tool for screening for psychiatric illness in a general medical setting; and a validation study conducted by Speckens et al (388) reported satisfactory internal consistency and stability and a high correlation between scores for the Whiteley Index, the Illness Attitudes Scales (389), and the Somatosensory Amplification Scale (112) in general medical and general practice patients.

The scales of the IBQ which provide an assessment of illness behaviour are as listed below:

First Order Scales:

- | | | |
|-------|---------------------------------------|-------|
| (i) | General Hypochondriasis | (GH) |
| (ii) | Disease Conviction | (DC) |
| (iii) | Psychological versus Somatic Focusing | (P/S) |

(iv)	Affective Inhibition	(AI)
(v)	Affective Disturbance	(AD)
(vi)	Denial	(D)
(vii)	Irritability	(I)

Second Order Scales:

Affective State	(AS)
Disease Affirmation	(DA)

Additional scales:

Discriminant Function	(DF)
Whiteley Index	(WI).

High scores on all of the scales except the third P/S scale suggest the presence of abnormal perceptions, evaluations or reactions to an illness. On the third scale, which is bipolar in nature with meaningful negative and positive loadings, a high score indicates a perception of the illness in psychological terms, while low scores indicate a perception of the illness as physical in nature, to the exclusion of the other dimension. (383)

Early applications of the IBQ in the study of illness behaviour were primarily in pain clinic populations. (390-396) Subsequently, the instrument has been employed in general medical hospital (233,397,398) and general practice (246,4399) settings to delineate predictors of treatment outcomes (400,401) and of health care utilization (233,402), to determine differences in illness behaviour patterns between differing clinical populations (403-405) and as a diagnostic tool for identifying 'somatizing' patients. (337,406)

4.2.3 Risk of Psychiatric Illness.

The scaled 28-item General Health Questionnaire (GHQ-28) was chosen to assess the risk of psychiatric illness. (Appendix 10.2) The GHQ is one of the most frequently used screening instruments for identifying patients who are likely to have a non-psychotic psychiatric illness. Designed as a self-report instrument for use in community and primary care settings, the questionnaire is concerned with changes in normal healthy functioning and the appearance of new distressing symptoms. In its various forms (60-,30-, 28-, and 12-items) (407), the GHQ has been administered and its reliability and validity tested in a range of cultures and settings. (408-414) The scaled 28-item GHQ was developed to take into account varying degrees of severity of symptoms and to increase the amount of variance accounted for by symptoms such as depression and anxiety in the primary care setting. (415-418) The questionnaire is divided into four sub-scales all relevant to the topic of this study: a) somatic symptoms, b) anxiety and insomnia, c) social dysfunction, and d) severe depression. The GHQ-28 was scored using the binary GHQ scoring method (ie. 0-0-1-1). Goldberg and Hillier concluded that this method provided better results than scoring using a Likert method. (416) The cut-off score for determining non-caseness/caseness was taken as 4/5, which has been shown to give better results than other cut-off scores such as 5/6. (416) The GHQ-28 was chosen for this study because it was felt that it could be completed in a relatively short time, thus not only minimizing any disruption of the doctor's practice, but also because multidimensional form of the 28-item GHQ with its four identifiable sub-scales might provide singular information about the cases of patients in comparison with psychologizing patients and patients with organic illnesses in this study. (417)

4.2.4 Structured Interview.

The structured interview used was the Composite International Diagnostic interview (CIDI). The interviewer-based CIDI questionnaire is a comprehensive, highly standardized instrument developed for the assessment of mental disorders, based on International Classification of Disease (ICD-10) and Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R) definitions and criteria. (419) Developed originally to combine two instruments widely used in epidemiological research; namely, the NIMH-Diagnostic Interview Schedule (DIS) (420) and the Present State Examination (PSE) (421), the CIDI has several advantages over similarly designed instruments. These include: a) its fully standardized and computerized format allows for consistency of symptom assessment and reliability of diagnostic decisions, b) it allows for assessment of recent and lifetime prevalence of mental disorders, c) it relies on the respondent's self-report of symptoms, and d) because of accompanying detailed instructions and specifically-worded questions and probes, the CIDI may be used reliably by non-clinicians after a brief period of training. Extensive international field trials in hospital, primary care and community settings have attested to the reliability and validity of the interview. (422-424) This study utilized four sections of the interview; namely, Section A (Demographics), Section C (Somatoform and dissociative (conversion) disorders), Section D (Phobic and other anxiety disorders) and Section E (Depressive disorders and dysthymic disorder). Reasons for this were that firstly, the purpose of the study was to examine illness behaviour in patients in primary care where anxiety disorders and depressive illnesses are the most commonly-occurring psychiatric illnesses; secondly, the major focus of the study was on patients who somatize psychological distress; and thirdly, patients with major psychotic illnesses and drug and alcohol problems were excluded from the study population. It

was therefore felt that it would be most efficient to restrict the interview to those sections which would be most relevant to the study.

4.3 TREATMENT.

4.3.1 Protocol.

The treatment protocol developed for somatizing patients in the study comprised two stages. The structured protocol sought to combine two previously developed treatment plans for patients with inexplicable physical symptoms. The first stage, Reattribution was based on the method developed by Goldberg et al (371,372) for the treatment of somatization in general practice. This was followed by a Problem-solving phase developed from problem-solving literature summarized by Hawton et al. (425,426) Both of these processes are described more fully below.

The treatment plan consisted of a course of 8 to 12 weekly half-hour sessions. Therapy followed the 'conversational model' developed by Hobson. (427,428) This model of therapy emphasises and seeks to focus on patient's feelings and interpersonal problems expressed in the 'here and now'.

4.3.2 Reattribution.

The reattribution technique described by Goldberg et al (371,372,429) was developed from the observation of over 1000 interviews between patients and doctors in general practice combined with the expertise of Lesser in Canada. (430) The final

model emerged from discussions with experienced general practitioners in both Australia and England.

The reattribution technique comprises three stages; namely, “feeling understood”, “changing the agenda” and “making the link”. The goal of the first stage is to establish an empathetic and therapeutic relationship between the doctor/therapist and patient. It involves obtaining a history of the symptoms, the typical course of the symptoms and an exploration of social and family factors and of the patient’s health beliefs. The steps taken to change the agenda of the patient’s focus on somatic problems to a consideration of psychological factors are taken with an acknowledgment of the presence of the physical symptoms. Taking this step involves making the proposal that the physical symptoms are temporally associated with stressful life events. The final stage of making the link between physical symptoms and psychological problems requires a negotiating style, in which the patient is drawn to consider that the pattern of the course of the symptoms is influenced by and associated with stressful events in their lives.

The reattribution technique has been developed from the experience of many successful encounters between doctors and patients with medically inexplicable physical symptoms. It is acknowledged (372) that teaching patients techniques of reattribution is an early phase in the treatment of somatization, and that patients require further skills to be able to deal with the psychological stressors that precipitate their physical symptoms. Thus, in this study, patients were further instructed in a method of problem-solving as a way of completing the treatment.

4.3.3 Problem-solving.

The problem-solving phase was added to the treatment protocol based on evidence that the relationship between stressful life events and ill-health is associated with the number and the nature of the problems created for the individual as a result of the stressful event. (431) Other evidence suggests that individuals with effective problem-solving skills report less depression in the event of stressful situations than individuals with fewer skills. (432) On the other hand, cognitive studies indicate that problem-solving may be impaired in individuals with high levels of state anxiety and heightened levels of bodily awareness. (433) Successful problem-solvers have been characterized as individuals who approach problems in a systematic manner, have a clear and insightful understanding of the problem, are less impulsive and engage in fewer avoidant strategies than “unsuccessful” problem-solvers. (434)

In the problem-solving phase of treatment, patients were asked to select a current life problem. The patient and author then worked at finding a solution to the problem, using the following steps;

- (i) identification and clarification of the problem
- (ii) setting achievable goals
- (iii) formulation of alternative solutions
- (iv) selection of a solution
- (v) planning to implement the solution
- (vi) evaluation of the solution.

The problem-solving tasks were accompanied by keeping a diary of progress each week between sessions and other homework tasks. Preliminary studies of teaching problem-solving strategies to patients with inexplicable physical symptoms

and depressive illnesses indicate that this form of treatment is both feasible and acceptable as a therapeutic method in the primary care setting. (373,374,425,435)

4.4 PROCEDURE.

4.4.1 Recruitment of Subjects.

Patients were recruited from the practices of twenty-two general practitioners drawn from three of the four Divisions of General Practice in Adelaide; namely; the Western, North-Eastern and Central and Eastern Divisions. A total area of 74.022 sq kms were serviced by the locations of participating practices, according to postcode data. (380) Recruitment of general practitioners was conducted by approaching the Chairman of each Division in person to explain the nature and purpose of the study. The Chairman then either wrote to doctors in the Division who had previously expressed an interest in psychosocial medicine, or provided a list of doctors with this interest to whom the author wrote an introductory letter (Appendix 10.3). General Practitioners were also made aware of the study by placement of an advertisement in Division Newsletters. The author met with doctors who responded, to describe the nature and purpose of the study, to discuss the process of patient recruitment and to explain the doctor's role in the collection of data. This information was also explained to the ancillary nursing and receptionist staff in the practice.

Recruitment of patients took place over a time period of two consecutive weeks in each of the participating doctor's consulting rooms. Patients were recruited while waiting to see the doctor. Every patient who consulted the doctor in the two-week time

frame was screened for the study. Each patient who met inclusion criteria was approached by the author in the doctor's waiting room. The author explained explained the nature and purpose of the study to the patient, and then asked the patient to read an Information Sheet (Appendix 10.4), which described the project as a Health Study being conducted by the Departments of General Practice and Psychiatry of the University of Adelaide. In accordance with University and Hospital Ethics Committee regulations, all patients also read and signed a consent form (Appendix 10.5) before commencing the study. The author recorded details of the patient's name, age and gender on the questionnaire forms. Patients were then asked to complete the 28-item General Health Questionnaire (GHQ-28) and the Illness Behaviour Questionnaire (IBQ). They were asked to approach the author if they required help with the wording or sense of any of the questions. This was to discourage any inclination to complete the questions with the help of relatives or accompanying persons, or even asking accompanying persons to fill out the questionnaires on their behalf; such behaviours having been encountered in the pilot phase of the study. Completion of the questionnaires was usually done before seeing the general practitioner. If patients had not answered all of the questions before the doctor was ready to see them, they were asked to do so after the consultation and before leaving the surgery. In a few instances, patients took the questionnaires home, either because they did not have time to complete them at the surgery, or because they wished to exercise their right (as explained in the Consent Form) to discuss the questionnaire with a family member. In the great majority of cases, these questionnaires were returned to the author. If the questionnaires were not returned after a follow-up telephone call, the patient was regarded as having refused to participate in the study.

4.4.2 Clinical Assessment by the General Practitioner.

The doctor was asked to record the primary reason for each patient's presentation. This was taken as the complaint for which the patient made the appointment and was that which was first mentioned in the course of the consultation. After the patient had left the consulting room, this data was recorded by the doctor on an individual "Doctor's Data Sheet" which accompanied the patient's medical records into the consulting room (Appendix 10.6). On the data sheet, doctors were required to indicate by means of a tick, one of three statements describing the primary reason for the patient's presentation; namely, the patient presented with a) a physical complaint, or b) a psychological problem, or c) for a routine test or procedure. In the case of the patient's presentation with a physical complaint, doctors were also asked to specify whether or not they felt there was an adequate medical explanation for the symptom at the time. On two occasions when the doctor preferred to exercise caution before recording the patients' presentation as "with a physical complaint for which no adequate medical explanation could be found", because the results of investigations were pending, the patient was followed up by the author when the test results became available and the data sheet completed accordingly by the practitioner.

On the basis of this information, patients were classified into three groups as:

- (i). **"Organic" (Group O):** where the primary reason for the consultation was for a medically explicable physical complaint,
- (ii) **"Somatizers" (Group S):** where the primary reason for the consultation was for a physical complaint for which no adequate medical explanation could be found at the time,

(iii) **“Psychologizers” (Group P):** where the patient presented primarily with psychological problems.

4.4.3 CIDI Interview.

The three sections of the CIDI questionnaire (described above) were administered to all patients in Group S, ie. ‘somatizing’ patients who presented with medically inexplicable physical symptoms. All of the interviews were conducted by the author, who undertook a week long training course in the use and administration of the CIDI questionnaire in the Anxiety Disorders Unit at St Vincent’s Hospital, Sydney, New South Wales, which is a World Health Organization centre for such treatment and research of such disorders.

Patients were forewarned at the time of their recruitment in the doctor’s surgery that they might be asked for a further interview. With their doctor’s knowledge and consent, patients classified as ‘somatizers’ were telephoned by the author within 2 to 3 days after their initial consultation with the General Practitioner, to explain that they had been selected for this interview. The interview was described as a longer questionnaire that asked questions about the patient’s physical health, moods and anxieties in more detail than that of the two questionnaires they had completed in the doctor’s surgery. If the patient agreed, a time and place for the procedure were arranged. Interviews were conducted within 2 weeks after the patient’s appointment with the doctor. All but two of the interviews were conducted in the patient’s home. In the two cases where this was not possible, the interviews were conducted in a quiet room in the doctor’s practice from which the patient had been recruited. In all cases,

the interviews were conducted with the author and patient being the only persons present, and without interruptions.

At the beginning of each interview, it was necessary to explain to the patient that the questionnaire was a very structured instrument, and that the questions had to be asked exactly as they had been written. Thus, at times, the questionnaire would seem to be tedious and repetitious. Interviews took between 30 and 45 minutes to complete. When the interview was completed, the author explained to those patients who had been randomized into the treatment stream of the study that she would like to discuss their health problems further, if they were agreeable. It was explained that a programme had been developed which was designed to help persons such as themselves with distressing physical problems to be able to understand more fully the nature of the symptoms and to devise ways of dealing with them. The time and place for follow-up treatment appointments were then arranged. Patients who were randomized as 'controls' were advised that they would be asked to complete the IBQ and GHQ-28 questionnaires and answer a global question about their health status in six months time, and that no other demands would be made of them.

4.4.4 Treatment.

As described elsewhere, the treatment plan was that of a course of 8 to 12 weekly half-hour sessions. The time and place for the sessions was negotiated with the patient, with every attempt being made to keep the sessions at the same time and place each week. In all but one case, patients were treated in their homes. One patient preferred to talk in a room that was made available in his doctor's practice.

In accordance with requirements for the 'conversational method' of therapy (427), much of the first session was taken up with an explanation of the nature of the treatment programme, its time-frame, the processes involved and the hoped for outcomes. It was explained that patients would be given a diary and that there would be homework tasks to complete each week. Patients were provided with a homework book/diary and an appointment sheet which included the author's work telephone number. This information was provided in a negotiable manner-with the patient. The second problem-solving phase of the treatment was not begun until the author (therapist) felt that the patient had reached an understanding and realization of the relationship between the physical symptoms and psychological stressors. This was indicated by a verbal statement from the patient to the effect that the patient understood a link was possible between their physical symptoms and a current life stressor.

As the completion of the treatment programme approached, patients were asked to consider how their problem-solving skills might be applied to other stressful situations in their lives. The final session was taken up largely with a review of the programme. At the end of the last session, patients were advised that they would be asked to complete the I.B.Q and GHQ-28 forms again, as well as to answer a global question about their general well-being at that time. Shortly before the six month term ended, the author telephoned each patient to remind them that the questionnaires were about to be provided, and these were then posted to the patients with a covering letter and a return-addressed and stamped envelope to facilitate the return of the completed forms.

CHAPTER 5.

**PRELIMINARY STUDY OF ILLNESS BEHAVIOUR
AND SOMATIZATION IN GENERAL PRACTICE.**

5.1 INTRODUCTION.

In the primary care setting, the early recognition that a patient has psychological problems is frequently hindered by the mode of presentation known as somatization. It is now readily acknowledged that mild non-psychotic psychiatric illness is common in the community. (7) Often precipitated by emotionally overwhelming life events, or emerging at a time of critical change in the individual's life, most inceptions follow the course of a mild transient episode of mental disturbance, which remits spontaneously, without sequelae and without ever requiring psychiatric care. Some individual's however appear to be more vulnerable to the destabilizing effects of stressful events and recover from the consequent mental disturbance less readily.

Although there is evidence that increased vulnerability may be predetermined by genetic factors (436,437), research more strongly supports the theory that vulnerability is familial. By 'familial' is meant that individuals respond to psychologically stressful situations in ways that are learned in childhood, either from observing the behaviours of significant family members in similar situations, or as the result of parenting methods characterized by lack of caring. (253) Increased vulnerability may therefore be associated with having learned to deal with stressful situations for example, by denying they exist or by denying one's responsibility for them. Of the many possible strategies, the use of somatic symptoms to gain entry to the sick role is readily available in our society. Examples of this response to stress would be expected in the General Practice setting, and this has been shown to be the case. (27) A useful way of conceptualizing this response is within the framework of illness behaviour.

The construct of illness behaviour was proposed by Mechanic to describe the ways in which different persons individually perceive, evaluate and react to symptoms. (81) Defined in this way, variables associated with illness behaviour as it determines help-seeking lie between the appearance of symptoms and the treatment of them. It does not take into account illness behaviour that occurs when symptoms are not present but are likely to occur. Examples of this are the preventative illness behaviours associated with pre-Winter influenza injections, or the illness behaviours of persons who knowingly are infected with an illness which has not yet manifested itself symptomatically, such as HIV positive persons without Auto-immune Immunodeficiency Syndrome. In consideration of situations such as these, Pilowsky (157) proposed a less restrictive definition of illness behaviour, that it refers to:

the ways in which individuals experience and respond to those aspects of themselves which they are predisposed to evaluate in terms of an illness-health frame of reference. (157)

While illness behaviour is proposed as an adaptive process, undertaken by persons to make sense of symptoms and potential symptoms, and what to do about them, Pilowsky's construct of abnormal illness behaviour was proposed to clarify the forms of illness behaviour that are maladaptive, persistent and unresponsive to medical reassurance. (154) The construct of abnormal illness behaviour was developed to provide a framework which may be used to elucidate those instances where patients present to doctors with somatic complaints without organic cause as a way of dealing with or avoiding emotional conflicts. The early recognition of patients whose somatic symptoms have an aetiology in psychological disturbance remains difficult. In these situations, assessment of aspects of the patient's illness behaviour may reveal the presence of maladaptive coping or avoidance strategies, and may add an extra



dimension with which to measure the possibility that the patient has a non-psychotic psychiatric illness characterized by abnormal illness behaviour.

This chapter presents the results of a preliminary study that examined the illness behaviour of patients presenting to general practitioners with somatic complaints. The aims of the study were twofold. Firstly, to identify patients who presented to general practitioners with somatic complaints for which no medical cause could be established, and to compare aspects of the illness behaviour of these patients with patients in whom there was evidence of an organic cause for their complaint. The risk of the presence of mild psychiatric illness was measured using the 30-item General Health Questionnaire (GHQ-30) (407), and aspects of illness behaviour were measured using the Illness Behaviour Questionnaire (IBQ) (383). Secondly, this preliminary study was conducted to assess the feasibility of conducting such a project in metropolitan general practices, with a view to carrying out a much larger study of illness behaviour of patients who present to General Practitioners.

It was predicted that patients with somatic complaints and no identifiable organic pathology would score higher on the GHQ-30, and would show higher IBQ scores on those scales which measure illness phobia, affective disturbance, denial of life stressors, and increased difficulties in their interpersonal relationships. It was also predicted that these patients would demonstrate greater disease conviction and a stronger tendency to believe that the aetiology of their complaints was physical rather than psychological in nature.

5.2 METHODS.

5.2.1 Patients.

The study was carried out in three metropolitan general practices. Sociodemographic groups in both old, established and newly-established suburban settings are represented. Every patient attending the General Practitioner during the recruitment phase was screened. Patients were excluded if they were less than 18 years of age, had insufficient command of English to be able to complete the two self-report questionnaires, or if they were known to have a psychotic illness or an organic brain syndrome.

5.2.2 Procedures.

Patients were recruited consecutively on the day of their appointment with the doctor, while they waited for their consultation. The Nurse Manager of the practice asked each eligible patient if they would agree to take part in a Health Survey being conducted in the practice. It was explained that the survey was being carried out by the Department of Psychiatry in the major metropolitan hospital that serviced the area. Patients were informed that participation was completely voluntary, and involved the completion of two self-report questionnaires before seeing the doctor. In light of the fact that patient anonymity was observed, it was not deemed necessary to obtain formal ethical approval or consent. Following the consultation, the doctor completed a Data Sheet for each participating patient that recorded details of age, gender, whether the patient was an old patient with a continuing illness or a patient with a new inception of illness, whether the patient's presentation was for a physical or a psychological

complaint, and, in the case of physical complaints, the nature of the complaint and whether or not its cause could be established.

New inceptions of illness were defined as complaints for which help had not been sought from any source in the previous 12 months, according to the criteria of Bridges et al. (282) The mode of presentation was determined by the doctor. A physical presentation was defined as one in which the patient presented with somatic symptoms only (eg. pain, nausea). A psychological presentation was one in which the patient's consultation was for "feeling low" or "anxious". When presentations were mixed, the doctor ascertained whether or not the patient acknowledged that his or her physical symptoms might have been associated with some psychological stressor. In the case of such acknowledgment, the patient's presentation was classified as physical if the psychological distress was secondary to the physical problem, and as psychological if the patient acknowledged that the psychological distress was the major problem. When patients denied any relationship and attributed the somatic complaints to a physical cause, the presentation was classified as physical. Somatizing patients were defined as those who presented with somatic symptoms for which no organic cause could be established. Non-somatizing patients were those whose presentation was for somatic complaints, for which there was adequate evidence of somatic pathology.

The two self-report questionnaires, the GHQ and the IBQ have been described previously in Chapter 3.

5.2.3 Statistical Analysis.

Categorical data were analysed using the Chi square test to determine the distribution of proportions between groups. Mean differences between the groups of continuous data were compared for significance using the Mann-Whitney U and Kruskal-Wallis tests.

5.3. RESULTS.

A total of 347 consecutive patients were screened. In accordance with the exclusion criteria, 97 patients were excluded for the following reasons: less than 18 years age (37), insufficient English (10), diagnosis of psychotic illness (1). Forty-nine (49) patients refused to take part because of time constraints, very poor health at the time, or because they did not wish to be included in the study. A total of 250 patients agreed to complete the two questionnaires and were recruited into the study.

Examination of the questionnaires and doctor's data sheets revealed that a further 49 patients had to be excluded from data analysis. Eighteen (18) patients did not complete the forms fully, and 31 patients had consulted their doctor for routine procedures such as driver's licence check-ups, annual Pap smears and influenza injections. The latter group of patients were excluded because they were asymptomatic at the time of the consultation. Analysis of the data from this group showed (in some cases) evidence of an increased risk of the presence of mild psychiatric illness and some aspects of abnormal illness behaviour. This suggests that this is a sub-group of

patients whose illness and consulting behaviours may bear further investigation. However, it was felt that this was outside the scope of this study, the aim of which was to examine illness behaviour in patients actually presenting with physical symptoms. Data were analyzed from a total of 201 patients.

5.3.1. New Inceptions of Illness.

There were 112 new inceptions of illness. Of these, 101 presentations were for somatic complaints, and 11 for psychological complaints. In the case of the somatic presentations, an organic cause was established in 70 patients, but not in 31 patients. On this basis, patients were divided into two groups: Group I (Non-somatizing patients - organic cause established: n=70), and Group II (Somatizing patients - no organic cause established: n=31). As shown in Table 5.3.1, there were significant differences between the groups in age and gender. Somatizing patients were likely to be older than non-somatizing patients ($p=0.005$), and female ($p=0.012$). For the group as a whole, there were no significant differences between somatizing and non-somatizing patients on the mean GHQ-30 scores, or on mean scores of any of the IBQ scales.

When the data were stratified by gender, male somatizers were found to differ from male non-somatizers on several factors of the IBQ. (Table 5.3.2) That is, male somatizers were found to have significantly higher scores than male non-somatizers for Disease Conviction ($p=0.01$; Diff in Means=1.2, 95% CI=0.22, 2.13), Affective Disturbance ($p=0.02$; Diff in Means=1.7, 95% CI=0.39, 3.07) and lower scores for Denial ($p=0.04$; Diff in Means=1.3, 95% CI=0.07, 2.78). These differences were not found in the equivalent data analysis for female patients. Females with or without an

Table 5.3.1.

**Age and Gender Composition of Group I (Non-somatizing)
and Group II (Somatizing) Patients.**

	Group I (n=70)	Group II (n=31)
Age	38.6 (± 16.5)	49 (± 15.3)*
Males	36	7
Females	34	24*

Data expressed as Mean \pm SD. * $p \leq 0.05$

organic cause for their somatic symptoms were not differentiated on any of the variables studied.

5.3.2. Longstanding Illnesses.

There were 89 cases of "Longstanding illnesses", 72 of whom presented with somatic complaints. In these, a cause for the complaint was established in 54 patients, but not in 18 patients. There were no significant differences between these two groups in gender, "caseness" or in the mean scores on the GHQ-30 or in mean scores on any of the IBQ scales.

Table 5.3.2

Comparisons of IBQ Scores for Males in Group I (Non-somatizing) and Group II (Somatizing).

	Group I (n=36)	Group II (n= 7)
IBQ Scales:		
General Hypochondriasis	1.1 (±1.5)	1.6 (±1.7)
Disease Conviction	1.4 (±1.1)	2.6 (±1.1) *
Psychological/Somatic Focus	1.9 (±0.8)	2.3 (±0.7)
Affective Inhibition	1.9 (±1.5)	2.8 (±2.)
Affective Disturbance	1.3 (±1.5)	3.0 (±2) *
Denial	2.9 (±1.6)	1.6 (±1.1) *
Irritability	1.5 (±1.5)	2.4 (±1.5)
Affective State	3.9 (±3.3)	7 (±4.9)
Disease Affirmation	4.4 (±1.4)	5.3 (±1.2)
Discriminant Function	49.1 (±13.2)	48.9 (±8.9)
Whiteley Index	2.4 (±2.3)	4 (±2.9)

Data expressed as Mean ± SD * p ≤ 0.05

A final analysis of comparisons between somatizing patients with “Longstanding” and somatizing patients with “new inceptions” of symptoms revealed significant differences in several aspects of illness behaviour. Patients with new inceptions of inexplicable physical complaints were less somatically focused (P/S scores: p=0.045; Diff in Means=0.7, 95% CI=0.12, 1.29), were more likely to acknowledge difficulties in their lives not related to their physical symptoms (D scores:

Table 5.3.3.

Comparison of IBQ Scores for Somatizing Patients with “Longstanding illnesses” and Somatizing Patients with “New inceptions “of illness.

	Group I (n=18)	Group II (n=31)
IBQ Scales: (Mean±SD)		
General Hypochondriasis	1.7 (±2.5)	1.1 (±1.3)
Disease Conviction	2.7 (±1.7)	1.8 (±1.2)
Psychological/Somatic Focus	1.4 (±1.2)	2.1 (±0.8) *
Affective Inhibition	2.3 (±1.6)	2.1 (±1.6)
Affective Disturbance	1.8 (±1.8)	2.1 (±1.9)
Denial	3.5 (±1.1)	2.4 (±1.3) *
Irritability	1.8 (± 1.7)	1.6 (±1.4)
Affective State	5.3 (±5.0)	5.1 (±3.7)
Disease Affirmation	6.3 (±2.9)	4.7 (±1.7) *
Discriminant Function	61.7 (±18.9)	48 (±12.4) *
Whiteley Index	4 (±3.5)	2.6 (±2.1)

Data expressed as Mean ± SD. * p ≤ 0.05

p=0.005; Diff in Means=1.1, 95% CI=0.34, 1.82), were less convinced of the presence of a physical disease (DA scores: p=0.044; Diff in Means=1.6, 95% CI=0.39, 2.79) and were less likely to have a conversion disorder (DF scores: p=0.02; Diff in Means=13.7, 95% CI=4.7, 22.74). (Table 5.3.3).

5.4. DISCUSSION.

The results of this pilot study indicate that while it was possible to differentiate between male patients with physical symptoms and no organic pathology (somatizers) and male patients with physical symptoms with organic pathology (non-somatizers), in female patients and in the groups as a whole, no differences between somatizing and non-somatizing patients were found.

In the case of male patients, somatizers were distinguished from non-somatizers by the greater strength of their conviction that they had a physical disease, by higher levels of affective disturbance, and by a greater willingness to acknowledge they had life stressors unrelated to their illness. These findings are similar to previously described studies of illness behaviour patterns in somatizing patients. (246,390,393,394,403,438) in which higher scores for Disease conviction and Affective Disturbance are consistently found. The findings differ on the point of acknowledgment of life stressors. Typically, chronic somatizers (such as patients with chronic pain where no organic pathology is evident) deny such stresses or regard them as a consequence of their symptoms. (384) Our findings suggest that in the early stages, male somatizers may acknowledge the existence of personal difficulties, but do not recognize an association between these difficulties and their physical symptoms.

Our hypotheses (and the reports of previous studies) were not supported for the group as a whole or for female patients. There are several possible explanations for this. The first may lie in differences between the populations studied. This study was specifically directed towards finding differences in patients with "new" illnesses in a general practice setting. Previous studies have largely involved patients with long-

standing intractable pain syndromes in tertiary referral centres (390,393,394,403,438), or have made no distinction between patients with “new” illnesses and those with continuing symptoms (with no organic pathology), who typically have histories of multiple investigations and referrals. (246)

This explanation is supported by the further finding in our study that somatizers with long-standing histories of physical symptoms (>12 months) differed from somatizers with “new” illnesses on those aspects of illness behaviour that have been shown to distinguish somatizing patients from non-somatizing patients in previous studies. The long-term somatizing patients were significantly more somatically focused and more firmly convinced of the presence of a physical disease. Interestingly, the long-term somatizing patients reported significantly less affective disturbance than “new” somatizing patients. That is, although they complained of persisting physical symptoms, they did not report concomitant anxiety or depression. This picture is reminiscent of the description of a classical “conversion disorder”, in which patients appear to be indifferent to their physical suffering. It was shown in this study that long-term patients were significantly more likely to be demonstrating a conversion disorder than “new” somatizing patients, according to the scores on the Discriminant Function scale of the IBQ.

This is not to suggest that chronicity gives rise to abnormal illness behaviours. The results of earlier work (392), and the data in this study concerning male patients indicate that patterns of abnormal illness behaviour may be detected from an early stage in the patient’s illness. On the other hand, it may be argued that these findings suggest that, with the passage of time, the use of maladaptive coping strategies for dealing with psychological stress becomes more firmly entrenched and may be used more

effectively. Our findings indicate that the use of such coping strategies is more evident in male than in female patients at an early stage in the patient's illness.

Secondly, the findings of this study of patients with "new" illnesses may be a reflection of illness behaviours that influence patients to consult a doctor initially. A study by Pilowsky et al (246) showed that general practitioner utilization by male patients was determined by somatic focusing and disease conviction (in the presence of organic pathology), and by affective disturbance and difficulty expressing negative emotions (in the absence of organic pathology). The illness behaviour of male somatizers in this study is characterized by a combination of these factors. It is possible that with time, differences between somatizing patients and non-somatizing patients will become more clearly delineated and pronounced.

In the case of female patients, the previous study by Pilowsky et al (246) found that female patients without pathology were distinguished from those with pathology by higher levels of affective disturbance. That female patients with or without pathology did not differ significantly on any of the IBQ scales in this study, may be explained by the probability that in the early stages of an illness, females both with and without pathology may be experiencing a degree of anxiety and /or depression, and it may not be possible to distinguish between the two groups at this time. It may require several visits before differences between the groups begin to emerge. Furthermore, because there were significantly more female than males in the study population, it is possible that this influenced the results for the population as a whole.

The difficulty of diagnosing mild non-psychotic psychiatric illness, when it is presented in the guise of somatic complaints has been well-described. (27) The importance of being able to detect these illnesses early is demonstrated by the high costs associated with somatization. (330) The findings of this study indicate that, while it might be possible to distinguish male somatizing patients from male non-somatizing patients early in their illness, differences between female somatizers and non-somatizers at this time are less distinct. This may be largely related to the differences between factors that initially prompt patients to consult a doctor. While male patients show a tendency to adopt a somatic focus and a conviction that a physical disease is present when their physical functioning is compromised, female patients tend to respond to such changes affectively.

It also seems that, should the management of these patients over a long period of time continue to place emphasis on the somatic component of the illness at the expense of diagnosing and treating the psychological component of the illness, then the differences between somatizing patients and non-somatizing patients become more evident. While the use of maladaptive coping measures may appear to become more effective with time (as affective disturbance lessens), this state of psychological stability is likely to have been achieved by inappropriate use of medical services, and arguably may last only until the patient's psychological health status is challenged by the next traumatic and destabilizing life event.

While the results of this study await replication, we conclude that acknowledgment of psychological as well as physical factors that prompt patients to consult a doctor at the time that they do, and an early assessment of the possibility that

patients may be using maladaptive coping strategies to cope with other stresses in their lives, may assist in alleviating that distress, and the associated physical symptoms.

The second aim of the study was to assess the feasibility of conducting a much larger study of illness behaviour in general practice patients. Both general practitioners who participated in this pilot study reported that it had been a reasonably smooth process, and had not caused any great disruption to the running of the practice. However, it was decided to make some minor changes to the protocol. These were that the author (JS) would screen and recruit all patients for the larger study, thereby releasing the nursing and receptionist staff from this task, and adding a measure of consistency to patient recruitment. Secondly, it was decided that the 28-item GHQ (416) would be used instead of the 30-item GHQ (407) because of the multi-dimensional properties of the former questionnaire. Finally, the Doctor's Data Sheet was simplified to minimize the time required of the doctor to complete this form. The revised protocol is described fully in Chapter 3.

CHAPTER 6

ILLNESS BEHAVIOUR AND PSYCHOLOGICAL DISTRESS IN PATIENTS IN PRIMARY CARE WITH ORGANIC ILLNESSES, PSYCHOLOGICAL PROBLEMS AND MEDICALLY INEXPLICABLE PHYSICAL SYMPTOMS: A COMPARATIVE STUDY.

6.1. INTRODUCTION.

Recognition of the phenomenon of somatization presents a major challenge to medical practitioners. Defined generically by Lipowski as:

a tendency to experience and communicate somatic distress and symptoms unaccounted for by pathological findings, to attribute them to physical illness, and to seek medical help for them (77),

somatization may be regarded as a normal human response to changes in functioning and well-being. However, in the clinical setting, where somatization is associated with psychological distress and psychiatric disorder (27,224), this mode of presentation is associated with significant costs to the health care system in terms of utilization of resources(12-14), and to patients in terms of suffering and loss of quality of life, as a result of undiagnosed and untreated underlying psychiatric illness. (15,18-21)

The occurrence of somatizing behaviour has been reported in numerous clinical settings. (292-304) It is in the primary care setting however, that the impact of somatization and its relationship with undetected psychiatric morbidity has been most widely felt and described and felt. It is at this point, between the second and third levels of Goldberg and Huxley's model of "Pathways to Psychiatric Care" (324), that the largest proportion of psychiatric disorders are detected. As the first point of contact between the patient and the doctor, it is therefore discouraging that studies show recognition rates of psychiatric disorders in the primary care setting vary considerably. (3,29,30,439-442) That these estimates may vary between 20% and 80% of true cases (7,443) has been attributed to methodological issues (3,6,444-446) and to the often mild and transient nature of these illnesses in this setting. (26,29, 34,447,448) However, it has also been proposed that the non-recognition of psychiatric disorders

in primary care is due in no small part to the phenomenon of somatization (40), where patients perceive their illness as physical rather than psychological, and seek help for physical complaints for which inadequate or no medical explanation can be established.

Ormel and Tiemans (33) refer to the problem of non-recognition of mental illness in the primary care setting as a “*collusive phenomenon*”. Studies show that, in the majority of cases, patients in the community with psychiatric illnesses present to general practitioners with somatic complaints without organic pathology (40), or with concomitant physical diseases. (449) This is a major contributing factor to the non-recognition of the mental disorder. To the extent that non-recognition of mental disorder is a collusive phenomenon, the physical presentation of psychological distress provides a way in which both doctor and patient are able to avoid having to deal with psychological problems, by focusing exclusively on their physical aspect. (37) However, as often as not, the presentation by patients with physical symptoms without objective pathology is a source of disagreement between doctor and patient, resulting in considerable frustration and unhappy outcomes of the consultation. (450)

Viewed as a point of disagreement, patients who present to doctors with pathologically inexplicable physical symptoms may be exhibiting abnormal illness behaviour, defined by Pilowsky as;

the persistence of a maladaptive mode of experiencing, perceiving, evaluating and responding to one’s own health status, despite the fact that a doctor has provided a lucid and accurate appraisal of the situation and management to be followed (if any), with opportunities for discussion, negotiation and clarification, based on an adequate assessment of all relevant biological, psychological, social and cultural factors”. (160)

That is, somatization might be conceptualized as a pathological form of illness behaviour, in which sociocultural and social-psychological factors have shaped the patient's attitudes and beliefs about their symptoms in such a way that they resist expert medical knowledge. When patients persist with perceptions and evaluations of the significance of their symptoms that are resistant to medical advice, their consulting behaviour may be said to fall under the rubric of abnormal illness behaviour.

It may therefore be possible to determine the presence of somatization by assessing whether or not patients are harbouring inappropriate or maladaptive beliefs and attitudes about their illness. Furthermore, an examination of aspects of the illness behaviour of somatizing patients which distinguish them from patients with explicable physical symptoms or psychological problems may provide a characteristic profile of somatization which adds to an understanding of this phenomenon. Such dimensions of illness behaviour as those delineated by the Illness Behaviour Questionnaire (IBQ) (383), include "general hypochondriacal" features, "disease conviction", "psychological or somatic perceptions" of illness, "affective inhibition", "affective disturbance", "denial" and "irritability". Previous studies investigating illness behaviour in patients with somatoform disorders have found relationships between personality dimensions and the reporting of illness in patients with a diagnosis of hysteria (451), and have demonstrated that the instrument may be a useful tool in diagnosing conversion disorder. (406) Similarly, Chaturvedi showed that the Disease Affirmation scale of the IBQ could effectively be used to distinguish somatizing patients in his study. (337)

The purpose of this study was to determine if somatizing patients might be distinguished from patients with organic illnesses or patients presenting with

psychological problems, by comparing the psychological status and risk of the presence of psychiatric illness of each group of patients; and by aspects of the illness behaviour characteristic of the patients in each group. In the former case, the scaled 28-item GHQ was used to assess risk of psychiatric illness (416); and illness behaviour was delineated using the Illness Behaviour Questionnaire. (383)

6.2 METHODS.

This study follows from the preliminary study reported in Chapter 5. One of the aims of the preliminary study was to assess the feasibility of conducting such a project on a larger scale. As a result of that assessment, the protocol for the larger study was changed slightly, to allow for greater consistency in patient recruitment, and to use a form of the General Health Questionnaire (ie. GHQ-28) which would provide information relevant to the project. Because of the changes in the protocol, data collected in the preliminary study were not used in the analysis of this larger study.

The methodology used in this study has been previously described in detail in Chapter 3. An outline is provided here.

6.2.1 Patients.

Patients were recruited in the waiting rooms of general practitioners in suburban practices in a large metropolitan city. Twenty-three general practitioners participated in the study. Criteria for inclusion in the study required that patients were

18 years of age or more, had sufficient English to be able to give an informed consent and complete two self-report questionnaires, and that there was no evidence that the patient had an organic brain disorder or a psychotic illness. Patients were also excluded from data analysis if their appointment was of a routine nature, and they were asymptomatic on the day.

6.2.2 Procedures.

After being informed about the nature and purpose of the study, patients who signed a consent form were asked to complete the 28-item General Health Questionnaire (GHQ-28) and the Illness Behaviour Questionnaire (IBQ), before their consultation. On the few occasions when time constraints prevented this, patients completed the questionnaires after their consultation with the General Practitioner, and before leaving the premises, or took them home and returned the questionnaires by post.

6.2.3 Doctor's Assessment.

The doctor assessed the primary reason for each patient's presentation after the consultation; recording on a Doctor's Data Sheet (Appendix) whether the consultation was for:

- (i) a physical complaint for which an adequate medical explanation could be established, or
- (ii) a physical complaint for which no adequate medical explanation could be established, or

- (iii) a psychological problem, or
- (iv) a routine test or procedure.

Accordingly, patients were classified as (i) "Organic" (Group O) if the consultation was primarily for medically explicable complaints, (ii) "Psychologizing" (Group P) if the consultation was primarily for psychological problems, or (iii) "Somatizing" (Group S) if the consultation was for physical complaints for which no objective pathology could be found.

6.2.4 Questionnaires.

The 28-item GHQ (416) is a self-administered pencil and paper screening instrument designed for use in primary care and community settings. Its purpose is to identify patients who are at risk of having a mild non-psychotic psychiatric illness associated with disruption of normal/usual functioning. The questionnaire was scored using the 0-0-1-1 formula, with a cut-off score of 4/5 to distinguish between "non-cases" and "cases".

The IBQ (383) is a 62-item self-report questionnaire requiring "Yes/No" responses. It comprises 7 first order scales: General Hypochondriasis (GH), Disease Conviction (DC), Psychological versus Somatic focusing (P/S), Affective Inhibition (AI), Affective Disturbance (AD), Denial (D) and Irritability (I). Two composite second order scales provide global measures of the severity of affective disturbance; that is, Affective State (AS); and the strength of the patient's focus on physical illness and rejection of a psychological perspective; that is, Disease Affirmation (DA). In addition, a Discriminant Function (DF) score provides an indication of the likelihood

that the patient has a conversion disorder, and the Whiteley Index (WI) provides an estimation of the likelihood that the patient has a hypochondriacal disorder.

6.2.5 Statistical Analysis.

Categorical data were analysed using the Chi Square test. Continuous data were analysed using unpaired Student 't' test for normally-distributed data, and the non-parametric Kruskal-Wallis and Mann Whitney-U tests for non-normally distributed data. Normally distributed results are presented as 'p' values with associated differences between the means and 95% confidence intervals, to provide a measure of the size of the difference between the groups, and therefore the practical importance of the finding. (452,453) Non-normally distributed results are expressed as 'p' values only.

6.3 RESULTS.

A total of 1546 patients were screened. Of these, 872 patients were excluded from the data analysis for the following reasons: 237 patients were less than 18 years of age, 199 patients had an insufficient command of English to be able to give an informed consent or complete the two questionnaires, 59 patients had a diagnosed psychotic illness or an organic brain disorder, 197 patients presented without symptomatology for routine tests or procedures, and 180 patients refused to participate in the study. Patients who refused to participate did so for reasons which included feeling too unwell at the time, dislike/suspicion of questionnaires, or because they

were emergency cases following a traumatic incident. After taking into account patients who did not meet the study's inclusion criteria, a total of 854 patients were eligible for the study. Thus, after removing the 180 eligible patients who refused, there remained 674 patients (78.9%) who provided the data for analysis in the study.

With few minor exceptions, there were no significant differences between the patient populations presenting to each general practitioner and the patient population as a whole in terms of gender composition and the mean ages of males and females in each patient group. Similarly, patient populations presenting to each general practitioner did not vary significantly in terms of the risk of mild non-psychotic psychiatric illness or in aspects of the illness behaviour questionnaire in comparison with scores for these variables for the population as a whole. Thus, we assume that each general practitioner population was similar to, and representative of the group as a whole.

6.3.1. Group Classification.

As described in the Methods (Section 6.2), patients were assigned to one of three presentation groups, according to the general practitioner's assessment of the primary reason for each patient's consultation. The numbers in each category were as follows:

- | | |
|--------------------------------|----------------|
| (i) Group O (Organic): | (n=552; 81.9%) |
| (ii) Group P (Psychologizing): | (n=57; 8.5%) |
| (iii) Group S (Somatizing): | (n=65; 9.6%) |

Table 6.3.1.

Age and Gender Composition of the Presenting Groups.

	Group O (n=552)	Group P (n=57)	Group S (n=65)
Males	216	17	24
Age	46.8 (\pm 19.5)	35 (\pm 11.4)	55.2 (\pm 17.9)
Females	336	40	41
Age	44.9 (\pm 19.4)	45.7 (\pm 16.5)	45.3 (\pm 15.1)
Total	552	57	65
Age	45.6 (\pm 19.5)	42.5 (\pm 15.9)	48.9 (\pm 16.8)

Data expressed as Mean \pm SD.

6.3.2. Age and Gender Characteristics of the Groups.

Table 6.3.1 presents age and gender data for each group. It may be seen that in each group females outnumbered males by between 1.5 to 2.0 times. There were no significant differences in gender composition between groups.

The data show that the mean age of the total patients in each group was similar. This also held for the mean age of female patients in each group. Significant differences found between males in each of the presenting groups, and between males and females within each presenting group are summarized in Table 6.3.2. It may be

Table 6.3.2.

Summary of Significant Differences in Age between patients in the Presenting Groups.

	Difference between Means	95% Confidence Interval	'p' value
Males			
Group P v Group O	11.84 years	2.36 , 21.32	0.015
Group P v Group S	20.25 years	10.23 , 30.23	0.0002
Group S v Group O	8.41 years	0.18 , 16.66	0.045
Males v Females			
Group P	10.73 years	1.89 , 19.56	0.018
Group S	9.93 years	1.59 , 18.27	0.02

Data analysed using Student's 't' test.

seen that male patients presenting with psychological problems (Group P), were significantly younger than males with organic illnesses (Group O) and males with inexplicable physical symptoms (Group S); and were also younger than female patients presenting with psychological problems (Group P). In comparison, male patients presenting with inexplicable physical symptoms (Group S), were significantly older than male patients with organic illnesses (Group O) and males with psychological problems (Group P); and were also older than female patients presenting with inexplicable physical symptoms (Group S). Thus, the group of male patients who presented with psychological problems comprised the youngest of the patient groups

in this study, while somatizing behaviour was more likely to be the mode of presentation in older male patients.

6.3.3 GHQ-28 Results - Differences between the Presentation Groups.

Table 6.3.3. presents a summary of the mean total GHQ-28 scores, scores for the subscales of the groups as a whole, and for males and females in each group. Significant differences between patient groups on the GHQ-28 scores are summarized in Table 6.3.4.

The data show that within Groups O and S, mean GHQ-28 scores were similar for males and females, but in Group P, psychologizing males were at a significantly greater risk of having a mild psychiatric disorder than were females who presented with psychological problems. Considering differences between the groups, it may be seen that, as might be expected, patients who presented with psychological problems (Group P) were at a significantly greater risk of being GHQ "Cases" than were patients in Group O. Similarly, patients in Group S (Somatizers) were also found to be at a significantly greater risk of being GHQ "Cases" than patients in Group O. In both cases, the differences held for both the total and subscale scores, and occurred between the groups as a whole as well as between the males and females in each group.

It is notable, that there was no significant difference between the total GHQ-28 scores for patients in Groups P and S; neither between the groups as a whole or between males and females in the groups. This was also the case for scores on the subscales of the GHQ-28. Thus, somatizing patients were at a significantly greater

Table 6.3.3.

Comparison of GHQ-28 Scores between Patients in the Presenting Groups.

	Group O (n=552)	Group P (n=57)	Group S (n=65)
Males	216	17	24
Total Score	4.5±5.3	15.0±7.27	10.2±8.1
Subscales: GHQ-1	1.7±2.1	4.5±1.9	2.8±1.9
GHQ-2	1.2±1.9	4.6±2.4	3.2±2.8
GHQ-3	1.3±1.8	3.6±2.5	2.7±2.5
GHQ-4	0.4±1.0	2.4±2.5	1.5±2.3
Females	336	40	41
Total Score	4.9±5.1	9.7±6.9	8.8±6.9
Subscales: GHQ-1	2.1±2.1	2.6±2.2	2.9±2.1
GHQ-2	1.3±1.9	3.2±2.4	2.5±2.5
GHQ-3	1.2±1.8	2.4±2.1	2.3±2.4
GHQ-4	0.3±1.1	1.5±2.3	1.0±1.6
Whole Groups	552	57	65
Total Score	4.8±5.2	11.3±7.4	9.3±7.4
Subscales: GHQ-1	1.9±2.1	3.2±2.3	2.8±2.1
GHQ-2	1.3±1.9	3.6±2.4	2.8±2.6
GHQ-3	1.2±1.8	2.8±2.3	2.5±2.4
GHQ-4	0.3±1.1	1.8±2.4	1.2±1.9

Data expressed as Mean ± SD. GHQ-1 = Somatic symptoms; GHQ-2 = Anxiety and insomnia; GHQ-3 = Social dysfunction; GHQ-4 = Severe depression.

risk of GHQ "Caseness" than patients with medically explicable physical symptoms - a risk equivalent to that of Psychologizing patients.

Table 6.3.4.

Summary of Significant Differences in GHQ-28 Scores for Patients in the Presenting Groups.

	Difference between Means	95% Confidence Interval	'p' value
Mean GHQ-28 Scores			
Males v Females			
Group P	5.3	1.15 , 9.37	0.019
Whole Groups			
Group P v Group O	6.5	5.09 , 8.07	<0.0001
Group S v Group O	4.5	3.1 , 5.94	<0.0001

Data analysed using Student's 't' test.

6.3.4. IBQ Results -Differences between the Presentation Groups

The mean scores on the scales of the IBQ for each patient group are shown in Table 6.3.5. Significantly different results are summarized in Table 6.3.6.

The results show that Group S (somatizing) patients differed from Group O patients on several scales of the IBQ, with significantly higher scores for Disease Conviction, Disease Affirmation, Affective Disturbance, Affective State, Irritability and on the Whiteley Index for Hypochondriasis. The results on the Disease Conviction and Disease Affirmation scales indicate that somatizing patients were more firmly convinced they had a physical disease, and that they were less readily reassured by the

Table 6.3.5.**Mean Scores on the IBQ Scales for Patients in the Presenting Groups.**

	Group O (n=552)	Group P (n=57)	Group S (n=65)
First Order Factors			
General Hypochondriasis	1.2±1.6	1.9±2.1	1.9±2.2
Disease Conviction	1.8±1.4	2.6±1.7	2.8±1.7
Psychological/Somatic	1.7±0.9	2.6±0.9	1.7±1.1
Affective Inhibition	2.1±1.6	2.7±1.6	2.5±1.8
Affective Disturbance	1.5±1.6	3.6±1.6	2.6±1.8
Denial	3.2±1.5	1.7±1.5	2.8±1.5
Irritability	1.1±1.3	2.5±1.8	1.9±1.7
Second Order Factors			
Affective State	3.9±3.4	7.9±4.4	6.6±4.5
Disease Affirmation	5.1±1.8	4.9±1.9	6.1±2.1
Discriminant Function	52.8±14.5	44.3±16.1	56.5±16.7
Whiteley Index	2.8±2.5	3.9±3.2	4.5±3.8

Data are expressed as Mean ± SD.

doctor that there was no evidence for this. These beliefs were combined with higher levels of affective distress (AD, AS and I scores), where somatizing patients admitted feeling more anxious, depressed and isolated than patients in Group O. Similarly, according to scores for the Whiteley Index, somatizing patients reported more

Table 6.3.6.

Summary of Significant Differences on Scores for the IBQ between Patients in the Presenting Groups.

	Difference between Means	95% Confidence Interval	'p' value
Group S v Group O			
Disease Conviction	1.0	0.65 , 1.38	<0.0001*
Disease Affirmation	1.0	0.47 , 1.46	0.0001*
Affective Disturbance	-	-	<0.0001#
Affective State	-	-	0.0001#
Irritability	-	-	0.001#
Whiteley Index	-	-	0.0001#
Group P v Group O			
Disease Conviction	0.8	0.41 , 1.19	<0.0001*
Psychological/Somatic Focus	0.9	0.62 , 1.12	<0.0001*
Discriminant Function	8.5	4.47 , 12.46	<0.0001*
Affective Disturbance	-	-	<0.0001#
Affective State	-	-	<0.0001#
Denial	-	-	<0.0001#
Group S v Group P			
Psychological.Somatic Focus	0.9	0.47 , 1.21	<0.0001
Disease Affirmation	1.4	0.34 , 1.79	0.004
Discriminant Function	12.2	6.27 , 18.09	<0.0001
Affective Disturbance	-	-	0.014
Denial	-	-	0.0002

*: Analysis using Unpaired Student's 't' test. # Analysis using Kruskal-Wallis and Mann Whitney-U tests.

hypochondriacal fears and pre-occupations than did patients in Group O. Taking a cut-off point for normal/abnormal illness behaviour as the mid-point score on each scale, scores for the somatizing patients on the DA, AD, and AS scales suggest the presence of abnormal illness behaviour. The scores for DC fell just short of the mid-point, while scores on the I and WI scales were within normal limits.

Data analysis showed that somatizing patients (Group S) shared several common differences with psychologizing patients (Group P) to patients in Group O. That is, as for patients in Group S, psychologizing patients differed from patients in Group O with higher scores for Disease Conviction, Affective Disturbance and Affective State. However, Group P patients were further differentiated from patients with organic illnesses (Group O) by their acknowledgment that their illness was psychological rather than physical (higher score for P/S scale), by being less likely to convert psychological distress into physical symptoms (lower scores on the Discriminant Function scale), and by more readily acknowledging problems in their lives unrelated to the symptoms (lower scores on the Denial scale)

While psychologizing and somatizing patients differed similarly in some aspects (Affective Disturbance) from patients with organic illnesses, they were distinguishable on aspects of illness behaviour which tend to reflect somatization. Thus, somatizing patients held a somatic rather than psychological perspective on their symptoms (lower scores on the P/S scale), were more likely to deny having problems in their lives, other than those attributed to the symptoms (higher scores on the Denial scale), were more convinced the symptoms were indicative of a physical rather than a psychological illness (higher scores on the DA scale), and were more likely convert psychological distress into physical symptoms (higher scores on the DF scale).

Psychologizing patients however reported significantly higher levels of affective distress (higher scores on the AD scale).

6.3.5. Gender Differences on IBQ Scores between the Three Groups.

Mean scores on the scales of the IBQ for males and females separately are presented in Table 6.3.7. The differences described above also occurred between the groups as a whole, as well as between males in each group and females in each group. A few additional gender-specific differences between the groups were found. These are summarized in Table 6.3.8. They included differences between males in Groups O and P, where it was found that psychologizing males scored higher on the Affective Inhibition, General Hypochondriasis and Whiteley Index scales, than males with organic illnesses. That is, psychologizing males had greater difficulty expressing negative thoughts and emotions than males with organic illnesses, and were also more likely to report hypochondriacal pre-occupations and fears.

6.3.6. Gender Differences on IBQ Scores Within each Group.

In the case of patients with organic illnesses, females reported higher levels of psychological distress (higher scores for Affective Disturbance). In addition, although the difference did not reach conventional levels of significance, male patients with organic illnesses showed a greater tendency to have difficulty expressing fears and negative emotions than females (higher scores for Affective Inhibition). In Group P, this tendency was more pronounced. The data show psychologizing males experienced significantly greater difficulty expressing their fears and emotions than psychologizing

Table 6.3.7.

Mean IBQ Scores for Males and Females in the Presenting Groups.

	<u>Group O</u>		<u>Group P</u>		<u>Group S</u>	
	Males (n=216)	Females (n=336)	Males (n=17)	Females (n=40)	Males (n=24)	Females (n=41)
First Order Scales						
General Hypochondriasis	1.2±1.6	1.2±1.6	2.5±2.6	1.7±1.9	1.6±1.6	2.1±2.5
Disease Conviction	1.9±1.5	1.7±1.3	3.3±1.9	2.2±1.5	3.2±1.8	2.5±1.6
Psychological/Somatic	1.6±0.9	1.7±0.9	2.8±0.9	2.5±1.0	1.4±0.9	1.9±1.1
Affective Inhibition	2.3±1.6	1.9±1.6	3.3±1.7	2.4±1.5	2.6±1.6	2.5±1.9
Affective Disturbance	1.3±1.5	1.7±1.6	4.1±1.1	3.4±1.8	2.6±1.8	2.9±1.8
Denial	3.4±1.4	3.1±1.5	1.5±1.5	1.8±1.5	2.9±1.7	2.8±1.4
Irritability	1.3±1.4	1.0±1.2	3.1±1.6	2.2±1.8	2.1±1.7	1.8±1.7
Second Order Factors						
Affective State	3.8±3.4	3.9±3.4	9.6±3.9	7.2±4.4	6.4±3.7	6.8±4.5
Disease Affirmation	5.3±2.0	4.9±1.7	5.8±2.2	4.8±1.7	6.8±2.0	5.6±1.9
Discriminant Function	54.7±14.6	51.6±14.3	44.5±18.8	44.2±15.1	62.6±15.9	52.9±16.3
Whiteley Index	3.1±2.6	2.7±2.4	4.9±3.4	3.5±3.1	4.9±2.9	4.3±3.6

Data expressed as Mean ± SD.

Table 6.3.8.

Summary of Significant Differences between Males and Females in the Presenting Groups on Scores for the IBQ Scales.

	Difference between Means	95% Confidence Interval	'p' value
Group O v Group P (Male patients)			
General Hypochondriasis	1.3	0.4 , 2.06	0.045 *
Affective Inhibition	-	-	0.009 #
Whiteley Index	-	-	0.033 #
Within Group Differences (Males v Females)			
Group O			
Affective Disturbance	-	-	0.007 #
Group P			
Affective Inhibition	-	-	0.046 #
Group S			
Psychological/Somatic Focus	0.5	0.05 , 1.1	0.035 *
Disease Affirmation	1.2	0.14 , 2.23	0.036 *
Discriminant Function	9.7	1.33 , 17.97	0.029 *

* Analysis using Student's 't' test. # Analysis using Kruskal-Wallis and MannWhitney-U tests.

females (higher scores for Affective Inhibition). In Group S, somatizing males maintained a stronger somatic focus with the exclusion of a psychological perspective concerning their symptoms than did females (lower scores for Psychological/Somatic

Focus); were more firmly convinced they had a physical disease (higher score for Disease Affirmation), and were more likely to convert psychological distress into physical symptoms (higher scores for Discriminant Function).

6.4. DISCUSSION.

The results of the present study show that patients in the three presentation groups differed from each other in terms of the likelihood of the presence of mild psychiatric disorder, according to GHQ-28 findings, and demonstrate distinctive patterns of illness behaviour on the IBQ. This held for the groups as a whole, and for males and females in each group, considered separately.

6.4.1. Affective Distress in the Three Presentation Groups.

The data support our prediction that psychologizing and somatizing patients would both differ from patients presenting with organic illnesses by gaining significantly higher scores on the GHQ-28, and on scales of the IBQ which measure affective disturbance.

Psychological disturbance and mild psychiatric illness is commonly reported in somatizing patients in both western and eastern primary care population studies. (27,40,199,224,225) Indeed the presence of such illnesses in association with somatizing behaviour is inherent in both the definition of somatization (224), and in diagnostic criteria for somatization according to Bridges and Goldberg. (27) The

findings of the present study are therefore in keeping with previous studies of somatization and psychological distress in this setting. They also provide construct validity for the IBQ scales.

6.4.2. Risk of Psychiatric Illness.

Two previous studies which compared psychiatric morbidity in somatizing and psychologizing patients found the total GHQ-28 scores were significantly higher in psychologizing patients. (282,229) Thus, Bridges and Goldberg (282) found somatizing patients were less severely depressed, but equally anxious as psychologizing patients, according to GHQ and PSE measurements; while in the latter study, Garcia-Campayo et al (229) found somatizing patients were most frequently diagnosed with an anxiety disorder, and in psychologizing patients the most frequent diagnosis was that of a major depressive episode. In the present study, although total scores for the GHQ-28 were higher in psychologizing patients than in somatizing patients, the difference did not reach statistical significance. In terms of the sub-scales of the GHQ-28, somatizing patients scored higher on the somatic symptoms scale, but in the other three scales concerned with anxiety and insomnia, social dysfunction and severe depression, psychologizing patients reported higher scores. However, none of the differences were statistically significant.

6.4.3. IBQ Results.

Both psychologizing and somatizing patients reported significantly higher scores than patients with organic illnesses on scales which measure affective disturbance. It was also found that psychologizing patients achieved significantly

higher scores than somatizing patients on this aspect of illness behaviour. That is, psychologizing patients were more likely to report feeling easily anxious and finding it difficult to relax, as well as being more easily saddened and more often depressed. That psychologizing patients differed significantly from somatizing patients on this measure on the IBQ but not the GHQ-28, may reflect the more direct nature of the questions on the IBQ concerning anxiety and depression. As studies have shown, patients reliably and accurately provide estimates of their health-status when asked to do so in self-report questionnaires. (109) Secondly, the difference may be associated with the nature of psychiatric illness in the primary care setting. That is, although psychological distress is common in this setting, it is often mild and the presenting picture frequently does not meet clinical criteria for DSM and ICD classifications of psychiatric disorders.

It was an unexpected finding that the patients who presented with the highest risk of psychiatric illness also comprised the youngest group in the patient population. Thus, male psychologizing patients were significantly younger than male patients with organic illnesses and male somatizing patients. The psychologically stressful life problems these men reported included the breakdown of their marriage or intolerable workplace situations. The finding that younger people, especially those in professional occupations are increasingly prepared to seek medical help in such situations has previously been reported by Veerhak. (22) However, the findings in this study suggest that this applies particularly to male patients, and that they are more severely ill when help is sought. A possible explanation for this finding may lie in the finding that male psychologizing patients were significantly less able to express negative feelings and emotions than were female patients, as evidenced by the scores on the Affective Inhibition scale of the IBQ. That is, while female patients may more easily alleviate

their distress in stressful situations by talking with friends and family, male patients have much greater difficulty doing so, and may feel their only avenue for help may lie with the objective and professional advice of a neutral doctor.

The lesser degree of psychological distress in somatizing patients compared with psychologizing patients has led some authors to suggest that somatization may be an adaptive response to overwhelmingly stressful life situations or to psychiatric illness. (282) Thus, Bridges et al (282) and Pilowsky (454,455) refer to somatization as a defence mechanism whereby patients avoid having to deal with psychologically distressing situations by focusing on physical symptoms. By doing so, patients who somatize are able to seek help for legitimate reasons from a doctor, whose task it becomes to assume responsibility for the problem. Consequently, the patient, absolved of the responsibility for the symptoms or of feeling accountable for the life situation is less depressed by it. That somatizing behaviour may have a defensive or blame-avoidant function is demonstrated by further findings discussed below.

6.4.4. Group Differences in Illness Perceptions and Attributions.

Both somatizing and psychologizing patients reported significantly higher scores than patients with organic illnesses on the Disease Conviction scale of the IBQ. This scale provides a measure of a patient's pre-occupation with physical symptoms and the ability to be reassured by a doctor. High scorers on this scale report they are often bothered by symptoms and are more aware of changes in body functioning. They are also more likely to believe there is something seriously wrong with them, and they find it difficult to accept reassurance from a doctor. Furthermore, psychologizing patients perceived their illness as psychological in nature and attributed the symptoms

to problems in their lives, while somatizing patients maintained the symptoms indicated the presence of physical disease, and refused to consider the symptoms might be related to other worries in their lives. These differences were reflected in the somatizing patients' low scores, and psychologizing patients' high scores on the bipolar Psychological versus Somatic Focus scale of the IBQ.

In addition, while somatizing patients scored higher than both psychologizing patients and patients with organic illnesses on the Disease Affirmation scale, (which indicates the strength of disease conviction and somatic focusing), psychologizing patients did not differ from patients with organic illnesses on this scale because they perceived their symptoms as related to psychological problems rather than somatic illnesses. In the case of psychologizing patients, the perception that their illness was serious, and their lack of confidence in the doctor may be a reflection of the degree of their sense of helplessness in the situation, and also lack of confidence in the medical profession's ability to treat psychological disorders. (23) Somatizing patients' doubts however, may be an indication of the dissatisfaction these patients felt because of the doctor's apparent inability to find a physical cause for the problem. It is important to somatizing patients that their physical symptoms are located in an organic illness, for failure to do so threatens the patient's defenses against other stressful ideas and emotions.

Denial of life stressors was greatest in somatizing patients, although these patients acknowledged levels of anxiety and depression comparable to that of psychologizing patients. However, while psychologizing patients attributed their affective disturbance to stressful life problems, somatizing patients denied the existence of such problems and attributed their distress to the presence of the

symptoms. That is, somatizing patients reported no problems in their lives, other than problems associated with their physical symptoms. Denial has previously been described as a defence aimed at protecting the psychological equilibrium of individuals (96), and in the short term may be part of an adaptive process to psychologically disturbing situations which reduces the risk of depression in these instances. (100,101) Thus denial of psychological stressors might be viewed as an integral aspect of somatizing behaviour. Combined with the finding in this study of a significantly greater tendency of somatizing patients (compared with psychologizing and organically-ill patients), to convert psychological distress into physical symptoms, it appears that the former patients take considerable measures to avoid having to deal with emotionally stressful life events.

6.4.5. Illness Behaviour in Primary Care Populations.

IBQ scores for certain aspects of illness behaviour found in this study are comparable to those obtained in previous studies of the illness behaviour of patients in the primary care setting. (246,382) This is particularly so in the case of patients presenting to a general practitioner with medically explicable physical symptoms. The illness behaviour of somatizing patients, in which scores are elevated on scales of the IBQ which measure somatic focusing, denial of life stressors, affective distress and bodily pre-occupation are similar to patterns of illness behaviour found in patients attending Chronic Pain Management Units. (384,385) Although the scores of somatizing patients in the primary care setting are not as elevated as those characteristic of patients with chronic pain illnesses, on scales associated with affective disturbance, somatic focusing, attention to body functioning and the ability to be reassured by medical advice, the scores were higher than what may be considered normal, giving

rise to the possibility of abnormal illness behaviour in these patients. These differences and similarities have previously been described by Chapman et al in a study of patients in a primary care setting compared with patients attending a Chronic Pain Unit. (438) The significant factor common to somatizing patients in primary care and patients with chronic pain illnesses is the predominant belief that the illness is physical; and although these patients acknowledge elevated levels of anxiety and depression, they are reluctant to accept that psychological distress may be an influential factor in the aetiology and maintenance of the symptoms.

6.4.4. Conclusions.

There are a number of limitations in this study. Firstly, because it is based on a single encounter with patients in the doctor's office, it is not possible to draw firm conclusions about the origins of the patient's behaviour, nor whether or how the patient's behaviour will change as the result of the visit and subsequent visits to the doctor. However, the aim of the study was to determine how patients in the three presentation groups might differ in the manner in which they presented to the doctor; and to determine what aspects of illness behaviour might significantly influence the mode of presentation.

It has been shown that in this study, patients with organic illnesses, psychologizing patients, and somatizing patients with medically inexplicable physical symptoms are clearly differentiated in terms of levels of affective disturbance, and in aspects of illness behaviour which measure attitudes and beliefs about symptoms, patients' perceptions of the symptoms, and the attributions patients make about the cause of the symptoms. While somatizing patients acknowledge moderately high levels

of psychological distress, they deny life stressors and reject any association between their psychological distress and the presence of physical symptoms. These results suggest that somatizing behaviour may have a defensive function whereby somatizing patients are able to avoid having to deal with and take responsibility for psychologically stressful situations.

While Kirmayer and Robbins' (199) identification of psychosocial, initial and facultative somatizing patients, and Goldberg's similar identification of facultative somatizers (27) suggests that in some cases inappropriate attributions may be identified and redirected by careful questioning, and may represent a normal immediate human adaptive response to psychosocial problems, true somatizers continue to reject a psychological explanation for their symptoms. Their persistent behaviour becomes a maladaptive response aimed at protecting their psychological state, and may spring from behaviour learnt in childhood and which may be influenced by social forces over which they have no control. Thus, in response to the stigma attached to psychological disorders, somatizing patients have been found to have an unsympathetic attitude towards mental illness and to show an unwillingness to consult a doctor with psychological problems (282), while Garcia-Campayo (229) found somatizing patients reported significantly higher scores for Suspiciousness on the Standardized Polyvalent Psychiatric Interview (SPPI).

A second limitation of the study is associated with the doctors' ratings of the patients. Several studies have identified primary care doctors low recognition rates of psychiatric disorder. (3,29,30,439-442) Goldberg et al (27) found that when patients present with psychological problems, psychological disorders are accurately identified in up to 90% of cases. While it may be argued that this is greater than the inter-rater

reliability of most diagnostic questionnaires, it must be remembered that rarely if ever, may a questionnaire be replaced by a clinical interview. It must also be remembered that general practitioners, for the most part have a greater knowledge of their patients and details of their histories than that which may be elicited by a questionnaire. In this study, new patients were rare. Most of the patient populations of the doctors were stable, and the patients in the study had seen the doctor on at least one occasion before their encounter with the study. Therefore, the doctor's ratings were likely to be based on a reasonably thorough knowledge of the patient and the patient's current life problems, as well as problems in their past history. Furthermore, the doctors who participated in the study were recruited from those known to have an interest in psychological medicine. Both this, and the fact that the majority of practices had been established for at least 10 years have been shown by Goldberg et al (357) to increase the likelihood that these doctors will accurately identify patients with psychological disorders. (353,354)

The identification of somatizing patients was based on the presentation of physical symptoms for which no organic pathology was evident. It is a danger that in some cases, symptoms presented very early in a disease may seem inexplicable, and may not become diagnosable until the disease is more advanced. Doctors are not unaware of this possibility, and two doctors refused to take part in the study for fear of making a mistake of this nature. However, it has been shown that in approximately only 1 in 10 cases is an organic illness diagnosed when it was not apparent at an initial interview or physical examination. (456,457) In this study, somatizing patients were followed up for at least 6 months after their first encounter with the study, and in one case only was an organic illness diagnosed after the patient had been in the study for

approximately 2 months. The patient was withdrawn from the study. This finding is in keeping with Kroenke's figures. (456)

Finally, the numbers of somatizing and psychologizing patients are relatively small compared with the number of patients with organic illnesses. While this may suggest the possibility of selection bias, the results show that the standard deviations for the scores on the GHQ-28 and the IBQ scales are similar in value, indicating less likelihood that such a bias has entered the study. However, the findings of the study can not be generalized to whole populations without replication of the data. The costs associated with somatizing patients are disproportionately high. This study has shown that the use of screening instruments such as the IBQ may be useful in eliciting information from patients that may indicate the presence of maladaptive and inappropriate perceptions and attributions about the symptoms, thereby providing doctors with a means of identifying somatizing behaviour, which may be followed with appropriate management and avoidance of costly investigations and procedures.

CHAPTER 7

PREVALENCE OF PSYCHIATRIC MORBIDITY AND ITS ASSOCIATION WITH ILLNESS BEHAVIOUR IN PRIMARY CARE PATIENTS WITH ORGANIC ILLNESSES, PSYCHOLOGICAL PROBLEMS AND MEDICALLY-INEXPLICABLE PHYSICAL SYMPTOMS.

7.1. INTRODUCTION.

In the course of the past 30 years, major changes have taken place in understanding the nature of psychiatric disorder and, subsequently, in the delivery of mental health care. Much of this change may be attributed to significant improvements in psychopharmacologic agents, to improvements in statistical methods that have allowed more meaningful analysis of population studies data (458), to research and an increased understanding of psychotherapeutic techniques such as counselling and brief interventions (360,367,370,373), and to technological advances that have allowed researchers and clinicians greater access to knowledge of how the conscious brain functions. (459)

Largely based on this knowledge, the treatment and care of mentally-ill patients in Western countries has become guided by two main principles: namely, that long-term psychiatric patients should not be isolated in large mental hospitals, but should be integrated and treated in the community, and secondly, that 'continuity of care' should be available with the provision of in-, day- and out-patient services conducted by multi-disciplinary teams of health care practitioners. A result of the application of these principles has been the trend to abolish large mental hospitals and to establish smaller multifunctional psychiatric units (particularly in Europe) (460,461); and to establish in-patient psychiatric units within the general hospital setting. (462)

While the introduction of these changes has been frequently met with opposition and concern for quality of care (463), they have also been shown to be associated with considerable benefits. In terms of the provision of services, the most noticeable cost savings have been associated with shorter duration of hospitalization

for mentally-ill patients, by as much as from an average of 40 days to approximately 2 weeks. (464) Others report savings of between 30-40% to health care companies in the United States. (463) It is also suggested that accessibility to mental health services has improved, and that quality of care is maintained because of the multi-disciplinary approach to managing mental health problems which provides for continuing care following discharge from hospital.(465) One of the most significant benefits, however has emerged from the integration and availability of psychiatric services in the general medical sector. This has resulted in co-ordinated efforts in the management of the high percentage of medical-surgical in- and out-patients and hospitalized AIDS patients, in whom psychiatric co-morbidity has been shown to correlate significantly with longer hospitalization and complications in treatment and recovery. (232,466-469)

In the primary care setting, the integration of psychiatric services has been timely. It follows the epidemiological studies of Shepherd et al in the United Kingdom (2), the Epidemiological Catchment Area study in the United States (240), and World Health Organization studies (8), all of which revealed high percentages of psychological disturbance and psychiatric disorder in this setting. At the same time, with argument for a biopsychosocial model of medicine (470), and with the gradual evolution of the discipline of social psychiatry concerned with the relationship between disorders of the mind and the human environment (471), it has become apparent that there has been an overwhelming need for psychiatric expertise in this setting; both to elucidate and prevent risk factors leading to mental illness, and to develop treatment strategies appropriate to this setting. (472)

The development of Goldberg and Huxley's framework of five levels and four filters that determined whether or not patients with mental illnesses reach mental health

services was based upon their observation that patients in psychiatric hospitals were more severely ill than were patients with identifiable mental illnesses in the community. (324) Patients admitted to psychiatric hospitals tended to be severely dysfunctional and disabled by mental illnesses that included schizophrenia, organic brain disorders and bipolar affective disorders. Their observations are supported by studies that show that as patients proceed to the higher levels of Goldberg and Huxley's framework, the degree of social dysfunction and clinical severity of the illness also increases. (473) A study of mental hospital and psychiatric ward admission rates in eastern and western European countries found that while differences in the admission rates for diagnoses such as the neuroses could be explained by the availability of supporting mental health services; overall admission to in-patient services was associated with illnesses characterized by the necessity for longer hospitalizations because of their severity and their refractory nature, such as schizophrenia, organic syndromes and affective psychoses. (461) In the United States, it has been reported that there has been an increase in general hospital treatment of psychiatric in-patients from 21% in 1955 to 44% in 1990. That is, psychiatric wards in general hospitals have become the primary site for the delivery of acute in-patient psychiatric care (464); to the extent that treatment of patients with serious and persistent mental illnesses in this setting has doubled in the years between 1955 and 1990. (474)

Efforts to extend integration psychiatric services into the primary care setting however, saw the uncovering of a major problem: namely, that of the high incidence of non-recognition of mental illnesses by primary care practitioners. International studies conducted by the World Health Organization, and studies in Australia and in the United Kingdom show that in up to 50% of 'cases' with psychiatric disorders

presenting to general practitioners, the diagnosis is missed. (27,28,475) Although a considerable body of research has been undertaken over many years in the study of this problem, it remains a complex and poorly understood issue. (476-479)

A major contributory factor in the non-recognition of psychiatric disorder in primary care however, lies in the nature of these illnesses in this setting. While mental illnesses seen in the general hospital or psychiatric hospital settings are characteristically the more severe psychotic illnesses with florid symptoms that fit readily into categorical models of psychiatric disease, the mental illnesses most commonly seen in the primary care setting are non-psychotic depressive illnesses, anxiety-related disorders or a combination of both. They are more often mild in severity, transient in nature; and remit spontaneously without medical intervention. (7) It has been shown that a substantial number of these illnesses, as they occur in primary care do not easily fit psychiatric nosology and cannot readily be classified because of the heterogeneous nature of the presenting symptoms which do not meet the requirements for definitive diagnoses according to DSM-IV and ICD-10 classifications. (5,19,445,480)

With this in mind, Picinelli et al (481) studied 1617 primary care attenders with 3 symptoms of anxiety, depression and/or somatization but with no formal ICD-10 disorders. They delineated six prototype categories of symptoms which they suggest better characterize patients with significant psychopathology which does not however typically reach thresholds for formal mental disorders. These included somatization symptoms, mixed anxiety-depression symptoms, general anxiety disorder, sporadic symptoms of anxiety, depression or somatization, sleep problems and anxiety disorder characterized by panic symptoms. This study follows other investigations of

subsyndromal presentations of psychiatric disorders in primary care, that have led to modifications in psychiatric nosology. Notably, the diagnostic threshold for somatization disorder has been reduced from 37 to 8 symptoms in DSM-IV, and to 6 symptoms in ICD-10 classification systems. Escobar et al propose even fewer symptoms: that is, 6 symptoms for females and 4 symptoms for males as diagnostic for a form of somatization which he termed 'abridged' somatization. (75) Similar debate continues concerning the existence of a mixed anxiety-depressive disorder which some propose exists as a continuum rather than as separate anxiety and depressive entities. (482,483)

Williams et al (484) have suggested that defining psychiatric illness in the primary care setting may more appropriately take into account three factors: namely, symptoms, personality and social functioning. This triad takes into account that in vulnerable individuals, environmental stressors may trigger symptoms of physical and/or mental distress, and the manner in which these are or are not presented to the primary care practitioner depends on personality factors which determine the individual's interpretation of the significance of the symptoms and their reaction to them. Thus, it is possible that the presentation of psychiatric disorder in the primary care setting may be described in terms of the individual's illness behaviour. That is, understanding the nature of psychiatric disorder in the primary care setting might usefully be examined by taking into account individual patients' attitudes and beliefs about symptoms and illness, which largely determine their initial help-seeking behaviour.

The purpose of this paper is to report a study which investigated aspects of illness behaviour in three groups of patients who presented to general practitioners.

These were, a) patients who presented with organic physical illnesses, b) patients presenting with psychological problems, c) and patients who presented with inexplicable physical symptoms. Comparisons were made between 'cases' and 'non-cases', determined by scores on the scaled 28-item General Health Questionnaire (GHQ-28) (416) in each group of patients. Aspects of illness behaviour were assessed by scores on the scales of the Illness Behaviour Questionnaire (IBQ). (383)

7.2. METHODS.

The methods used in this study have previously been described in detail in Chapter 3. The following is a brief description of the patients and procedures involved.

7.2.1. Patient Classification.

As has been described previously, patients were categorized into one of four groups; determined by the nature of their presentation to the doctor. That is, patients were classified as:

- (i) **Group O:** presenting with physical symptoms explained by the presence of organic pathology, or
- (ii) **Group S:** presenting with physical symptoms not explained by any organic pathology, or

- (iii) **Group P:** presenting with psychological problems, or
- (iv) presenting for a routine test or procedure.

Comparisons of aspects of illness behaviour and level of psychological distress were then made between the groups of patients. Patients who presented for a routine test or procedure were excluded from the statistical analysis, because they were asymptomatic at the time of the consultation.

7.2.2. Statistical Analysis.

Categorical data were analysed using the Chi Square test. Continuous data were analysed using the unpaired Student 't' test for normally distributed data; and the non-parametric Kruskal-Wallis and Mann Whitney-U tests for non-normally distributed data. For normally distributed data, results are expressed as 'p' values with associated differences between the means for the groups and 95% Confidence Intervals. (452,453) The results of non-normally distributed data are expressed as 'p' values only.

7.3. RESULTS.

A total of 1546 patients were screened. Of these, 872 patients were excluded for the following reasons: 237 were less than 18 years of age, 199 had insufficient command of English to be able to give an informed consent or complete the questionnaires, 59 had an organic brain disorder or a psychotic illness and 197 patients

were asymptomatic and presented for a routine test or procedure. Thus, total of 854 patients were eligible for the study, but of these, 180 refused to take part. Therefore, a remainder of 674 patients (78.9% of eligible patients) provided final data for analysis.

Based on the information provided in the Doctor's Data Sheets, patients were classified according to the primary reason for their consultation, as follows:

(i) Group O (Organic illnesses):	552 patients (81.9%)
(ii) Group P (Psychologizers)	57 patients (8.5%)
(iii) Group S (Somatizers)	65 patients (9.6%)

7.3.1. Age and Gender Characteristics of the Presentation Groups.

A summary of the age and gender composition of the groups characterized by 'non-caseness/caseness' is presented in Table 7.3.1. Significant differences are summarized in Table 7.3.2. The data show that, with the exception of 'non-cases' in Group P, both within each group and across the groups the ratios of males to females was constant, with females outnumbering males by approximately 2 to 1. The 'non-case' patients in Group P, comprised 11 females and one male patient.

Table 7.3.1.

**Age and Gender Composition
of the Presenting Groups by “Caseness”.**

	Group O (n=552)	Group P (n=57)	Group S (n=65)
GHQ Non-Case” Patients			
Total N	331	12	23
Age	46.9±19.9	52.5±21.7	50.2±16.1
Males	135	1	9
Age	48.1±20.1	24	58.8±15.2
Females	196	11	14
Age	46.2±19.7	55.1±20.7	44.6±16.0
“GHQ Case” Patients			
Total N	221	45	42
Age	43.7±18.8	39.9±13.1	48.3±16.9
Males	81	16	15
Age	44.8±18.5	35.7±11.4	53.1±19.6
Females	140	29	27
Age	42.9±19.0	42.4±13.6	45.7±14.9

Data expressed as Mean ± SD.

Table 7.3.2.

Summary of Significant Age Differences in the Presenting Groups.

	Difference between Means	95% Confidence Interval	'p' value
Non-Case Patients (Males v Females)			
Group S	14.2 years	0.27 , 28.22	0.046
Case Patients			
Group P v Group S (Whole Group)	8.4 years	1.9 , 14.85	0.012
Group P v Group S (Male Patients)	17.4 years	5.68 , 29.08	0.005
Case v Non-case Patients			
Group P	12.6 years	2.59 , 22.55	0.014

Data analysis using Student's 't' test.

There were no significant differences in age between 'non-case' patients in the presentation groups, or between 'case' and 'non-case' patients in each of Groups O and S. For 'case' patients, those presenting with psychological problems (Group P)

were significantly younger than 'case' patients presenting with inexplicable physical symptoms

There were no significant differences in age between 'non-case' patients in the presentation groups, or between 'case' and 'non-case' patients in each of Groups O and S. For 'case' patients, those presenting with psychological problems (Group P) were significantly younger than 'case' patients presenting with inexplicable physical symptoms (Group S): and within Group P, 'case' patients were significantly younger than 'non-case' patients in this group.

Analysis of gender differences in age showed that the mean age of female patients was similar, whether they presented with an organic illness, psychological problems or with medically-inexplicable physical symptoms; and whether they were at a low or increased risk of having a psychiatric illness. For male patients, those identified as 'cases' in Group P were significantly younger than 'cases' in Group S. Finally, it was also found, that in Group S, somatizing males at low risk of psychiatric illness were significantly older than somatizing females at low risk of psychiatric illness.

7.3.2 "Non-caseness/Caseness" in the Presentation Groups.

Table 7.3.3. presents the mean scores for the GHQ-28 in total and for each subscale in the presentation groups. Using a cut-off score of 4/5 to distinguish between patients at low risk of having a psychiatric illness (non-cases) and those at increased risk (cases), it may be seen that in the whole patient population, there were

Table 7.3.3.

**Comparison of GHQ-28 Scores by “Caseness” for Patients
in the Presenting Groups.**

	Group O (n=552)	Group P (n=57)	Group S (n=65)
GHQ Non-Case Patients			
(n)	331	12	23
Total Score	1.3±1.45	1.7±1.2	2.1±1.5
Subscale: GHQ-1	0.7±1.1	0.8±1.2	1.1±1.3
GHQ-2	0.3±0.7	0.2±0.4	0.5±0.9
GHQ-3	0.3±0.7	0.6±0.7	0.3±0.6
GHQ-4	0.1±0.3	0.1±0.3	0.1±0.3
GHQ Case” Patients			
(n)	221	45	42
Total Score	9.9±4.7	13.9±6.0	13.2±6.2
Subscale: GHQ-1	3.9±1.9	3.8±2.1	3.8±1.7
GHQ-2	2.7±2.2	4.6±1.8	4.0±2.4
GHQ-3	2.5±2.1	3.4±2.2	3.6±2.2
GHQ-4	0.8±1.5	2.2±2.5	1.8±2.2

Data expressed as Mean ± SD. GHQ-1 = Somatic symptoms; GHQ-2 = Anxiety and insomnia;
GHQ-3 = Social dysfunction; GHQ-4 = Severe depression.
366 (54.4%) non- cases, and 308 (45.6%) cases.

That is, almost 50% of patients in the study were at an increased risk of having a psychiatric illness. The majority of both 'non-case' and 'case' patients presented with medically explicable physical symptoms (331, 90.4% non-cases and 221, 71.7% cases), with the remaining 'case' patients presenting with psychological problems (14.6%) or with medically-inexplicable physical symptoms (13.7%).

Within each presentation group, almost half of the patients with organic illnesses (40%) were also at risk of having a concomitant psychiatric disorder; while one fifth of patients with psychological problems (21.1%), and over one third of somatizing patients (35.4%) scored below the threshold for 'caseness', indicating low risk of psychiatric illness.

7.3.3. GHQ-28 Results.

Significant differences between the patient groups on scores for risk of psychiatric illness are summarized in Table 7.3.4. As would be expected, in each presentation group, the difference in the mean GHQ-28 score between 'case' and 'non-case' patients was significant. This difference occurred for both the total score and for scores on each of the subscales of the questionnaire.

Between the groups, mean GHQ-28 scores for 'non-case' patients were similar for all three modes of presentation - both for the total score and scores for each subscale of the GHQ-28. However, for patients scoring above the threshold for "caseness", the risk varied significantly. Patients in Group O (organic illnesses)

Table 7.3.4.

**Summary of Significant Differences in GHQ-28 Scores between
Patients in the Presenting Groups.**

	Difference between Means	95% Confidence Interval	'p' value
Case v Non-case Patients			
Group O	8.6	7.98 , 9.06	<0.0001
Group P	12.2	8.85 , 15.77	<0.0001
Group S	11.1	8.53 , 13.71	<0.0001
Case Patients - Group P v Group O			
Total Score	4.0	2.54 , 5.69	<0.0001
Anxiety/Insomnia	1.9	1.18 , 2.56	<0.0001
Social dysfunction	0.9	0.14 , 1.5	0.028
Severe depression	1.4	0.92 , 2.02	<0.0001
Cases Patients - Group S v Group O			
Total Score	3.3	1.72 , 4.98	0.0017
Anxiety/Insomnia	1.3	0.54 , 2.02	0.0019
Social dysfunction	1.1	0.31 , 1.79	0.0045
Severe depression	1.0	0.47 , 1.53	0.0024

Data analysed using Student's 't' test.

revealed a significantly lower risk of psychiatric illness than patients in Group P and patients in Group S. There was no difference in GHQ-28 scores between patients in Groups P and S.

Analysis of GHQ-28 subscale scores showed that “case” patients in each group all reported similar degrees of somatic distress (GHQ-1 scores). On the remaining subscales, psychologizing patients in Group P and somatizing patients in Group S differed significantly to patients with organic illnesses in Group O, in that, ‘case’ patients in Groups P and S reported significantly higher levels of anxiety and insomnia, greater social dysfunction, and more severe depression than ‘case’ patients in Group O. ‘Case’ patients in Groups P and S reported equivalent scores on each of the sub-scales of the GHQ-28.

7.3.4. IBQ Results.

The mean scores on the IBQ scales for ‘non-cases’ and ‘cases’ in each presentation group are presented in Table 7.3.5. Significant findings are summarized in Tables 7.3.6, 7.3.7 and 7.3.8.

A comparison of aspects of illness behaviour for ‘non-case’ patients in each group found that patients differed significantly in their beliefs and attitudes towards their symptoms. Specifically, ‘non-case’ patients in Group P reported significantly more affective disturbance than ‘non-case’ patients in Group O. (AD score). ‘Non-case’ patients in Group S differed from ‘non-case’ patients in Group O by reporting significantly higher scores for Disease Conviction, and ‘non-case’ patients in Group P differed from ‘non-case’ patients in Group S by reporting significantly stronger

Table 7.3.5.

Mean IBQ Scores by 'Caseness' for Patients in each Presenting Group.

	<u>Group O</u>		<u>Group P</u>		<u>Group S</u>	
	Non-case (n=331)	Case (n=221)	Non-case (n=12)	Case (n=45)	Non-Case (n=23)	Case (n=42)
First Order Scales						
General Hypochondriasis	0.9±1.3	1.5±1.8	2.1±2.1	1.9±2.2	1.4±1.7	2.2±2.4
Disease Conviction	1.4±1.2	2.3±1.4	1.8±1.7	2.8±1.6	2.0±1.4	3.2±1.7
Psychological/Somatic	1.7±0.8	1.7±1.0	1.8±1.1	2.8±0.8	1.5±0.9	1.9±1.1
Affective Inhibition	2.0±1.6	2.1±1.7	2.5±1.6	2.8±1.7	2.0±1.9	2.8±1.7
Affective Disturbance	1.2±1.4	2.0±1.8	2.7±1.9	3.9±1.5	1.6±1.9	3.5±1.3
Denial	3.4±1.4	2.9±1.6	2.7±1.6	1.4±1.3	3.3±1.4	2.6±1.5
Irritability	0.9±1.1	1.5±1.5	2.0±1.7	2.7±1.7	0.9±1.4 ^	2.4±1.6
Second Order Factors						
Affective State	3.1±2.7	5.1±3.8	6.8±5.1	8.4±4.1	3.9±4.0	8.1±3.9
Disease Affirmation	4.7±1.6	5.7±2.0	5.0±2.2	5.0±1.8	5.5±1.8	6.3±2.2
Discriminant Function	51.4±12.8	54.9±16.5	50.7±16.6	43.0±15.7	56.2±13.6	56.7±18.7
Whiteley Index	2.2±2.0	3.7±2.8	3.4±3.4	4.1±3.1	3.5±2.9	5.1±3.5

Data expressed as Mean ± SD.

feelings of social isolation (I score). However, while these differences in attitudes and beliefs about their illness occurred, the scores on the IBQ scales were all within published 'normal' limits and do not suggest abnormal illness behaviour. (383)

A comparison of 'case' patients in the three presentation groups showed that patients in both Groups P and S reported higher levels of psychological distress than 'case' patients in Group O. Specifically, patients in Groups P and S reported higher scores than Group O patients for Affective Distress, Irritability and Affective State. Both Group P and Group S 'case' patients found greater difficulty talking about negative and unpleasant emotions than Group O 'case' patients (AI score), and 'Case' patients in Group S differed further from 'case' patients in Group O with significantly higher scores on the Whiteley Index for Hypochondriasis, and higher scores on the Disease Conviction scale.

A final difference between 'case' patients in Groups O, P and S was the manner in which the significance of the symptoms was interpreted. Psychologizing patients viewed their symptoms as related to psychological distress rather than physical disease. They were less likely to be converting psychological distress into physical symptoms, and more readily acknowledged psychologically stressful problems in their lives other than those associated with the the symptoms. That is, Group P 'case' patients recorded significantly higher scores than 'case' patients in Groups O and S on scales for Psychological/ Somatic Focusing, and lower scores for the Disease Affirmation, Discriminant Function and Denial scales.

Table 7.3.6.

Summary of Significant Differences on the IBQ Scales between ‘Non-case’ Patients in each of the Presenting Groups.

	Difference between Means	95% Confidence Interval	‘p’ value
Non-case Patients			
<u>Group P v Group O</u>			
Affective Disturbance	-	-	0.05 #
<u>Group S v Group O</u>			
Disease Conviction	0.6	0.16 , 1.2	0.01 *
<u>Group P v Group S</u>			
Irritability	-	-	0.046 #

* Data analysed using Student’s ‘t’ test. # Data analysed using Kruskal-Wallis and Mann Whitney-U tests.

Table 7.3.7.

**Summary of Significant Differences on Scales of the
IBQ between "Case" Patients in the Presenting Groups.**

	Difference between Means	95% Confidence Interval	'p' value
Case Patients			
<u>Group P v Group O</u>			
Affective Disturbance	-	-	<0.0001 #
Irritability	-	-	<0.0001 #
Affective State	-	-	<0.0001 #
Affective Inhibition	-	-	0.04 #
Psychological/Somatic Focus	1.1	0.74 , 1.39	<0.0001 *
Disease Affirmation	0.7	8.65E , 1,32	0.047 *
Discriminant Function	11.9	6.58 , 17.21	<0.0001 *
Denial	-	-	<0.0001 #
<u>Group S v Group O</u>			
Affective Disturbance	-	-	<0.0001 #
Irritability	-	-	0.0004 #
Affective State	-	-	<0.0001 #
Affective Inhibition	-	-	0.04 #
<u>Group P v Group S</u>			
Psychological/Somatic Focus	0.9	0.54 . 1.38	<0.0001 *
Disease Affirmation	1.3	0.45 , 2.2	0.03 *
Discriminant Function	13.7	6.33 , 20.97	0.0009 *

* Data analysed using Student's 't' test. # Data analysed using Kruskal-Wallis and Mann Whitney-U tests.

Table 7.3.8.

**Summary of Significant Differences on Scales of the
IBQ between 'Case' and 'Non-case' Patients in
the Presenting Groups.**

	Difference between Means	95% Confidence Interval	'p' value
'Case' v 'Non-case' patients			
<u>Group O</u>			
General Hypochondriasis	-	-	<0.0001 #
Affective Disturbance	-	-	<0.0001 #
Affective State	-	-	<0.0001 #
Irritability	-	-	<0.0001 #
Disease Conviction	0.09	0.78 , 1.23	<0.0001 *
Disease Affirmation	1.0	0.65 , 1.26	<0.0001 *
Discriminant Function	3.5	1.05 , 5.97	0.005 #
Denial	-	-	0.0002 #
<u>Group P</u>			
Disease Conviction	1.0	9.86E , 2.14	0.05 *
Psychological/Somatic Focus	1.0	0.47 , 1.67	0.0007 *
Denial	-	-	0.018 #
<u>Group S</u>			
Affective Disturbance	-	-	0.0002 #
Affective State	-	-	0.0004 #
Irritability	-	-	0.0002 #
Whiteley Index	-	-	0.045 #
Disease Conviction	1.2	0.32 , 1.98	0.007 *

* Data analysed using Student' 't' test. # Data analysed using Kruskal-Wallis and Mann Whitney-U tests.

Within each presentation group, beliefs and attitudes towards symptoms differed considerably between 'non-case' and 'case' patients. In Group O, 'case' patients differed from 'non-case' patients with significantly higher scores for General Hypochondriasis, Affective Disturbance, Affective State, Irritability, Disease Conviction, Disease Affirmation, Discriminant Function, and lower scores for Denial.

In Group P, 'case' patients reported higher scores than 'non-case' patients for Disease and Psychological versus Somatic Focusing, and lower scores for Denial.

In the group of patients with inexplicable physical symptoms (Group S), 'case' patients reported higher scores than 'non-case' patients on the IBQ scales for Affective Disturbance, Affective State, Irritability, the Whiteley Index and Disease .

7.4. DISCUSSION.

The results of this study showed that by far the largest group of patients who presented to their general practitioner, did so with physical rather than psychological complaints: ie. 91.5% compared to 8.5%, respectively. It was also found that almost half (47.6%) of the patients who presented with physical complaints were identified by the GHQ-28 as 'cases', and were at an increased risk of having a psychiatric illness. Of the 'case' patients with physical complaints, approximately 84% had a diagnosed organic illness, while the remaining 16% presented with medically inexplicable physical symptoms. These findings are comparable with those of previous studies that have shown patients with a psychological disorder in the primary care setting most

commonly present with physical rather than psychological complaints. (40,196,203,282,325,408,485-489)

In terms of GHQ-28 scores, there were no differences between 'non-case' patients in each group for either the total score or for scores on the subscales. More than one fifth of patients with psychological problems were at a low risk of psychiatric disorder. Explanations for this may be that the disorder had resolved spontaneously, or that, because these patients had seen the doctor on more than one occasion, they were responding well to the counselling and other treatment they had been receiving. While 'non-case' psychologizing patients reported higher levels of irritability than 'non-case' patients with physical symptoms in Groups O and S, this finding may indicate that while these patients may have established a trusting and therapeutic relationship with the doctor, they remained, at this time, less confident in the company of family and friends. It is noted that scores on this scale of the IBQ for 'non-cases' in all three groups were within a normal range and did not indicate any suggestion of abnormal illness behaviour.

One third of patients with medically inexplicable physical symptoms were found to be at low risk of psychiatric illness. Although patients in this group were termed 'somatizers', this finding indicates they do not meet the operationalized diagnostic criteria for somatization defined by Goldberg and Bridges. (27) Because the numbers in this group were small, it is difficult to analyse the data for a possible explanation of this result. It is notable, however that the male patients in this group were significantly older than male patients in the other groups and female 'non-case' patients in this group. This may reflect a tendency described by Leventhal et al (140) for older patients to use medical services with more efficiency than younger age

groups; and to seek help for perceived changes in physical well-being without expending emotional energy in response to the symptoms. Another possible explanation may be that this group of somatizing patients had successfully adapted to a psychological stressor by using physical symptoms, and as a result were no longer disturbed by the original stressor.

As has previously been described (7), the degree of risk of having a psychiatric illness in those patients identified as 'cases' was low, although significantly greater in patients with psychological problems and in patients with inexplicable physical symptoms than in patients with organic illnesses. Analysis of the subscales of the GHQ-28 showed 'case' patients who presented with physical symptoms either with or without pathology could not be distinguished on the somatic symptoms subscale from patients presenting with psychological problems. This is not an unexpected finding, given that the physical correlates of psychological distress, such as feeling run down, in need of a tonic and headaches are also commonly associated with the presence of an organic illness. On the other subscales however, psychologizing and somatizing 'case' patients reported significantly more anxiety, sleep disturbance, social dysfunction and depression than did 'case' patients with organic illnesses.

As would be expected, within each presentation group, 'case' patients reported significantly higher scores on the GHQ-28 than 'non-case' patients. Although 'case' patients scores indicated minor psychiatric illness, this was associated with significantly more anxiety, sleep disturbance, social dysfunction and depression than that for 'non-case' patients.

In Group O patients with organic illnesses, 40% of patients were identified as 'cases'. The illness behaviour of 'case' patients in this group was characterized by significantly greater attention to the physical symptoms, greater illness phobia, more affective disturbance and a stronger likelihood that psychological distress was being interpreted as physical illness. However, while these patients were primarily focused on their physical symptoms and the illness associated with them, they were less likely to deny having problems other than those associated with the illness. These results are suggestive of patients who are hypervigilant towards bodily sensations and who may amplify symptoms so that they are regarded as more serious than the pathology would indicate. The anxiety and/or depression experienced by these patients is not necessarily an indication of the severity of the symptoms or illness, as Barsky has shown that patients with hypochondrical tendencies regard several symptoms commonly associated with a mild illness as more serious and warranting medical help-seeking than do others. (117) Negative affectivity, whether it exists as a transient state or as an enduring trait is associated with increased susceptibility to perceive symptoms and to interpret them in a negative and threatening manner. (122-126)

In Group P, 'case' patients differed from 'non-case' patients by reporting more psychological stressors in their lives, a stronger belief that their problems were associated with psychological disturbance rather than physical illness, and by a stronger belief that they were seriously ill and could not readily be reassured by the doctor. These findings support those of Jorm et al (23), Rogers and Pilgrim (24), and Bayer and Paey (491) who showed that people in the community frequently recognize they have a mild psychiatric disorder. However, while patients themselves may recognize the presence of mental disorder, they often have little faith that health

professionals will provide appropriate support, and have been shown to mistrust or even be fearful of available treatments. (23)

In Group S, two thirds of patients with inexplicable physical symptoms were at an increased risk of having a mild psychiatric disorder, and would thus meet the diagnostic criteria of Goldberg et al. (27). Compared to that of 'non-case' patients, the illness behaviour of 'case' patients in this group was characterized by higher levels of anxiety and depression, stronger feelings of social alienation, more hypochondriacal fears and beliefs and a stronger tendency to convert psychological distress into physical symptoms. On several scales of the IBQ, 'case' patients scored above the limit for 'normal' illness behaviour, suggesting that the beliefs and attitudes they held were maladaptive and inappropriate for the symptoms with which they presented to the doctor. In comparison with 'case' patients with physical symptoms associated with the presence of an organic illness, 'case' patients with inexplicable physical symptoms were more somatically focused and showed greater hypochondriacal tendencies to amplify the physical symptoms and to regard them as more serious than the objective findings would suggest. Furthermore, 'case' patients with inexplicable physical symptoms reported greater difficulty in expressing negative emotions and fears (high AI scores), and a tendency to present them as physical symptoms rather than as psychological distress (low P/S scores).

Patients with psychiatric disorders in general or psychiatric hospitals have already passed the first two filters of Goldberg and Huxley's pathway to psychiatric care. (324) The large majority of patients in these settings have been referred by medical practitioners on the basis of professional knowledge and experience. It is not surprising therefore, that the symptoms of these patients are more readily recognizable

as patterns of psychiatric disorder which fit into diagnostic classifications for mental illness.

In the primary care setting however, patients' consultations are self-initiated. The information presented by patients is based on the life experience of an individual not bounded by diagnostic criteria or text-books. Research on illness behaviour indicates that in an attempt to adapt to their change in health status, patients may present to a doctor with already-formed ideas and beliefs about possible causes for the symptoms. The results of this study, and of other authors suggest their estimation of the perceived severity of the symptoms may be affected by a negative and fearful reaction to the symptoms themselves, by a negative mood that is the result of other social and psychological pressures, or by patient's beliefs and attitudes about both physical symptoms and mental illness.

A frequent response to evidence of psychological distress in patients with physical symptoms who have a serious medical problem or stressful social problems is that such distress is understandable or even to be expected in the circumstances. In this study, one of the highest scores on the GHQ-28 for patients in the group of patients with medically explicable physical symptoms was reported by a woman who presented to the doctor with symptoms of a head cold. Underlying her physical symptoms, was considerable anxiety associated with her new-born baby who had been diagnosed with multiple life-threatening cardiac abnormalities.

That one group of patients may present their symptoms in terms of physical illness while another does so in terms of psychological illness has been referred to as somatologia (with a predominantly somatic vocabulary) and thymologia (with a

predominantly psychological vocabulary). (492,493) The illness behaviour of the former group suggests a perceptual style in which physical factors are seen as the source of the symptoms, and the influence of psychological factors is not seen as related to the problem or is strongly denied. As this study has shown, almost half of the patients who reported to the doctor with physical symptoms (explicable or otherwise), were at an increased risk of having a mental disorder. This represents a major health care problem which clearly needs to be addressed, in patients both with organic illnesses and in those with inexplicable physical symptoms. For while it remains unclear that active treatment of these illnesses is beneficial (490), there is evidence that *recognition* of these 'cases' is important, and may be associated with beneficial consequences, such as a shorter duration of the illness. (6) Treatment may simply require recognition that fears and problems exist, and an overt acknowledgment of their effect, to reassure and provide the support the patient is seeking.

The recognition of these 'cases' in the primary care setting may be considerably facilitated by a greater knowledge of the behaviour of persons who perceive themselves as 'ill'. Understanding that illness behaviour that appears inappropriate may be an expression of the patient's inability or refusal to deal with psychological pressures could lead to more appropriate management of the patient's symptoms than focusing on and reinforcing their physical nature.

CHAPTER 8

**THE RESULTS OF A PRELIMINARY STUDY OF A
REATTRIBUTION AND PROBLEM-SOLVING TREATMENT
PROTOCOL FOR PATIENTS WITH SOMATIZATION IN THE
PRIMARY CARE SETTING.**

8.1. INTRODUCTION.

Treatment of somatization in the primary care setting has been the focus of a considerable research effort in recent years. However, while epidemiological studies of the prevalence of somatizing behaviour and its associated costs continue to demonstrate the considerable need for medical intervention in this problem, the efficacy and appropriateness of treatments provided remains unclear.

A variety of treatments has been suggested. Many are focused on cognitive behavioural techniques that teach patients behaviours that allow them to reduce the severity of symptoms and to achieve a measure of control over symptoms and circumstances. Techniques such as relaxation (494), stress management (495) and biofeedback (496) are examples of such treatments. However, treatments such as these tend to place an emphasis on the physical nature of the patient's problems, and may therefore reinforce the patient's already predominant somatic focus, at the expense of taking into account psychosocial factors operating in the patient's lives. Two further factors that require consideration in the proposal of such treatments are firstly, such treatments may be inappropriate in the General Practitioner's practice, where time constraints may preclude training for and teaching such techniques. Secondly, in the large majority of patients who present to General Practitioners, the symptoms are vague and ill-defined, and if treated early enough may not require therapies that are designed to help alleviate chronic, severe refractory symptoms.

The design of other cognitive behavioural treatment protocols for somatization has been to direct attention towards dysfunctional thoughts, beliefs and attributions about symptoms. The aim of these protocols is to break the cycle of interaction between physiological and psychological processes which leads to reinforcement and

the perpetuation of symptoms. (497,498) Klimes et al (365), for example report a study in which 31 patients with atypical chest pain, drawn from a variety of settings were treated in a controlled trial of cognitive behaviour therapy. The treatment strategy was to teach management techniques for the symptoms and to change inappropriate beliefs about the symptoms. The results of the study showed that the treatment was significantly effective in reducing chest pain, limitations and disruptions to daily activities and psychiatric morbidity; and that these changes were maintained for at least six months. Similarly, Speckens et al (499) conducted a randomized controlled study of a cognitive behavioural therapy programme in which the main therapeutic techniques were aimed at identifying and modifying dysfunctional automatic thoughts, using behavioural experiments directed towards breaking the cycle of symptoms and their consequences. The study showed the treatment programme was effective in reducing the severity and frequency of the symptoms, resulting in a higher recovery rate. There was also a reduction in sleep impairment, limitations to social and leisure activities and in illness behaviour; and these improvements were generally maintained at twelve months follow-up.

In both above-mentioned studies, patients were treated on an out-patient basis in a general hospital setting. Treatment was administered by personnel trained in cognitive behaviour therapy; and in the first study, subjects were a relatively homogeneous group of patients with a history of longstanding atypical chest pain (mean duration of 4.7 years). In the primary care setting, patients present with a far greater array of symptoms, to practitioners who are for the most part untrained in psychological therapeutic techniques. Frequently, the patient's clinical picture does not meet diagnostic criteria for psychiatric disorders of the somatoform type.

In the primary care setting, the somatic presentation of psychological distress may take several forms. Kirmayer and Robbins (196,199) propose three distinct forms of somatization that may be distinguished from each other; namely, (i) 'functional' somatization which is akin to the psychiatric disorder, somatization disorder, (ii) 'hypochondriacal' somatization, characterized by illness fears and worries, unresponsive to reassurance, and (iii) 'presenting' somatization. Furthermore, these authors suggest the most commonly occurring form of somatization in primary care, that is 'presenting' somatization may itself present in different ways. The first group whom these authors termed 'initial' somatizers present with physical symptoms, but will spontaneously attribute the symptoms to psychosocial problems: the second group was termed 'facultative' somatizers, and has also been described by Bridges and Goldberg (27). This describes somatizing patients who present with physical symptoms, but who, with careful questioning will subsequently acknowledge psychological stressors as the source of the symptoms. Finally, Kirmayer and Robbins (196) describe 'true' somatizing patients, who persist with the belief that the symptoms are associated with a physical disease, and reject a psychosocial explanation for them.

According to the operationalized criteria for diagnosis of somatization in primary care developed by Goldberg and Bridges (27), somatizing patients are characterized by the tendency to attribute the symptoms of psychological distress to the presence of a physical disease, and that treating the underlying psychological distress will result in alleviation or cure of the physical symptoms. Goldberg and Gask et al (371,372) consequently developed a treatment protocol, the first part of which was to teach patients to be able to recognize the nature of the symptoms, and to reattribute them appropriately to underlying psychological stressors. The authors acknowledge

that while these skills are essential for patients to be able to deal with the symptoms, it is necessary to further develop ways of treating the psychological stressors that precipitate the symptoms in the first place.

Using the model of psychiatric illness as it occurs in primary care proposed by Goldberg and Huxley (7), that much of the anxiety and depression that occurs in patients in this setting is the result of vulnerable persons inability to deal with and solve life problems, a possible effective second stage for treatment of somatization is to teach patients 'Problem-solving' skills.

A considerable body of research concerned with problem-solving and decision-making has grown since Dunker's early treatise on problem-solving processes. (500) While much early research was concerned with laboratory models and formal problems, such as anagrams and arithmetic problems which sought to clarify the problem-solving process, it became apparent that there was little practical applicability of this research in solving life problems outside the laboratory. (501) Subsequent research was therefore directed at providing information for counselling and other psychological services whose task it was to deal with patients who were unable or ill-equipped to deal with problems.

Studies of college students identified three dimensions underlying the personal problem-solving process; namely, confidence in problem-solving ability, an approach-avoidance style, and personal control. (502) Further studies of college student populations that compared self-appraised effective and ineffective problem-solvers showed that those students who regarded themselves as effective problem-solvers reported less depression and anxiety, fewer problems and less distress associated with

problems. (503,504) The results of these studies suggest that persons who feel they are effective problem-solvers are more successful in dealing with life problems, and therefore experience fewer major problems and a greater sense of personal control over their environment. Although it was not possible to establish cause and effect relationships from the studies: that is, whether ineffective problem-solving leads to increased depression and anxiety, or whether depression and anxiety decreases effective problem-solving skills, nevertheless, the results indicate a strong relationship between problem-solving and emotional distress.

Several studies of problem-based or problem-oriented therapy on different patient populations have been conducted, but the results of these studies are generally inconclusive. Early studies of therapeutic models of this type have identified deficiencies in problem-solving efficiency in in-patient populations with psychiatric illnesses (505-507), and overall have demonstrated the efficacy of psychotherapy in the treatment of complex medical-psychological problems. (508-512) Early studies conducted in the primary care setting were disappointing to the extent that they showed no significant clinical outcome differences associated with a psychotherapeutic intervention. (513-515) However, more recent randomized controlled studies of problem-solving therapy for patients with psychiatric illnesses in the primary care setting have shown this treatment to be of some value, particularly for patients with depressive disorders or who have a history of attempted suicide.(516) Similarly, Catalan et al (373) found problem-solving therapy provided by a psychiatrist was more effective than 'usual care' provided by a general practitioner for patients with emotional disturbance with a poor prognosis. In a second study of problem-solving therapy for patients with major depression in primary care, Mynors-Wallis et al (517), found this treatment to be as effective as amitriptyline and more effective than a

combined drug and psychological placebo treatment. In these studies, patients responded favourably to the treatment protocol by staying in the programme, and the results showed significant improvements in the treatment groups compared with the control groups on the outcome measures of the studies. The results of a preliminary study of problem-solving treatment for patients with inexplicable physical symptoms were inconclusive, largely because of the small numbers in the study. (374)

The aim of this project was to study the effectiveness of a Reattribution-Problem-solving treatment programme administered to a group of somatizing patients. The treatment was evaluated in a randomized controlled trial in which patients either received the treatment (Treatment Group) or continued to receive optimal 'care as usual' from their General Practitioner (Control Group). It was predicted that at follow-up, patients in the Treatment Group would have modified their illness beliefs and would more readily acknowledge that their physical symptoms may be related to psychological rather than disease factors. Secondly, it was predicted that patients in the Treatment Group would report less anxiety and depression, and that these changes would be accompanied by a decrease in the number of visits to the doctor, fewer investigations and less time off work because of illness following treatment than would patients in the Control Group.

8.2. METHODS.

The methods used in this study have previously been described in detail in Chapter 3. The following is a brief description of the patients and procedures involved.

8.2.1. Patients and Procedures.

The subjects of this study were with physical complaints for which there was no adequate medical explanation.

Patients were recruited consecutively, over a periods of 2 weeks, in the waiting rooms of each of the 23 General Practitioners who participated in the study. All patients over the age of 18 years were screened for the study. Patients were excluded if they had insufficient command of English to be able to complete two self-report questionnaires or give an informed consent to participation in the study; or if they had an organic brain disorder or a psychotic illness.

All patients were screened and recruited by the author, who explained that the doctor was taking part in a Health Study being conducted by the University of Adelaide. Patients were given both a verbal explanation and an Information Sheet about the study before signing a Consent Form to participate in the study. They were then asked to complete the Illness Behaviour Questionnaire and the scaled 28-item General Health Questionnaire before seeing the doctor. If patients had not completed the questionnaires before the doctor was ready to see them, this was done after the consultation and before leaving the practice. On a few occasions, patients exercised their right to take the questionnaires home with a return-addressed and stamped envelope. If the questionnaires were not returned after a reminder telephone call, patients were recorded as refusing to take part in the study. This was a rare occurrence.

8.2.2. Doctor's Assessment.

The doctor was asked to assess the patient in terms of the primary reason for the consultation. 'Somatizing' patients were identified as patients who primarily presented with physical complaints for which no adequate medical explanation could be established. This assessment was based on the doctor's previous knowledge and current examination of the patient. On two occasions, when there was some doubt about the assessment because the results of laboratory investigations were not yet available, the patient was followed up by the author, and the doctor's assessment was completed accordingly when the results became known.

8.2.3. CIDI Interview.

With the doctor's knowledge and consent, patients who were assessed as 'somatizers' were contacted by the author 2-3 days after the consultation, to ask for a further interview. The possibility that they might be asked for such an interview was explained as part of the original verbal explanation and in the Information Sheet. This interview, at which the CIDI was administered was described as asking questions about the patient's physical health, moods and anxieties in greater detail than that of the two questionnaires completed in the doctor's waiting room.

The CIDI interviews were conducted by the author within 2 weeks after the patient's appointment with the doctor. All but two interviews were conducted in the patient's homes. In the two instances where this was not possible, a quiet room was made available in the patient's doctor's practice for the purpose of the interview. In all cases, the interviews were conducted with the author and patient being the only persons present, and without interruption.

8.2.4. Randomization.

Patients were randomized to receive treatment (Treatment group) or to receive 'usual care' from their General Practitioner (Control group). The schedule by which patients were assigned to one group or the other was generated using a list of random numbers; and the assignment of each individual patient was sealed in an envelope. The envelopes remained sealed until the day of the CIDI interview.

At the completion of the CIDI interview, patients randomized into the Control group were thanked for their help. It was explained to these patients, that in six months time, they would be asked to complete the IBQ, 28-item GHQ and write a short paragraph giving a report on what they felt about their health status at that time. The patients would be reminded of this by a telephone call from the author a week before the six-month interval was due to end. The papers would be sent to the patient's home, in a package containing a stamped, return-addressed envelope in which to return the completed questionnaires. The Control group was equivalent to a 'usual care' group. During the six month interval, they were free to seek medical help whenever they felt it was needed, and from any source they felt appropriate. The completion of the papers after the six month period signalled the end of their participation in the study.

Patients who had been randomised into the treatment stream of the study were asked by the author if they would like to take part in the treatment protocol (described below). In the case of those who agreed to do so, a time and place suitable for the patient were arranged. All of the patients who were randomized into the treatment group agreed to take part in the programme. At the end of the treatment, the procedure for follow-up was implemented as for patients in the Control group.

8.2.5. Treatment.

The Treatment protocol is explained fully in Chapter 3. The procedure for administering the protocol was as follows.

The treatment protocol was explained to the patients as a programme that had been developed to help persons with distressing physical problems. It was explained that the programme was designed to help people understand more fully the nature of the symptoms, and to devise ways in which the patient could deal more effectively with the symptoms. Patients were told that treatment involved meeting once a week for half an hour for between eight to maximum twelve weeks.

All treatments were administered by the author. With the exception of two cases, the patient and author met in the patient's home, at the same time and on the same day each week. In one case, meetings were held in a room in the doctor's practice set aside for this purpose, and in the second case, meetings were held in the patient's workplace; again in a quiet room free from interruptions and at the same time each week.

8.2.6. Questionnaires.

The questionnaires used in this study were:

(i) The IBQ (383): a self-report questionnaire, which requires 'Yes-No' responses to 62 items, and which provides a measure of patients' beliefs and attitudes towards illness.

(ii) The 28-item GHQ (416): a self-report instrument which provides a measure of the risk that a patient is at of having a mild psychiatric disorder.

(iii) The CIDI (419): a structured interview which provides a standardized and comprehensive and fully standardized assessment of mental disorders according to ICD-10 and DSM-IV criteria. The study utilized three sections of the CIDI interview: namely, Section C (Somatoform Disorders), Section D (Panic Disorder, Generalised Anxiety and Phobic Disorders), and Section E (Major Depressive Episode and Dysthymia).

8.2.7. Outcome of Treatment Assessments.

Follow-up procedures included completion of the IBQ and the 28-item-GHQ. Patients were also asked to respond to a global question on health status which asked, **“Looking back over the past six months, since you last completed the questionnaires, would you comment briefly on any changes you feel have occurred in your health in general in that time, and how you feel now compared with then”**.

Other follow-up measures to test the efficacy of the treatment protocol included collection of data to show:

- (i) Number of visits to the General Practitioner
- (ii) Number of investigations/surgeries/hospitalizations
- (iii) Any changes in medications
- (iv) Number of visits to other health care providers
- (v) Days missed from work because of illness.

These data were counted for the six months before the date of randomization or the beginning of treatment, and for the six months after the date of randomization or

the completion of treatment. The data on these measures were collected by an independent investigator, who had had no other involvement in the study.

8.2.8. Statistical Analysis.

Results were analysed using a repeated measures analysis of variance with treatment as the between grouping factor. Scores on each measure, including the overall score on the 28-item GHQ, scores on the individual scales of the IBQ and the other outcome measures initially assessed before randomization were used as covariate; and scores assessed at six months following randomization (for the Control group) or six months after completion of treatment (for the Treatment group) were used as dependent variables.

8.3. RESULTS.

The treatment protocol was not introduced until the second year of the study. Thus, a total of 39 of the 65 patients identified as “somatizing” were eligible for this procedure.

8.3.1. Recruitment for the Treatment Programme.

Of the 39 patients considered to be eligible for treatment, seven patients (7) refused to take any further part in the study after the initial assessment of completing the GHQ-28 and IBQ forms. Reasons for this were primarily that the patients were not

Table 8.3.1.

Age and Gender Characteristics of the Randomized Groups.

	Control Group (n=12)	Treatment Group (n=7)
Whole Group (n)	12	7
Age	53.4±6.3	48.7±16.25
Males (n)	2	4
Age	58±5.7	49±20.5
Females (n)	10	3
Age	52.5±6.3	48.3±12.7

Data expressed as Mean ± SD.

interested in any further conversation or were suspicious of the procedure. A further 4 patients elected not to continue because they lived too far away or were travelling, and 3 patients could not be contacted because the practice did not have their current address or telephone number. Thus, a total of 25 patients were randomized into the treatment phase of the study. Of these, 3 patients were subsequently withdrawn from the study, in one case because of worsening symptoms for which an organic cause was eventually found, in the second case it emerged that the patient was seeing a psychiatrist, while the third patient became increasingly hostile during the procedure and a decision was made not to continue any further. A further 3 patients were lost at the point of the six month follow-up; 2 patients had moved away to new jobs and the third patient was travelling overseas. Thus a total of 19 (52.78%) patients out of a possible 36 patients (excluding the 3 patients withdrawn from the study) completed the

treatment phase. There were no significant differences between the groups in age or gender composition. (Table 8.3.1)

8.3.2 CIDI Data.

The results of the computerized analysis of the CIDI questionnaires are presented in Table 8.3.2. It may be seen that no diagnosis could be made in half of the Control group of patients, or in 2 of the 7 patients in the Treatment group. Diagnoses in the remaining patients included dysthymia, mixed depressive and anxiety disorders, generalized anxiety disorder and persistent somatoform disorder, and were relatively evenly distributed in the two groups.

Table 8.3.2.

CIDI Diagnoses in the Treatment and Control Groups.

	Control Group (n=12)	Treatment Group (n=7)
No Diagnosis	6	2
Dysthymia	1	0
Depression/Anxiety	2	2
Generalized Anxiety Disorder	0	1
Persistent Somatoform Disorder	3	2

Table 8.3.3.

**Mean GHQ-28 Scores for Control and Treatment Groups
at Randomization and at Six Months Following
Randomization/Treatment.**

	Control Group (n=12)	Treatment Group (n=7)
Mean GHQ Score:		
Randomization	8.6±7.9	9.3±5.9
Six month Follow-up	4.7±6.12	7.3±4.5
Difference in Mean GHQ Score	-3.8±3.6	-0.3±4.6

Data expressed as Mean ± SD.

8.3.3. GHQ-28 Results.

Table 8.3.3. presents a summary of the mean GHQ-28 scores of the Control and Treatment groups at randomization and six months after randomization (Control group) or after completion of treatment (Treatment group), respectively. The groups did not differ on the mean overall scores for the GHQ-28 measured at randomization. It may be seen that at 6 months follow-up, the risk of having a psychiatric illness had decreased in both the Treatment and Control groups. However, in the Control group, the decrease was significant ($p=0.004$; Diff between means=3.8; 95% CI=1.52,6.14); and the mean GHQ-28 score in the Control group at follow-up did not reach the cut-off score for 'caseness'. Data analysis using repeated measures analysis showed that the between-group main effect on overall GHQ-28 scores for Non-Treatment/Treatment was not significant ($p=0.07$). That is, at six months follow-up after randomization or completion of treatment, there was no significant difference in

the risk of having a psychiatric illness between patients who received treatment and those who did not.

8.3.4. IBQ Results.

Table 8.3.4. presents a summary of the mean scores on the IBQ scales measured in the Treatment and Control groups at randomization and at six months after randomization (Control group) or following the completion of treatment (Treatment group). The Treatment and Control groups did not differ significantly on any of the IBQ scales assessed initially at randomization.

It may be seen that in the Control group, scores on several of the IBQ scales increased during the 6 months following randomization. That is untreated patients reported an increase in hypochondriacal fears difficulty talking about fears and negative emotions (AI scale), and an increase in feelings of social alienation and anger (I scale). While there was a decrease in the scores for affective distress at follow-up (AD scale), there was an increase in the global measure of psychological distress (AS scale) which takes into account hypochondriacal fears and feelings of social alienation, as well as levels of anxiety and depression. Untreated patients became more convinced they had a physical problem (DC scale) but also became slightly more psychologically focused, shown by an increase in the P/S score, and a slight decrease in the global measure of the discrepancy between somatic and psychological thinking (DA scale). Only one of these changes, that of the increasing belief that the patient had a serious physical illness, coupled with an inability to be reassured by the doctor, reached statistical significance (DC score: $p=0.04$, Diff between means=0.6; 95% CI=0.01,1.16). Significance was approached on the AI score ($p=0.08$).

Table 8.3.4.

**Mean Scores on IBQ Scales
for Treatment and Control Groups at Randomization
and Six Months following Randomization/Treatment.**

	Control Group (n=12)		Treatment Group (n=7)	
	Before	After	Before	After
IBQ Scales.				
Primary Scales:				
GH	1.0±1.9	1.5±2.2	2.1±2.6	1.71±1.11
DC	2.0±1.6	2.6±2.3 *	3.0±1.6	3.1±1.7
P/S	1.3±0.9	1.5±0.5	2.0±1.4	2.0±1.7
AI	1.9±1.9	2.9±1.9	3.4±1.4	3.6±1.5
AD	2.4±1.9	1.9±1.7	3.4±1.4	3.9±1.8
D	4.1±0.9	4.1±1.3	2.6±1.7	2.0±2.2 ‡
I	1.6±1.7	2.0±1.9	2.7±1.6	2.7±1.2
Secondary Scales:				
AS	5.0±3.8	5.8±5.7	8.3±4.9	8.1±2.3
DA	5.7±2.0	5.08±2.9	6.0±2.6	5.1±2.8
DF	59.4±14.9	59.2±18.5	56.0±22.5	53.7±30.1
WI	3.1±3.1	3.6±3.9	4.6±3.1	5.3±2.9

Data expressed as Mean ± SD.

Control Group, before and after Randomization: * p<0.05

Comparison of the effect of the Treatment programme: ‡ p<0.05.

In the Treatment group, the data show a decrease in hypochondriacal fears (GH scale), but not in the overall likelihood of a hypochondriacal disorder (WI). Similarly, treated patients reported a stronger tendency to believe they had a physical illness (DC scale), an increase in difficulty expressing negative thoughts and emotions (AI scale), and an increase in levels of psychological distress (AD, AS scales). However, they were more able to acknowledge psychological stressors in their lives (D scale), and, unlike patients in the Control group did not feel any more socially isolated and alienated after treatment than before (I scale). None of the changes were significant in the group of patients who underwent treatment.

Repeated measures analysis found that the between-group main effect for non-treatment/treatment was significant on only one of the IBQ scales, the Denial scale ($p=0.009$). That is, at 6 months follow-up, the treatment protocol was more effective in helping somatizing patients to acknowledge the presence of psychological stressors in their lives, than was 'treatment as usual' from the doctor. Similar between-group effects were also found on the AI and AD scales. In the former case, both groups reported a tendency to experience greater difficulty expressing negative thoughts and emotions at follow-up (AI Scale), but the difference did not reach statistical significance ($p=0.06$). In the case of the AD scale scores, the Control group reported a decrease in anxiety and depression, and the Treatment group reported a small increase in psychological distress; but again the difference did not reach statistical significance ($p=0.06$).

8.3.5. Other Outcomes.

Repeated measures data analysis of the other outcome measures used to evaluate the efficacy of the treatment protocol, including the number of visits to the General Practitioner, number of investigations, hospitalizations and surgical procedures, medication changes and consultations with other health professionals showed no significant differences at the 6 month follow-up assessment between the treatment and control groups.

In response to the global question on general health and well-being, 4 of the 12 patients in the Control group reported that they felt a little better at 6 months follow-up, though they continued to experience physical symptoms. In one case, the patient attributed her improvement to the fact that her daughter and her family had moved in to live with her, so she no longer felt so alone and vulnerable. In the other 3 cases, the theme of the patients' reported improvement was the association with having **"become more tolerant"** of the symptoms, resulting in less psychological distress associated with them.

Patient responses in the Treatment group varied considerably. Four of the 7 patients in this group reported no change in their health and well-being. Two of these 4 patients responded in terms of their physical symptoms only, one did not mention her physical symptoms but wrote lengthily about several stressful life problems, and the last of this group reported that her physical symptoms remained unchanged, but that she was also seeking counselling for other problems. Of the 3 patients who reported an improvement in the symptoms, one patient attributed the change to taking more exercise, one patient attributed the change to regaining employment, and the third patient acknowledged that the original symptoms were probably related to several

worrying problems she had at the time, and now that the situations had resolved, she was feeling much better.

8.4. DISCUSSION.

This chapter presents the results of a preliminary study of a treatment protocol for somatizing patients in the primary care setting. The small numbers in the study population precludes the drawing of any firm conclusions concerning the efficacy of the treatment, or of the generalizability of the results to general practice populations on the whole.

The results in this sample of somatizing patients, showed that administration of the Reattribution-Problem-Solving treatment protocol was no more effective in changing psychological health status as measured by the GHQ-28, than that of receiving 'usual care' from the doctor. In both the Control and Treatment groups of patients, the risk of having a psychiatric disorder as measured using GHQ-28 scores was reduced at 6 months follow-up after randomization or after completion of treatment. In fact, in the Control group, the mean score for the GHQ-28 at 6 months follow-up was below that of the cut-off for 'caseness', indicating that on average, patients who received 'usual care' were no longer at risk of having a psychiatric illness. This finding is in keeping with that of other studies that the mild psychiatric disturbance characteristic of that of the majority of patients in the community and in primary care frequently remits spontaneously within 6 months of its inception. (18,34,518-520)

However, although the scores for risk of psychiatric disorder fell, responses to the global question on health and well-being showed that in the majority of cases, there had been no change in physical symptoms in this time. Thus, most of the patients continued to experience somatic symptoms. Furthermore, scores on several of the scales of the IBQ showed a tendency to increase in the 6 month follow-up period, indicating that patients' illness beliefs and attitudes were unchanged or slightly more maladaptive at follow-up than they had been at the initial consultation. Thus, although, according to the decrease in scores for affective disturbance (AD), patients reported less anxiety and depression at follow-up, the global score for affective state (AS) was increased due to increasing hypochondriacal fears (GH, WI scales) and increasing feelings of social isolation and anger (I scale) in the Control group. The scores also showed that patients' beliefs that they had a serious physical illness were accompanied by increasing inability to be reassured by the doctor and an increasing inability to talk about negative fears and emotions. It is possible that as time passed and the symptoms remained unchanged, patients developed ways of 'learning to live with them'. Thus psychological distress associated with the experience of the symptoms was reduced. The cost of this to the patients however was measured by increasing feelings of loss of social contacts and an increasing burden of fears and negative emotions such as anger, which could not be verbalized.

These changes may be attributed to an increasing frustration on the part of the patient with the doctor's apparent inability to find an explanation for the symptoms, and the doctor's unwillingness to explore the patient's psychological status.

In comparison, while the risk of psychiatric illness was also reduced at 6 months follow-up for patients in the Treatment group, the decrease was less than that

for patients in the Control group, and patients in the Treatment group remained at risk of having such an illness. This result may be explained by the finding that as a result of the treatment, patients in this group more readily acknowledged distressing life problems. Thus, as is shown by the increase in the level of affective disturbance on the AD scale of the IBQ, patients reported more anxiety and depression at follow-up, which may be related to increasing awareness of psychological stressors. In comparison with patients in the Control group, the Treatment group patients were also more strongly convinced they had a serious illness and were unable to be reassured by the doctor. This may be a reflection of patient attitudes towards the management of psychiatric illnesses (23) and the patients' feelings of helplessness in the face of stressful life situations. In contrast with patients in the Control group, the Treatment group patients showed a tendency towards a decrease in the global measure of Affective State, because the scores for General Phobic Hypochondriasis fell, and the scores for feelings of social isolation (I scale) remained unchanged. Thus the treatment protocol may have had some effect in reducing fears about the meaning of the physical symptoms, by changing the patient's ideas about their source from that of a somatic origin to that of a psychologically distressing life problem. Scores for the Discriminant Function scale of the IBQ showed that, in comparison with patients in the Control group, whose scores on this scale were unchanged at follow-up, in the Treatment group, scores on the DF scale fell, indicating patients were less likely to be converting psychological stressors into physical symptoms at this time.

The results also show that although scores for Disease Conviction and Affective Inhibition increased for both the Control group and Treatment group patients in the follow-up period, as a result of the treatment protocol the increase was smaller in the Treatment group patients, with a difference which approached significance. This

may indicate that, given the opportunity to discuss their fears about the symptoms, and having been provided with an alternative explanation for them other than that of a physical disease, patients are more reassured that they are not seriously ill, and that they are able to talk with a health professional about negative fears and emotions with some benefit.

For several reasons, the results of this study are tentative. Firstly, the very small numbers in the study increases the possibility of a Type II error, and therefore diminishes the value of the results that were found. Secondly, differences between the two groups of patients in terms of the nature of the presenting complaint, and the severity and duration of the symptoms may have influenced the results. Patients presenting with chronic complaints accounted for just over 50% (10 patients out of the 19 patients in the study population); and the numbers are too small to be able to determine if chronicity might have affected the effectiveness of the treatment. The most common presenting complaint was that of 'pain'; but no specific data were collected with respect to diagnoses, since the major focus of the study was that of illness behaviour and psychiatric morbidity. In this respect, patients in the Treatment and Control groups were similar at the initial assessment.

Secondly, the effects of the treatment programme may have been confounded by concurrent therapy provided by the patients' doctors during the treatment programme and the follow-up period. While several patients from the original group of 39 somatizers, who were attending psychiatric services were excluded from the study, doctors may have provided counselling to those in the study if they felt there was a need for such services. No between-group differences were found at the follow-up

assessment on measures of the number of doctor consultations or medications, but there are no data on the content of the consultations that might explain the results.

Other studies of brief psychotherapeutic treatments based on a problem-solving for patients with inexplicable physical symptoms in the primary care setting have shown that such programmes are effective in reducing symptoms, and can be as effective as amitriptyline for up to 18 months. (373,515,521,522) As in these studies, patients who agreed to enter the treatment group generally found the programme acceptable and helpful, although there were some initial reservations about the procedure. All of the patients complied with completion of the homework problem-solving tasks, although it was apparent that on some occasions minimal effort was applied to the task. One difference between this study and others is that all but one of the patients were treated in their homes, where they continued to fulfil their daily roles. Hence, time constraints may have limited the time available to do the homework. If the treatment had been administered in the more formal setting of the doctor's surgery, patients might have felt obliged to spend more time on the tasks.

In contrast with the above-mentioned studies, the author encountered several problems commonly associated with studies of this nature in the primary care setting. A considerable problem, and one frequently encountered in studies of this nature in the primary care setting (523,524), was that of the relatively high refusal rate of patients asked to consider the treatment programme. A possible reason for this was that the patients were not formally referred to the treatment by the doctor, but were approached, with the doctor's permission by the author. That the author therefore was a stranger, outside the doctor-patient relationship, may have inhibited patients' willingness to undertake the treatment programme.

Previous studies of the use of counsellors and nurse practitioners in the administration of brief psychotherapy programmes for the management of patients with psychosocial problems in primary care have yielded conflicting results. Gournay and Brooking (525), concluded from a study of the efficacy of counselling by community psychiatric nurses in primary care that community psychiatric nurses were ineffective in this role, although their study suffered from a 50% drop-out of patients during treatment, and other methodological difficulties. More successful studies have shown that nurses in primary care have provided psychological treatments with good results in managing obsessional and phobic patients (526), and in improving compliance with anti-depressant medication (527). Finally, Mynors-Wallis et al (528) conducted a study of a problem-solving treatment for patients with emotional problems in primary care, administered by trained community nurses, which showed that, while there was no difference in clinical outcome between the treatment provided by the nurses compared to 'usual care' provided by the general practitioners, and that the health care costs of the problem-solving treatment were higher than that of the general practitioners 'usual care', this was offset by the reduction in costs to the community in terms of reduced functional disability and loss of work productivity.

In a review of the efficacy of psychosocial treatments in the primary care setting, Brown and Schulberg (529) conclude that the findings of randomized controlled trials of such treatments in this setting generally support the efficacy of psychosocial treatment programmes. This study showed that, while the treatment programme provided no greater benefit in reducing the risk of psychiatric morbidity in this group of patients than did receiving 'usual care' from the doctor, treatment did provide some tentative evidence that a Reattribution-Problem-solving protocol effected a change in some aspects of somatizing patients' illness behaviours, with a greater

acknowledgment of psychological stressors in these patients' lives. With previous evidence (382) that somatizing patients characteristically deny such problems, this may be seen as a successful initial step on the patient's part in dealing with the problem of somatization.

CHAPTER 9 .

CONCLUSIONS.

9.1. THE DEFINITION OF SOMATIZATION.

In the course of the past three decades, a considerable research effort has been directed towards obtaining a greater understanding of the phenomenon of 'somatization'. Yet, in spite of the volume of literature now available on this subject, complete agreement on the definition of 'somatization' continues to elude authors, and the phenomenon of 'somatization' remains an ongoing, frustrating and costly problem in the clinical setting.

Historically, the term 'somatization' is said to have been introduced by Wilhelm Stekel (43), a Viennese analyst who is reported to have had a tendency to coin new terms for already existing ones. (530) In Stekel's definition, somatization was related to the psychoanalytical concept of conversion, in which psychological conflict is involuntarily transformed into and presented as physical symptoms. In a similar vein, Menninger (69) referred to 'somatization reactions' as "*the visceral expression of anxiety which is thereby prevented from being conscious*". Thus 'somatization' was construed as a defence mechanism which allowed patients an avenue through which distress could be communicated through the presence of physical symptoms, at the same time as they were able to avoid having to deal with the actual psychological stressor.

The possibility that such symptoms might be a physiological response to distress was discounted, in preference for the belief that they were the psychopathological products of a disordered mind. The disembodiment of the emotions has been a notion particular to the theory and practice of 20th century Western medicine. The view that diseases are located in the body developed from late 19th century discoveries in cellular biology. Subsequently, medical research has

provided a wealth of knowledge of biological systems and mechanisms beyond the imaginations of physicians in preceding centuries. Accompanying these advances have been technological developments that have made possible highly sophisticated diagnostic and treatment procedures which have served to further focus the attention of medical practitioners on bodily processes. As a result, physical symptoms that cannot be accounted for by the presence of a disease are described as 'in the mind', and are considered to be 'unreal' or 'imagined'.

Both past and current definitions of somatization have been and continue to be based on the assumption that the presence of physical symptoms without demonstrable organic pathology is due to psychopathological processes. Thus, the definitions of Katon et al (531), Kleinman and Kleinman (224), Ford (532,533) and Bridges and Goldberg (27) all relate organically inexplicable physical symptoms to the presence of a psychological/psychiatric disorder.

It is evident however, that ill-defined and organically inexplicable symptoms are a part of the everyday life of all individuals. Studies show that between 75% and 80% of persons experience such symptoms in an average month or week. (534-536) They may vary between fleeting, barely discernible sensations to a temporarily disabling symptom such as headache. It is unlikely that all of these symptoms are indications of the presence of a disease process, nor are they necessarily associated with psychological distress.

Research also shows that only 25% of individuals who experience symptoms seek medical help. Whether or not persons seek medical help, and the manner in which they do so has been shown to be determined by a wide range of factors. These include

the manner in which the symptoms are perceived, how disabling they are or are considered likely to become, the individual's explanations for the possible cause of the symptoms, and considerations about whether or not a medical practitioner is the appropriate source of help. Both Fabrega and Kirmayer have described how these personal appraisals and subsequent actions are largely informed by experience gained and behaviours learned in the individual's immediate social milieu, in the community in which the individual lives and by cultural norms of behaviour. (1,172) The greatest tendency, particularly in primary care, is that when patients seek medical help, they do so for physical symptoms. A second view of somatization, then, holds that it is a learned behaviour related to childhood experiences of illness behaviour of persons closely associated with the child's life, or that it may be a behaviour related to childhood experiences of neglect and lack of caring (77,253,537), which may teach somatizing behaviour directly, or indirectly through an influence on personality development.

With these views in mind, somatization, as it occurs in the primary care setting may most usefully be described as Lipowski defined it (77): that it is

“ a tendency to experience and communicate somatic distress and symptoms unaccounted for by pathological findings, to attribute them to physical illness, and to seek medical help for them”. (77)

While this definition is broad and encompasses a wide range of clinical situations, it provides a reasonable base from which to begin to understand the phenomenon of 'somatization'. It does not immediately confine the observer to a diagnostic category, the presence of disorder or abnormality or the implied presence of a psychiatric illness. This definition proposes that there are four essential components

of somatization; namely, that it comprises (i) experiential, (ii) cognitive (iii) behavioural, and (iv) observational dimensions. That is, the phenomenon of 'somatization' is derived from the patient's experience and perception of symptoms, the causal attributions patients make about the aetiology of the symptoms, the particular reaction with which patients respond to the symptoms which is to seek medical help, and the doctor's assessment that the symptoms do not appear to be attributable to an organic pathological state. It is notable that three of these components, namely experiential, cognitive and behavioural factors, bear a close similarity to factors Mechanic described as determinants of illness behaviour, which he defined as:

the ways in which given symptoms may be differentially perceived, evaluated and acted (or not acted) upon by different kinds of persons. (81)

9.2. THE IDENTIFICATION OF SOMATIZATION.

In clinical practice, the identification of disease states has historically been expedited by the establishment of classification systems. Since the conceptual separation of the mind from the body as a result of scientific and medical discoveries in the 19th century, such systems have been based on the presumption that diseases are independent, discrete entities located in the body, that will manifest in the same way in every individual. Accordingly, classification systems were therefore structured as aetiological, based upon pathological findings; or as descriptive, relying upon stable patterns of symptoms. In the context of classification, illnesses presented as physical symptoms without demonstrable organic findings were termed 'psychosomatic' or 'psychogenic' and therefore fell within a psychiatric classification because of the

assumption that such symptoms were due to psychopathological rather than organic processes. (538)

Although there have been several attempts to classify psychiatric disorders according to an aetiological model, these have largely failed, because the aetiology of the disorders is unknown or unproven. (539) This is no less true in the case of the occurrence of physical symptoms without organic pathology.

The inclusion of such symptoms under the umbrella of 'somatoform disorders' in the DSM and ICD classification systems was welcomed when this diagnostic category first appeared.(77,493) Drawn from 18th and 19th century disease constructs in psychiatry such as hysteria, conversion and hypochondriasis, it provided a pathway along which to further explore the phenomenon of puzzling somatic symptoms without a basis in organic illness. However, it remains understood that such categorizations are "*drafts in need of verification and renewal*" (540), and that there is a pressing need for empirically based criteria for the classification of somatoform disorders. (541) The most recent DSM -IV classification comprises five disorders in the diagnostic category of 'somatoform illnesses'; namely, somatization disorder, conversion disorder, pain disorder, hypochondriasis, and undifferentiated somatoform disorder. The construct validity of several of these disorders, such as conversion disorder (542) and hypochondriasis (530) remains a source of debate, while the criteria for pain disorder are considered to be imprecise, so that the diagnosis is rarely used. (77) A further criticism is that the specification that inexplicable pain should be present for at least 6 months, precludes early diagnosis and appropriate treatment which might prevent the problem from becoming chronic and intractable. (77)

Of the five disorders in the DSM-IV category of 'somatoform disorders', the most widely accepted is that of 'somatization disorder'. (205,243) Diagnosis of this disorder has been based on the count of inexplicable physical symptoms experienced in a lifetime. However, the criteria have been reduced in successive DSM and ICD classifications as it became evident that, using the original criteria exclude a large number of cases of 'somatization' particularly in the primary care setting. Most recently, Escobar has proposed an 'abridged somatization' disorder requiring 4 and 6 symptoms for males and females respectively. (75) Finally, as a result of studies conducted in the primary care setting, Kirmayer and Robbins working in Montreal have proposed three discrete forms of somatization with distinct and separate aetiologies (196,199); namely, 'Functional' somatization, 'Hypochondriacal' somatization and 'Presenting' somatization. By far the most common form, and that with which primary care physicians are most familiar, is that of 'Presenting' somatization. These authors have further subdivided this form of somatization into 'Initial', 'Facultative' and 'True' somatization. Presenting somatization, as its title suggests refers to the consulting behaviour of patients without overtones of psychopathology. It remains to be verified that the three forms of somatization proposed by Kirmayer and Robbins represent discrete entities, as the link between presenting somatization and the more severe and chronic form of somatization disorder is poorly understood. As Bridges and Goldberg (27) have suggested, they may well be better understood as a dimensional phenomenon, and the outcome of biologically-focused medical practice that tends to reinforce a somatic focus in the investigation of patients' symptoms. In a similar vein, Katon et al (208) have presented the view that somatization may be regarded in terms of a 'continuum of illness', with increasing numbers of inexplicable physical symptoms being accompanied by increasing rates of

co-existing psychiatric disorders, dysfunction and disability and utilization of medical resources.

Thus, lacking conclusive evidence of a definitive aetiological basis and natural history (543), and confounded by co-morbidity, typically in the form of depressive and anxiety disorders, the classification of 'somatoform disorders' remains a controversial issue. Some authors, such as McWhinney et al (544), call for the abandonment of the notion that 'somatoform disorders' are in fact disease states; concluding as Kirmayer and Robbins have done (545), that;

with the possible exception of somatization disorder per se, the somatoform diseases appear to be best thought of as symptoms or patterns of reaction, rather than discrete disorders with a discrete natural history". (545)

9.3. SOMATIZATION AS A FORM OF ILLNESS BEHAVIOUR.

This thesis has shown that, in the primary care setting, patients who present to general practitioners with physical symptoms for which the doctor can find no adequate explanation in organic pathological findings, differ significantly from patients with organic illnesses or with psychological problems in several aspects of illness behaviour. These aspects include differences in each of the four components of somatization as Lipowski defined it; that is in experiential, cognitive, behavioural and observational dimensions. That is, 'somatizing' patients present with distinctly different attitudes and beliefs about the nature, severity and significance of their symptoms, compared to the beliefs of patients with organic illnesses or with psychological problems.

9.3.1. Differences in Experiential (Perceptual) Factors.

The scores on the Whiteley Index scale of the Illness Behaviour Questionnaire show that somatizing patients are more likely to hold hypochondriacal concerns about the occurrence of physical symptoms. That is, as is the tendency of hypochondriacal patients, somatizing patients are more likely to be hypervigilant about bodily functioning, to sense physiological changes more acutely, to perceive symptoms as more serious and threatening, and to seek help for more innocuous symptoms than other individuals. Thus in their responses to questions comprising the Whiteley Index of Hypochondriasis of the IBQ, somatizing patients indicate that they are pre-occupied and more worried about their health than others, they believe the symptoms mean there is something seriously wrong, and they report being frequently aware of and concerned about aches and pains and other bodily sensations. (383)

It is not within the scope of this thesis to be able to explain why some patients apparently detect and respond to innocuous symptoms in this manner. Barsky (112), however, suggests evidence for a 'somatosensory amplifying style', whereby some people are more sensitive to, and report changes in internal sensations earlier than others. The mechanisms underlying such a style are unknown. Some suggest there is evidence for a role for genetic factors (546-550), for heightened perception of physiological changes associated with self-directed attention and anxiety (214), or that somatosensory amplification is associated with inadequate and inappropriate concepts of health and illness (117) or with disease phobias. (175,209) The findings of this thesis suggest that detection of these beliefs may provide an explanation for physical symptoms that have no apparent basis in organic illness.

9.3.2. Differences in Cognitive Factors.

Comparison of scores on several scales of the IBQ indicate differences in cognitive factors that distinguished between somatizing patients and patients who presented with organic or psychological illnesses. These were the scales for Disease Conviction and Disease Affirmation in the case of somatizing patients and patients with organic illnesses, and scales for Psychological versus Somatic Focusing and Denial in the case of somatizing patients and patients who presented with psychological problems. In the former case, somatizing patients expressed the belief more strongly that they had a physical illness, and reported that they would be less likely to be reassured by a doctor who felt otherwise. In the latter case, somatizing patients are distinguished from psychologizing patients by an attributional style in which the predominant focus is on a somatic cause for the symptoms rather than a psychological cause; so much so that somatizing patients are more likely to deny having psychological stressors in their lives, other than those that are attributed to the presence of the symptoms.

Barsky has proposed that one possible explanation for these findings, is that people are somatically-minded or psychologically-minded on a continuum between one or the other extremes. (492,493) Causal attributions for symptoms are therefore directed towards a somatic or psychological aetiology, depending on where the patient is located on this continuum. The findings of this study indicate that the nature of the causal attributions about symptoms are a significant element in somatization, because the tendency is to attribute symptoms to a somatic/physical disease and to resist psychosocial explanations. This somatic interpretation has been shown to be strongly influenced by both social and cultural factors. (1,169,224,551,552). This has been particularly demonstrated in research directed towards elucidating community attitudes

and beliefs attached to mental illness, in which Jorm et al (23), Rogers and Pilgrim (24), and Read and Law (553) have found mental illness is regarded by many in the community, as due to a lack of moral fibre, and an inability to cope with psychologically stressful situations. Thus, as Goldberg has suggested, blame avoidance may be a motivating factor in the presentation of medically inexplicable physical symptoms. (282)

9.3.3. Differences in Behavioural Factors.

A final distinguishing characteristic of somatizing patients is that they seek medical help for symptoms that are frequently diffuse and ill-defined. While other patients may seek advice for such complaints from a variety of sources, including family and friends before seeking medical help, somatizing patients are shown in this thesis to feel more isolated and alone when unwell according to scores on the Irritability scale of the IBQ. That is, somatizing patients report being irritable, impatient and difficult to get along with when ill, and as a result may distance themselves or be rejected by family and friends in these circumstances. Thus, cut off from many of the sources from which they might otherwise seek advice and support, the doctor may be the only legitimate source to whom to turn when diffuse and ill-defined symptoms occur - symptoms, that might in other circumstances, be dispelled by lay consultations with family and friends.

9.3.4. The Role of the Doctor's Findings in Somatization.

The role of the doctor's findings in the phenomenon of somatization, detectable by an assessment of the patient's illness behaviour is shown by differences in the

Disease Conviction scale of the IBQ. Thus, somatizing patients are found to be less easily reassured by the doctor's findings than patients with organic or psychological illnesses. Given the considerable advances in medical science and technology in the latter part of this century, patients who are overly anxious about the symptoms may be reluctant to accept that no physical explanation can be found to explain them, and some doctors have a tendency to reinforce this view by continuing to order investigations and to provide symptomatic treatments. This behaviour is compounded by reported prevailing community attitudes and beliefs, that dealing with psychosocial issues does not fall within the purview of General Practitioners' responsibilities, and that there is little faith in the community that medical science can do much for such problems. (23,491,554,555)

It is the view of some authors that somatization is a 'collusive phenomenon' (33), whereby both doctor and patient understand that somatization associated with psychological problems is present, but where both are more comfortable in dealing with physical problems than psychological issues. Many doctors feel they are untrained and ill-prepared to deal with psychological problems, and are therefore unwilling to do so for fear of making the problem worse.(36) Other issues for doctors in primary care are lack of time, financial inequities, fear of litigation, and lack of support. (556-558) However, if the problem persists, the eventual outcome of such consultations tends to be one of dissatisfaction and frustration for both the doctor and the patient, and little is gained from such transactions.

9.4. TREATMENT OF SOMATIZATION IN THE PRIMARY CARE SETTING.

The data show that in the primary care setting, somatizing patients differ from patients with organic illnesses and patients with psychological problems on aspects of illness behaviour which are part of the appraisal process undertaken by patients before consulting a doctor. Two elements of this process that have been shown to distinguish somatizing patients from patients in the other two groups are those of making causal attributions about the symptoms and denial of psychological stressors in the patients' lives. In the short-term, both of these factors are believed to be part of an adaptive process, as patients adjust to the presence of the symptoms and the discomfort and dysfunction they may cause.

That the symptoms are mistakenly attributed to a somatic/physical disease, or that the presence of life problems other than those that may be attributed to the symptoms is denied may be a reflection of a lack of medical knowledge, or may be explained by the fact that, while the patient is aware of other problems, their main concern is with the possible threat of physical disease associated with the symptoms. As Goldberg et al (371) have shown, patients may simply be unaware of the link between psychological distress and physical symptoms.

Management of these symptoms then, requires bringing patients to the realization that such a link may be made. This cannot be achieved by implying or stating that the symptoms are due to emotional distress, for such a statement is commonly interpreted by the patient as suggesting that the symptoms are imagined or unreal and may create grounds for conflict between doctor and patient. Medical reassurance that no disease state can be found should take the form of an informed

explanation, rather than telling the patient that all is well. (559) Furthermore, offering an explanation of the link between emotional states and physical symptoms is likely to fail, for this is a realization that patients themselves must make.

It is evident that some patients will acknowledge the association between psychological distress and physical symptoms more readily than others. Some patients, as for Kirmayer's 'initial' somatizers may spontaneously offer such an explanation; others, termed 'facultative' somatizers may make the link in the course of the consultation with careful questioning, while 'true' somatizers may require more intensive therapy and additional help with psychosocial issues.

The results of the treatment study reported in this thesis indicate that short-term psychotherapy was effective in changing one aspect of illness behaviour that distinguished somatizing patients from patients with organic or psychological problems; that is, denial of psychologically distressful problems other than problems associated with the presence of the symptoms per se. Given the small numbers in the study population, few conclusions about the efficacy or the effectiveness of the treatment can be drawn. However, the study showed, as other studies have done, that given the opportunity to discuss their problems, patients will do so (522,560), and this alone may be beneficial.

9.5. CONCLUSIONS.

This thesis is the first to utilize the Illness Behaviour Questionnaire in a large scale study of somatization in the primary care setting. Previous studies utilizing the

IBQ in this setting have generally been conducted in single practices (246), or have been directed towards particular problems, such as chronic pain (390-395) or the effect of ethnicity on attitudes and beliefs about illness. (399) In contrast, this study has examined illness behaviour in patients from a range of metropolitan socio-economic, cultural and educational backgrounds, and whose presentation is for the broad constellation of symptoms and problems common to the primary care setting.

The study differs further from previous studies of somatization in this setting, by examining all aspects of illness behaviour delineated in the IBQ, compared with previous studies that have extracted a particular subscale such as the Disease Affirmation scale used by Chaturvedi (337), or that have used the Whiteley Index for Hypochondriasis, as in Speckens' studies. (388) This has provided a measurement of singular attitudes and beliefs about illness, rather than that of the global representations provided by the composite scales of the IBQ; thus allowing a greater elucidation of the inter-relationships of the primary scales of the IBQ in the complex behaviours undertaken by patients when ill.

Finally, this thesis presents a study of patients as they consult a number of doctors in a variety of settings, as opposed to specialized General Practice departments located within University or teaching hospital locations. It is in the setting of this study, that patients undertake their first encounter with a doctor; and to this meeting, they bring their singular attitudes and untested beliefs about the symptoms they present. At the same time, the trappings of their lives outside of their illness may be a short distance from the door to the doctor's surgery. In the world of the General Practitioner, described as "*such a different world compared to the safety and predictability of medicine viewed from within teaching hospitals*" (561), the four

major tasks of the doctor are, “*handling undifferentiated illness, managing long term chronic illness, intervening in preventative care and accessing the complex systems of supporting care within and outside the medical systems*”. (561)

The central theme of this study then, is that somatization in the primary care setting may better be understood as a form of illness behaviour, and is the product of the many complex processes and behaviours undertaken by patients before their first encounter with a doctor.

The results of the study have demonstrated significant differences in aspects of illness behaviour that distinguish somatizing patients from patients with organic illnesses and patients with psychological problems. The findings suggest that the identification and management of somatization may be facilitated by a consideration of the perceptual and cognitive processes undertaken by patients, as they seek to find a meaning for, and an interpretation of the significance of their symptoms, before consulting a doctor. This requires that doctors should be knowledgeable not only of the somatic dimensions of the body, but also of the influence of psychological factors and the social, cultural environments in which persons learn from childhood how to behave when feeling ill. (562) These factors will all shape the illness attitudes and beliefs of individuals, which will in turn determine when and the manner in which patients will present to doctors. As Eisenberg has written;

“Children inherit - along with their parent’s genes - their parents, their peers and the places they inhabit. Neighbourhood and neighbours matter, as do parents and siblings .” (563)

Finally, it is essential in the identification and management of somatization that there is a compassionate acceptance that no suffering is unreal; and that, although the

mechanisms are as yet poorly understood or unknown, suffering may be as eloquently expressed in bodily terms as it may be stated verbally.

9.6. RECOMMENDATIONS FOR FUTURE RESEARCH IN SOMATIZATION.

A great deal remains to be understood about the phenomenon of somatization, particularly as it occurs in the primary care setting. The following recommendations are made for further study.

1. Clarification of a relationship between a psychopathological theory of somatization and an illness behaviour theory influenced by social and cultural factors.
2. Exploration of concepts such as somatic versus psychological mindedness and somatosensory amplification as factors contributing to the phenomenon of somatization.
3. Collaborative research between the fields of psychiatry and neuroscience to examine links between genetic risk factors and illness behaviour; and vulnerability to psychological disturbance and factors associated with the perception and interpretation of the meaning of symptoms.

4. Prospective-longitudinal studies of the outcomes of somatizing behaviour in terms of dysfunction and disability, and in terms of repetitive or relapsing behaviour.
5. Further long-term studies of therapeutic interventions which provide a comparison between psychotherapies provided by general practitioners, psychiatrists, psychologists and nurse practitioners, as well as pharmacological agents and treatment as usual by general practitioners.
6. Economic analyses of the costs of treatment of somatization, so that information about the most effective treatments may be disseminated through the Divisions of General Practice to medical practitioners.

CHAPTER 10.

APPENDICES.

10.1 ILLNESS BEHAVIOUR QUESTIONNAIRE

NAME: _____ UR No.: _____

DATE: _____ AGE: _____ LENGTH OF ILLNESS: _____

HEALTH SURVEY

On the following pages you will find a number of questions about your health and how it affects you. For the purposes of our survey, it is important that you complete every question, even though some of them may not be directly applicable to you.

We thank you very much for your co-operation.

C: I Pilowsky and ND Spence. Inquiries: Dept of Psychiatry, The University of Adelaide.
South Australia.

Here are some questions about you and your illness. Circle either YES or NO to indicate your answer to each question.

- | | | |
|--|-----|----|
| 1. Do you worry a lot about your health? | YES | NO |
| 2. Do you think there is something seriously wrong with your body? | YES | NO |
| 3. Does your illness interfere with your life a great deal? | YES | NO |
| 4. Are you easy to get on with when you are ill? | YES | NO |
| 5. Does your family have a history of illness? | YES | NO |
| 6. Do you think you are more liable to illness than other people? | YES | NO |
| 7. If the doctor told that he could find nothing wrong with you would you believe him? | YES | NO |
| 8. Is it easy for you to forget yourself and think about all sorts of other things? | YES | NO |
| 9. If you feel ill and someone tells you that you are looking better, do you become annoyed? | YES | NO |
| 10. Do you find you are often aware of various things happening in your body? | YES | NO |
| 11. Do you ever think of your illness as a punishment for something you have done wrong in the past? | YES | NO |
| 12. Do you have trouble with your nerves? | YES | NO |
| 13. If you feel ill or worried, can you be easily cheered up by the doctor? | YES | NO |
| 14. Do you think that other people realize what its like to be sick? | YES | NO |
| 15. Does it upset you to talk to the doctor about your illness? | YES | NO |
| 16. Are you bothered by many aches and pains? | YES | NO |
| 17. Does your illness affect the way you get on with your family or friends a great deal? | YES | NO |
| 18. Do you find that you get anxious easily? | YES | NO |
| 19. Do you know anybody who has the same illness as you? | YES | NO |
| 20. Are you more sensitive to pain than other people? | YES | NO |
| 21. Are you afraid of illness? | YES | NO |
| 22. Can you express your personal feelings easily to other people? | YES | NO |

23. Do people feel sorry for you when you are ill?	YES	NO
24. Do you think that you worry about your health more than other people?	YES	NO
25. Do you find that your illness affects your sexual relations?	YES	NO
26. Do you experience a lot of pain with your illness?	YES	NO
27. Except for your illness, do you have any problems in your life?	YES	NO
28. Do you care whether or not people realize you are sick?	YES	NO
29. Do you find that you get jealous of other people's good health?	YES	NO
30. Do you ever have silly thoughts about your health which you can't get out of your mind, no matter how hard you try?	YES	NO
31. Do you have any financial problems?	YES	NO
32. Are you upset by the way people take your illness?	YES	NO
33. Is it hard for you to believe the doctor when he tells you there is nothing for you to worry about?	YES	NO
34. Do you often worry about the possibility that you have got a serious illness?	YES	NO
35. Are you sleeping well?	YES	NO
36. When you are angry, do you tend to bottle up your feelings?	YES	NO
37. Do you often think that you might fall suddenly ill?	YES	NO
38. If a disease is brought to your attention through the radio, television, newspapers or someone you know, do you worry about getting it yourself?	YES	NO
39. Do you get the feeling that people are not taking your illness seriously enough?	YES	NO
40. Are you upset by the appearance of your face or body?	YES	NO
41. Do you find that you are bothered by many different symptoms?	YES	NO
42. Do you frequently try to explain to others how you are feeling?	YES	NO
43. Do you have any family problems?	YES	NO
44. Do you think there is something the matter with your mind?	YES	NO
45. Are you eating well?	YES	NO
46. Is your bad health the biggest difficulty of your life?	YES	NO

47. Do you find that you get sad easily?	YES	NO
48. Do you worry or fuss over small details that seem unimportant to others?	YES	NO
49. Are you always a co-operative patient?	YES	NO
50. Do you often have the symptoms of a very serious disease?	YES	NO
51. Do you find that you get angry easily?	YES	NO
52. Do you have any work problems?	YES	NO
53. Do you prefer to keep your feelings to yourself?	YES	NO
54. Do you often find that you get depressed?	YES	NO
55. Would all your worries be over if you were physically healthy?	YES	NO
56. Are you more irritable towards other people?	YES	NO
57. Do you think that your symptoms may be caused by worry?	YES	NO
58. Is it easy for you to let people know when you are cross with them?	YES	NO
59. Is it hard for you to relax?	YES	NO
60. Do you have personal worries which are not caused by illness?	YES	NO
61. Do you often find that you lose patience with other people?	YES	NO
62. Is it hard for you to show people your personal feelings?	YES	NO

**10.2 GENERAL HEALTH QUESTIONNAIRE
(SCALED 28-ITEM FORM)**

DATE: _____
NAME: _____ AGE: _____ SEX: _____

GENERAL HEALTH QUESTIONNAIRE

Please read this carefully.

We would like to know if you have had any medical complaints, and how your health has been in general, over the past few weeks. Please answer ALL questions on the following pages, by simply underlining the answer which you think most applies to you. Remember that we want to know about present and recent illnesses, not those you had had in the past.

It is important to try to answer ALL of the questions.

Thank-you for your co-operation.

HAVE YOU RECENTLY:

1. Been feeling perfectly well and in good health?

Better than usual	Same as usual	Worse than usual	Much worse than usual
----------------------	------------------	---------------------	--------------------------

2. Been feeling in need of a good tonic?

Better than usual	Same as usual	Worse than usual	Much worse than usual
----------------------	------------------	---------------------	--------------------------

3. Been feeling run down and out of sorts?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

4. Felt that you are ill?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

5. Been getting any pains in your head?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

6. Been getting a feeling of pressure or tightness in your head?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

7. Been having hot or cold spells?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

8. Lost much sleep over worry?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

9. Had difficulty staying asleep once you are off?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

10. Felt constantly under strain?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

11. Been getting edgy or bad-tempered?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

12. Been getting scared or panicky for no good reason?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

13. Found everything getting on top of you?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

14. Been feeling nervous or strung up all the time?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

15. Been managing to keep yourself busy and occupied?

More so than usual	Same as usual	Rather less than usual	Much less than usual
-----------------------	------------------	---------------------------	-------------------------

16. Been taking longer over the things that you do?

Quicker than usual	Same as usual	Longer than usual	Much longer than usual
-----------------------	------------------	----------------------	---------------------------

17. Felt on the whole you were doing things well?

Better than usual	About the same	Less satisfied than usual	Much less than usual
----------------------	-------------------	------------------------------	-------------------------

18. Been satisfied with the way you have carried out your tasks?

More satisfied	About the same	Less satisfied than usual	Much less than usual
-------------------	-------------------	------------------------------	-------------------------

19. Felt you were playing a useful part in things?

More so than usual	Same as usual	Less useful than useful	Much less than usual
-----------------------	------------------	----------------------------	-------------------------

20. Felt capable of making decisions about things?

More so than usual	Same as usual	Less so than usual	Much less than usual
-----------------------	------------------	-----------------------	-------------------------

21. Been able to enjoy your normal day-to-day activities?

More so than usual	Same as usual	Less so than usual	Much less than usual
-----------------------	------------------	-----------------------	-------------------------

22. Been thinking of yourself as a worthless person?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

23. Felt that life was entirely hopeless?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

24. Felt that life isn't worth living?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

25. Thought of the possibility that you might make away with yourself?

Definitely not	I don't think so	Has crossed my mind	Definitely have
-------------------	---------------------	------------------------	--------------------

26. Found at times you couldn't do anything because your nerves were so bad?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

27. Found yourself wishing you were dead and away from it all?

Not at all	No more than usual	Rather more than usual	Much more than usual
---------------	-----------------------	---------------------------	-------------------------

28. Found that the idea of taking your life kept coming into your mind?

Definitely not	I don't think so	Has crossed my mind	Definitely have.
-------------------	---------------------	------------------------	---------------------

10.3 LETTER FROM AUTHOR TO DOCTORS

Adelaide Central and Eastern Division of General Practice.
University of Adelaide.

DEPT. OF PSYCHIATRY.
Royal Adelaide Hospital
North Terrace
Adelaide. SA 5000.
Phone (08) 223 5141.

18th January, 1995.

Dear Doctor, 

Re: SOMATIZATION and GENERAL PRACTITIONER UTILIZATION STUDY.

Somatization, ie. "*the expression of personal and social distress in an idiom of bodily complaints and medical help-seeking*" has received increasing attention in recent years, as it is to General Practitioners in the primary care setting that patients first present. As a deceptive form of presentation, somatization is now known to be associated with considerable costs to the individual in terms of suffering, to the doctor in terms of time and frustration, and to the health care system in economic terms. This study plans to address two major factors largely responsible for these costs: viz. the difficulty of early recognition, and the institution of an effective treatment of this phenomenon.

Beginning in February 1995, the Adelaide Central and Eastern Division of General Practice in conjunction with the Departments of Psychiatry and General Practice in the University of Adelaide plan to conduct a study of Somatization and General Practitioner Utilization.

The project is designed in two stages.

STAGE ONE will concern the development of a method for identifying patients who are "somatizers". This will be done using two questionnaires. The first, the General Health Questionnaire assesses the risk that the patient is at of having a degree of psychological disturbance: and the second, the Illness Behaviour Questionnaire assesses characteristics of the patient's illness behaviour which may suggest the likelihood of the presence of "hypochondriacal syndrome" or a "conversion reaction".

STAGE TWO concerns the institution and evaluation of an early intervention programme. The nature of the intervention is that of a psychosocial counselling programme, the rationale of which is to assist the patient to reattribute their physical symptoms to psychological distress.

Pilot studies were conducted in three practices in the Adelaide Central and Eastern Division in 1994 to assess the feasibility of undertaking such a study. Bearing in mind information gained from these studies, we plan to conduct the study

with minimum disruption of the doctor's time and to the running of the practice. Recruitment and assessment of the patients, as well as institution of the treatment programme will be undertaken, under your direction, by Ms J. Scicchitano. Ms Scicchitano is a post-graduate student in the Department of Psychiatry at the Royal Adelaide Hospital and is funded by a Dawes Fellowship from the hospital. Her background is in nursing where she practice for several years at the bedside in areas including renal, oncological and intensive care nursing before becoming involved in research. At the end of 1993, Ms Scicchitano completed an Honours degree through the Dept. of Psychiatry at the Royal Adelaide Hospital. The project was a study concerned with the illness behaviour and responsiveness to treatment of patients experiencing chronic pain which was therefore related to somatization. Throughout the proposed project, Ms Scicchitano will be supervised by Professor I. Pilowsky (Dept. of Psychiatry) and Dr J. Marley (Dept. of General Practice).

The purpose of this letter is to bring the study to your notice. We would greatly appreciate your participation in this study. Not only do we hope to be able to find some answers to the problem of somatization as it involves General Practitioners, but we would also hope to be able to establish closer links between the Royal Adelaide Hospital and the General Practitioners it serves. Ms Scicchitano will telephone shortly for any questions you may have, and to find out whether you would like to be part of the study.

Your's faithfully,

10.4 INFORMATION SHEET

INFORMATION SHEET.

Introduction:

You are invited to take part in a Health Study being conducted by the Departments of Psychiatry and General Practice of the Royal Adelaide Hospital and the University of Adelaide. The purpose of the study is to investigate the effect that illness and patient's attitudes and reactions to an illness have on their recovery from an episode of ill-health.

It is believed that attitudes and reactions to illness influence the way in which a patient deals with difficulties that arise, when normal daily routines are disrupted by ill-health. This may consequently affect a patient's recovery, by prolonging the recovery period. As a result of our investigations, we plan to study ways in which problems which delay recovery may be overcome. We have chosen to study patients who attend General Practitioners, for although their health problems may not be severe enough to require hospitalization, we are aware that they may nevertheless create major difficulties for patients and their families.

What Involvement in the Study Means.

If you agree to take part in the study, you will be required to complete two questionnaires:

- i) The **General Health Questionnaire** which provides a measure of your state of well-being in the weeks prior to attending the doctor; and
- ii) The **Illness Behaviour Questionnaire** which gives a measure of how illness affects you.

After completing the questionnaires, you will see your doctor and continue to be treated by him as you normally would do. At a later date, an opportunity will be made available to you, should you feel you require help with the illness, to receive such assistance.

Ethical Considerations.

Your participation in the study is voluntary. If you agree to take part, but then change your mind, you may withdraw from the study, at any time, without any change in your relationship with your doctor.

Participation in the study does not involve payment of any kind.

All documentation will remain strictly confidential. No identifying information or results will be made available to any person not directly involved in the study. It is important for you to know that, although your medical records will be kept confidential, it may be necessary for the investigators to obtain some information concerning your illness from your General Practitioner.

The proposal for this study has been reviewed and approved by the Human Ethics Committee of the Royal Adelaide Hospital. Should you wish to discuss aspects of the study with one of the investigators, you may contact Mrs J. Scicchitano in the Department of Psychiatry, on telephone number 222.5141; or if you wish to discuss the study with someone not directly involved, you may contact the Chairman of the Human Ethics Committee, Dr. R. Webb, on telephone number (08) 222 5345.

10.5 CONSENT FORM

CONSENT FORM.

PROTOCOL NAME: Illness Behaviour in General Practice.

INVESTIGATORS. Ms Jan Scicchitano, Prof. John Marley and
Prof Issy Pilowsky.
Royal Adelaide Hospital and The University of Adelaide.

1. The nature and purpose of the research project have been explained to me. I understand it, and agree to take part.
2. I understand that I may not benefit directly from taking part in the study.
3. I understand that, while information gained during the study may be published, I will not be identified and my personal results will remain confidential.
4. I understand that I can withdraw from the study at any time and this will not affect my medical care, now or in the future.
5. I understand the statement concerning payment to me for taking part in the study, which is contained in the information sheet.
6. I have had the opportunity to discuss taking part in this study with a family member or friend.

Name of Subject:

Signed:

Date:

I certify that I have explained the study to the patient and consider that he/she understands what is involved.

Signed:

10.6 DOCTOR'S DATA SHEET

DOCTOR'S DATA SHEET.

Date.

Patient's Name. Age. Sex.

PRESENTATION:

Did patient present **primarily** with a physical complaint?

Yes

Are you satisfied that an **adequate** physical cause for the complaint may be established?

Yes

No

OR

Did the patient present **primarily** with a psychological complaint?

Yes

OR

Did patient present for a routine procedure?
(eg. BP check, diabetic check, Pap smear)

Yes

BIBLIOGRAPHY

1. Fabrega H. Somatization in cultural and historical perspective. In *Current Concepts of Somatization: Research and Clinical Perspectives*. Kirmayer LJ, Robbins JM. (Eds) American Psychiatric Press Inc. 1991: 181-199.
2. Shepherd M, Cooper B, Brown A, Kalton G. *Psychiatric illness in General Practice*. Oxford University Press. Oxford. 1966.
3. Kessler LG, Cleary PD, Burke JD. Psychiatric disorder in primary care. *Arch Gen Psychiatry*. 1985; 42: 583-587.
4. Williams P, Tarnopolsky A, Hand D, Shepherd M. Minor psychiatric morbidity and general practice consultations. London Survey. *Psycholog Med*. Monograph 1986; Suppl 9.
5. Barrett JE, Barrett JA, Oxman TE, Gerber PD. The prevalence of psychiatric disorders in a primary care practice. *Arch Gen Psychiatry*. 1988; 45: 1100-1106.
6. Ormel J, Maarten WJ, Koeter MA, van den Brink W, van de Williage G. Recognition, management and course of anxiety and depression in general practice. *Arch Gen Psychiatry*. 1991; 48: 700-706.
7. Goldberg D, Huxley P. *Common Mental Disorders: a biosocial model*. Tavistock/Routledge. London. 1992.

8. Sartorius N, Ustun TB, Costa e Silva J-A, Goldberg D, Lecrubier Y, Ormel J, Von Korff M, Wittchen H-U. An international study of psychological problems in primary care. *Arch Gen Psychiatry*. 1993; 50: 819-824.
9. Ustun TB, Gater R. Integrating mental health into primary care. *Current Opinion in Psychiatry*. 1994; 7: 173-180.
10. Regier D, Goldberg D, Taube C. The de facto mental health services system. *Arch Gen Psychiatry*. 1978; 35: 685-693.
11. Kessler L, Cleary P, Burke J. Psychiatric diagnosis of medical service users: evidence from the Epidemiological Catchment Area Programme. *Am J Public Health*. 1987; 77: 18-24.
12. Croft-Jeffries C, Wilkinson G. Estimated costs of mental disorder in United Kingdom general practices. *Psycholog Med* 1989; 19: 549-558.
13. World Psychiatric Association. International Committee for Prevention and Treatment of Depression Module/ Overview of Fundamental Aspects. Eli Lilly & Co. 1993.
14. Stansfield S, Feeny A, Head J, Canner R, North F, Marmot M. Sickness absence for psychiatric illness. The Whitehall II Study. *Soc Sci Med*. 1995; 40: 189-197.

15. Orley J, Saxena S, Herrman H. Quality of life and mental illness. *Br J Psychiatry*. 1998; 172: 291-293.
16. Huppert FA, Whittington JE. Symptoms of psychological distress predict 7-year mortality. *Psycholog Med*. 1995; 25: 1073-1085.
17. Ketterer MW, Huffman J, Lumley MA, Wassef S, Gray L, Kenyon L, Kraft P, Brymer J, Rhoads K, Lovallo WR, Goldberg AD. Five year follow-up for adverse outcomes in males with at least minimally positive angiograms: importance of 'denial' in assessing psychosocial risk factors. *J Psychosom Res*. 1998; 44: 241-250.
18. Ormel J, Oldehinkel T, Bribman E, van den Brink W. Outcome of depression and anxiety in primary care. A three-wave three and a half year study of psychopathology and disability. *Arch Gen Psychiatry*. 1993; 50: 759-766.
19. Wells KB, Steward A, Hays RD, Burnam M, Rogers W, Daniels M, Berry S, Greenfield S. The functioning and well-being of depressed patients: results of the Medical Outcomes Study. *JAMA* 1989; 262: 914-919.
20. Wohlforth TD, van den Brink W, Ormel J, Kater MWJ, Oldehinkel AJ. The relationship between social dysfunctioning and psychopathology. *Br J Psychiatry*. 1993;163: 37-44.

21. Beekman ATF, Deeg DJH, Braam AW, Smit JH, van Tilburg W.
Consequences of major and minor depression in later life: a study of disability, well-being and service utilization. *Psycholog Med.* 1997; 27: 1397-1409.
22. Verhaak PFM. *Mental Disorder in the Community and in General Practice.* Avebury. Aldershot. 1995
23. Jorm AF, Korten AE, Jacomb PA, Christensen H, Rodgers B, Pollitt P.
Mental health literacy: a survey of the public's ability to recognize mental disorders and their beliefs about the effectiveness of treatment. *Med J Aust.* 1997; 166: 182-186.
24. Rogers A, Pilgrim D. The contribution of lay knowledge to the understanding and promotion of mental health. *J Ment Health.* 1997; 6: 23-35.
25. Pilgrim D, Rogers A. *A Sociology of Mental Health and Illness.* Open University Press. Buckingham. UK. 1994.
26. Giel R, Koeter MWJ, Ormel J. Detection and referral of primary care patients with mental health problems: the second and third filters. In *The Public Health Impact of Mental Disorder.* Hogrefe & Huber. Toronto. 1990.
27. Bridges K, Goldberg D. Somatic presentations of DSM-III psychological disorders in primary care. *J Psychosom Res.* 1985; 29: 563-569.

28. Harris MF, Silove D, Kehag E, Barratt A, Manicavasagar A, Pan J, Frith JF, Blaszczyński A, Pond CD. Anxiety and depression in general practice: prevalence and management. *Med J of Aust.* 1996; 164: 526-529.
29. Coyne JC, Schwenk TL, Fechner-Bates S. Non-detection of depression by primary care physicians reconsidered. *Gen Hosp Psychiatry.* 1995; 17: 3-12.
30. Ormel J, van den Brink W, Koeter MWJ, Giel R, van de Willige G, Wilink FW. Recognition, management and outcome of psychological disorders in primary care: a naturalistic follow-up. *Psycholog Med.* 1990; 20: 909-923.
31. Tiemans BG, Ormel J. Detection of psychological disorders in primary care: consequences on outcome. Presented at the 8th Annual NIMH Int Res Conf on Mental Health Problems in the General Care sector. McLean, Virginia. Sept. 7-9. 1994.
32. Zimmermen M, Lish JD, Farber NJ, Hartwig J, Lush D, Kuzma MA, Plescia G. Screening for depression in medical patients. Is the focus too narrow? *Gen Hosp Psychiatry.* 1994; 16: 388-396.
33. Ormel J, Tiemans B. Recognition and treatment of mental illness in primary care. Towards a better understanding of a multi-faceted problem. *Gen Hosp Psychiatry.* 1995; 17: 160-164.

34. Schulberg HC, McClelland M, Gooding W. Six month outcomes for medical patients with major depressive disorders. *J Gen Intern Med.* 1987; 2: 312-317.
35. Olfson M, Gilbert T, Weissman M, Blacklow RS, Broadhead WE. Recognition of emotional disorders in physically healthy primary care patients who perceive poor physical health. *Gen Hosp Psychiatry.* 1995; 17: 173-180.
36. Royal Australian College of General Practitioners, Victoria Faculty. All Things to All People. The General Practitioner as a provider of mental health care. RACGP, Victoria Faculty. 1995.
37. Eisenberg L. Treating depression and anxiety in primary care. Closing the gap between knowledge and practice. *NEJM* 1992; 326: 1080-1083.
38. Rost K, Smith R, Matthews DB, Guise B. The deliberate misdiagnosis of major depression in primary care. *Arch Fam Med.* 1994; 3: 333-337.
39. Odell SM, Surtees PG, Wainwright NWJ, Commander MJ, Sashidaran SP. Determinants of general practitioner recognition of psychological problems in a multi-ethnic inner-city health district. *Br J Psychiatry.* 1997; 171: 537-541.
40. Goldberg D, Bridges K. Invited Review. Somatic presentations of psychiatric illness in the primary care setting. *J Psychosom Res.* 1988; 32: 137-144.
41. Shorter E. From Paralysis to Fatigue. A History of Psychosomatic Illness in the Modern Era. Maxwell Macmillan. Toronto. 1992.

42. Hollingshead A, Redlich RC. *Social Class and Mental Illness*. Wiley, New York. 1958.
43. Stekel W. *Nervöse Augstzustände und ihre Behandlung*. Urban and Schwarzenberg. Berlin and Vienna. 1908.
44. Stekel W. Der epileptische symptomkomplex und seine analytische bedeutung. *Fortschritte der Sexualwissenschaft und Psychoanalyse*. 1924; 1: 17-57.
45. Stekel W. Eine interessante somatization. *Psychoanalytische Praxis*. 1932; 2: p 148.
46. Bass CM. *Introduction: Somatization: Physical Symptoms and Psychological Distress*. Bass CM. (Ed) Blackwell Scientific Publications. Oxford. 1990.
47. Pines M. The development of the psychodynamic movement. In *150 Years of British Psychiatry: 1841-1991*. Berrios GE, Freeman H. (Eds) Gaskell. 1991; 206-231.
48. Beard GM. *A practical treatise on nervous exhaustion (neurasthenia), its symptoms, nature, consequences, treatment*. 2nd Edit Rev. New York. 1880.
49. Sichernan B. The uses of a diagnosis: doctors, patients and neurasthenia. *J of the History of Medicine*. 1977; 32: 33-54.

50. Berrios G. Obsessional disorders in the 19th century: terminology and classificatory issues. In *The Anatomy of Madness. Vol I.* Bynum W, Porter R, Shepherd M (Eds). Tavistock, London. 1985; 167-187.
51. Berrios G. Melancholia and depression during the 19th century: a conceptual history. *Br J Psychiatry.* 1988; 153: 298-304.
52. Krapelin E. *Clinical Psychiatry* (Transl. R Defendorf) MacMillan, London. 1902.
53. Oppenheim H. *Textbook of Nervous Diseases for Physicians and Students. Vol II, 5th Edit.* (Transl. A Bruce) Foulis, London. 1908.
54. Lane C. The mental element in the aetiology of neurasthenia. *J Nerv Ment Dis.* 1906; 33: 463-466.
55. Bleuler E. *Textbook of Psychiatry.* (Transl. A Brill) MacMillan, New York. 1924; 557-559.
56. World Health Organization. *The ICD-10 Classification of Mental and Behavioural Disorders. Clinical Descriptions and Diagnostic Guidelines.* Geneva: WHO. 1992.
57. Schepank H. *Epidemiology of psychogenic disorders. The Mannheim Study.* Springer-Verlag, Berlin. 1987.

58. Starcevic V. Neurasthenia. A paradigm of social psychopathology in a transitional society. *Am J Psychotherapy*. 1991; 45: 544-553.
59. Calloway P. *Society and Western Psychiatry: A Comparative Study*. The Moor Press. Keighley. 1992.
60. Sartorius N. Phenomenology and classification of neurasthenia. In *Problems of psychiatry in general practice*. Gastpar M, Kielholz P (Eds) Hogrefe & Huber, Lewiston, New York. 1991; pp 37-48.
61. Ware NC, Kleinman A. Culture and somatic experience: The social course of illness in neurasthenia and chronic fatigue syndrome. *Psychosom Med*. 1992; 54: 546-560.
62. Sing Lee. Neurasthenia and Chinese psychiatry in the 1990s. *J Psychosom Res*. 1994; 38: 487-491.
63. Wessely S. Neurasthenia and chronic fatigue: theory and practice in Britain and America. *Transcult Psychiatric Res Rev*. 1994; 31: 173-209.
64. Dunbar HF. *Emotions and Bodily Changes: a Survey of the Literature on Psychosomatic Inter-relationships*. Columbia University Press. New York. 1935.
65. Dunbar HF. *Mind and Body: Psychosomatic Medicine*. Harper & Brothers. New York. 1948

66. James GWB. Anxiety neurosis. *Lancet*. 1940; Nov.: 561-564.
67. Anderson C, Jeffrey M, Pai MN. Psychiatric casualties from the Normanby beach-head. *Lancet*. 1944; Aug.: 218-221.
68. Torrie A. Psychosomatic casualties in the Middle East. *Lancet*. 1944; Jan.: 139-143.
69. Menninger WC. Psychosomatic Medicine: somatization reactions. *Psychosomatic Medicine*. 1947; 9: 92-97.
70. Lipowski Z. What does the word 'psychosomatic' really mean? A historic and semantic inquiry. *Psychosomatic Medicine*. 1984; 46: 153-171
71. Halliday JL. Psychoneurosis as a cause of incapacity among insured persons. *BMJ*. 1935; 1: Suppl: 85-88.
72. Annotations: Psychosomatic illness and morale. *Lancet*. 1943; May: 686.
73. Kosmak GW. The newer medical education. *New York State Medicine*. 1946; 46: 1559-1560.
74. Barsky AJ, Klerman GL. Hypochondriasis, bodily complaints and somatic styles. *Am J of Psychiatry*. 1983; 140: 273-283.

75. Escobar JI, Rubio-Stepic M, Canino G. Somatic Symptom Index (SSI): a new abridged somatization construct. *J Nerv Ment Dis.* 1989; 177: 140-146.
76. Kellner R. Functional somatic symptoms and hypochondriasis: a survey of empirical studies. *Arch Gen Psychiatry.* 1985; 42: 821-833.
77. Lipowski ZJ. Somatization: the concept and its clinical applications. *Am J Psychiatry.* 1988; 145: 1358-1368.
78. Schurman RA, Kramer PD, Mitchell JB. The hidden mental health network: treatment of mental illness by non-psychiatrist physicians. *Arch Gen Psychiatry.* 1985; 42: 89-94.
79. Parker G, Abehuse B, Morey B, Holmes S, Manicavasager V. Depression in general practice. *Med J Aust.* 1984; 141: 154-158.
80. Davis A, George J. *States of Health: Health and Illness in Australia.* Harper & Rowe Publishers. Sydney. 1988.
81. Mechanic D. The concept of Illness Behaviour. *J Chron Dis.* 1962; 15: 189-194.
82. Parsons T. *The Social System.* The Free Press. New York. 1951.
83. Twaddle AC. The concept of the sick role and illness behaviour. *Adv Psychosom Med* 1972; 8: 162-179.

84. Wearne BC. The Theory and Scholarship of Talcott Parsons to 1951. Cambridge University Press. Cambridge, UK. 1989.
85. Freidson E. The sociology of Medicine. *Curr Sociology*. 1962; x/xi: 3.
86. Kosa J, Robertson L. The social aspects of health and illness. In *Poverty and Health*. Kosa J et al (Eds) Harvard University Press. Cambridge, Conn. 1969; 35-68.
87. Twaddle AC. *The Sick Role in Illness Behaviour*. GK Hall & Co. Boston, Massachusetts. 1979; 43-60.
88. Mechanic D. *Symptoms, Illness Behaviour and Help-seeking*. Monographs in Psychological Epidemiology. Neale Watson Academic Publications Inc. New York. 1982.
89. Wadsworth MEJ, Butterfield WJH, Blaney R. *Health and Sickness: the choice of treatment, perception of illness and use of services in an urban community*. Tavistock. London. 1971.
90. Dunnell K, Cartwright A. *Medicine Takers, Prescribers and Hoarders*. Rutledge & Keegan Paul. London. 1972.
91. Australian Bureau of Statistics. *Australian Health Survey 1977-78*. Australian Bureau of Statistics. Canberra. ACT.

92. Anderson R, Kravits J, Anderson O. Equity in Health Services: empirical analyses in social policy. Ballinger Publishing Co. Cambridge. Massachusetts. 1975.
93. Antonovsky A. A model to explain visits to the doctor with specific reference to the case of Isreal. *J Hlth Soc Behav.* 1972; 13: 446-454.
94. Epsom J. The mobile Health Clinic. A report on the first year's work. In Tuckett D, Kaufert J. (Eds) *Basic Readings in Medical Sociology.* Tavistock. London. 1978.
95. Koos EL. *The Health of Regionville.* Columbia University Press. New York. 1954.
96. Goldbeck R. Denial in physical illness. *J Psychosom Res.* 1997; 43: 575-593.
97. Freud S. *The Standard Edition of the Complete Works of Sigmund Freud.* Hogarth Press. London. 1958.
98. Sperling S. On denial and the essential nature of defence. *Intl J Psychoanalysis.* 1958; 39: 25-38.
99. Levine J, Rudy T, Kerns R. A two-factor model of denial in illness: a confirmatory factor analysis. *J Psychosom Res.* 1994; 38: 99-110.

100. Sackheim HA. Self-deception, self-esteem and depression: the adaptive value of lying to oneself. In *Empirical Studies of Psychoanalytic Theories*. Masling J (Ed). Analytic Press. Hillsdale. New Jersey. 1983.
101. Lewinsohn PM, Mischel W, Chaplain W, Barton R. Social competence and depression: the role of illusory self-perceptions. *J Abn Psychol*. 1980; 89: 202-203.
102. Esteve LG, Valdes M, Riesco N, Jodar I, de Flores T. Denial mechanisms in myocardial infarction: their relations with psychological variables and short-term outcomes. *J Psychosom Res*. 1992; 36: 491-496.
103. Lazarus RS. The costs and benefits of denial. In *The Denial of Stress*. Breznitz S (Ed). International University Press. New York. 1983.
104. Strauss DH, Spitzer RL, Muskin PR. Maladaptive denial of physical illness: a proposal for DSM-IV. *Am J Psychiatry*. 1990; 147: 1168-1172.
105. Barsky AJ. Palpitations, cardiac awareness and panic disorder. *Am J Med*. 1992; 92: 1A 31S- 1A 34S.
106. Cassidy MA. The treatment of cardiac cases. *Br Med J*. 1934; 1: 45-47.
107. Whishaw R. Anxiety and the heart: with an analysis of cases. *Med J of Aust*. 1937; 1: 360-366

108. Frasure-Smith N. Levels of somatic awareness in relation to angiographic findings. *J Psychosom Res.* 1987; 31: 545-554.
109. Idler EL, Benjamini Y. Self-rated health and mortality: a review of 27 community studies. *J Health Soc Behav.* 1997; 38: 21-37.
110. Scrambler A et al. Kinship and friendship networks and women's demands in primary care. *J Royal Coll of Gen Practitioners.* 1981; 26: 746-750.
111. Beecher HK. Measurement of subjective responses: quantitative effects of drugs. Oxford University Press. New York. 1959.
112. Barsky AJ, Goodson JD, Lane RS, Cleary PD. The amplification of somatic symptoms. *Psychosom Med.* 1988; 50: 510-519.
113. Barsky AJ, Wyshak G. Hypochondriasis and somatosensory amplification. *Br J Psychiatry.* 1990; 157: 404-409.
114. Suchman EA. Socio-medical variations among ethnic groups. *Am J Sociology.* 1964; 70: 319-331.
115. Friedson E. *Profession of Medicine.* Dodds Mead. New York. 1970.
116. Edman JL, Kameoka VA. Cultural differences in illness schemas: an analysis of Philipino and American illness attributions. *J Cross-Cult Psychol.* 1997; 28: 252-265.

117. Barsky AJ, Coetaux RR, Sarnie MK, Cleary PD. Hypochondriacal patients' beliefs about good health. *Am J Psychiatry*. 1993; 150: 1085-1089.
118. Barkwell D. Ascribed meaning: a critical factor in coping and pain attenuation in patients with cancer-related pain. *J Palliative Care*. 1991; 7: 5-14.
119. Lipowski Z. Physical illness, the individual and the coping processes. *Psychiatric Med*. 1970; 1: 91-102.
120. Watson D, Clark LA. Negative affectivity. The disposition to experience aversive emotional states. *Psycholog Bull*. 1984; 96: 465-490.
121. McLennan J, Bates GW. Vulnerability to psychological distress: empirical and conceptual distinctions between measurement of neuroticism and negative affectivity. *Psycholog Reports*. 1993; 73: 1315-1323.
122. Costa PT Jr, McCrae RR. Somatic complaints in males as a function of age and neuroticism. A longitudinal analysis. *J Behav Med*. 1980; 3: 245-257.
123. Kellner R, Sheffield B. A one-week prevalence of symptoms in neurotic patients and normals. *Am J Psychiatry*. 1973; 130: 102-105.
124. Swartz M, Landerman R, Blazer D, George L. Somatization symptoms in the community: a rural/urban comparison. *Psychosomatics*. 1989; 30: 44-53.

125. Vassend O. Dimensions of negative affectivity, self-reported somatic symptoms, and health-related behaviours. *Soc Sci Med.* 1989; 28: 29-36.
126. Watson D, Pennebaker JW. Health complaints, stress and distress: exploring the central role of negative affectivity. *Psycholog Rev.* 1989; 96: 234-254.
127. Neitzert C, Davies C, Kennedy SH. Personality factors related to the prevalence of somatic symptoms and medical complaints in a healthy student population. *Br J Med Psychol.* 1997; 70: 93-101.
128. Safer M, Thorps Q, Jackson T, Levanthal H. Determinants of three stages of delay in seeking care at a medical clinic. *Med Care.* 1979; 17: 11-29.
129. Bauman L, Cameron LD, Zimmerman R, Levanthal H. Illness representations and matching labels with symptoms. *Health Psychol.* 1989; 8: 449-469.
130. Prohaska TR, Keller ML, Levanthal EA, Levanthal H. Impact of symptoms and aging on emotions and coping. *Health Psychol.* 1987; 6: 495-514.
131. Robbins JM, Kirmayer LJ. Attributions of common somatic symptoms. *Psycholog Med.* 1991; 21: 1029-1045.
132. Turnquist DC, Harvey JH, Anderson BC. Attributions and adjustment to life-threatening illness. *Br J Clin Psychol.* 1988; 27: 55-65.

133. Sensky T. Causal attributions in physical illness. *J Psychosom Res.* 1997; 43: 565-573.
134. Weiner B. *An Attributional Theory of Motivation and Emotion.* Springer. New York. 1986.
135. Kelley HH. Attribution theory in social psychology. In *Nebraska Symposium on Motivation.* Levine D (Ed). Univ of Nebraska Press. Lincoln. Nebraska. 1967: 192-238.
136. Anderson CA. How people think about causes: examination of the typical phenomenal organization of attributions for success and failure. *Social Cognition.* 1991; 9: 295-329.
137. Cameron L, Levanthal EA, Levanthal H, Schaefer P. Symptom representations and affect as determinants of care-seeking in a community dwelling, adult samle population *Health Psychol.* 1993; 12: 171-179.
138. Lindal E, Uden A. Why do people seek medical help for back pain: a comparison of consulters and non-consulters. *The Clin J of Pain.* 1989; 5: 351-358.
139. Anderson R, Anderson OW. Trends in the use of health services. In *Handbook of Medical Sociology.* 3rd Edit. Freeman HE, Levine S, Reeder LG (Eds). Prentice Hall. Englewood Cliffs. NJ. 1979: 371-391.

140. Levanthal EA, Levanthal H, Schaefer P, Easterling D. Conservation of energy, uncertainty reduction and swift utilization of medical care among the elderly. *J Gerontol.* 1993; 48: 78-86.
141. Small (Frank) & Associates. *Patient Perspectives of General Practice Standards.* A consultancy report to the Commonwealth Department of Human Services and Health. Canberra. ACT. 1995.
142. Commonwealth Department of Human Services and Health & Consumers' Health Forum. *Integrating Consumer Views about Quality in General Practice.* A report prepared by the Albany Consulting Group, Ian Cameron Research, ARTD Research and Management Consultants, Australian Government Publishing Service. Canberra. 1996.
143. Commonwealth Department of Health and Family Services. *General Practice in Australia: 1996.* A report prepared for the General Practice Branch of the Commonwealth Department of Health and Family Service. Canberra. Act. 1996.
144. Bloor M, Horobin G. Conflict and conflict resolution in patient interactions. In *A Sociology of Medical Practice.* Cox A, Mead A. (Eds). MacMillan. London. 1975.
145. Barsky, AJ. The paradox of health. *New Eng J Med.* 1988; 318: 414-418.

146. Navarro V. Work, ideology and service. *Soc Sci Med.* 1980; 14C: 191-205.
147. Mechanic D. Public perceptions of medicine. *New Eng J Med.* 1985; 312: 181-183.
148. Shenfield GM, Atkin PA, Kristoffersen SS. Alternative medicine: an expanding health industry. *Med J Aust.* 1997; 166: 516-517.
149. Clute KF. *The General practitioner. A study of medical education and practice in Ontario and Nova Scotia.* University of Toronto Press. 1963.
150. Cartwright A, Anderson R. *General Practice Revisited: a Second Study of Patients and their Doctors.* Tavistock, London. 1981.
151. Anderson NA. Primary Care in Australia. *Int J Health Services.* 1986; 16: 199-212.
152. Rosenman SJ, Batman GJ. Trends in General Practitioner Distribution from 1984-1989. *Aust J Pub Health.* 1992; 16: 84-88.
153. Peterson C, Whittaker M. *Glossary of Terms, Monograph No 7, Technical Advisory Group, National Centre for Epidemiology and Population Health, The Australian National University, Canberra.* 1994.
154. Pilowsky I. Abnormal illness behaviour. *Br J Med Psychol.* 1969; 42: 347-351.

155. Pilowsky I. The concept of abnormal illness behaviour. *Psychosomatics*. 1990; 31: 207-213.
156. Pilowsky I. A general classification of abnormal illness behaviours. *Br J Med Psychol*. 1978; 51: 131-137.
157. Pilowsky I. Abnormal illness behaviour and sociocultural aspects of pain. In *Pain and Society*. Kosterlitz HW, Terenius LY. (Eds). Hahlem Konferenzen. Weinheim: Verlag Chemie GmbH. 1980: p 405-460.
158. Pilowsky I. *Abnormal Illness Behaviour*. John Wiley & Sons. Chichester. 1997.
159. Pilowsky I. *Abnormal Illness Behaviour*. In *Psychiatry in Medical Practice*. 2nd Edit. Goldberg D, Benjamin S, Creed F. (Eds). Routledge, London. 1994: p 230-246.
160. Pilowsky I. Abnormal illness behaviour (Dysnosognosia). *Psychother Psychosom*. 1986; 46: 76-84.
161. Pilowsky I. Aspects of abnormal illness behaviour. *Psychother Psychosom*. 1993; 60: 62-74.
162. Pilowsky I. Abnormal illness behaviour. *Psychiatric Med*. 1987; 5: 85-91.

163. Pilowsky I. Abnormal illness behaviour: a 25th anniversary review. *Aust NZ J Psychiatry*. 1994; 28: 566-573.
164. Mayou R. Sick role, illness behaviour and coping: a comment. *Br J Psychiatry*. 1984; 144: 320-322.
165. Webster's Third New International Dictionary & Seven Language Dictionary. Vols II & III. Encyclopaedia Britannica Inc. Chicago. 1976.
166. Laderman C. The embodiment of symbols and the acculturation of the anthropologist. In *Embodiment and Experience: the existential ground of culture and self*. Csordas TJ (Ed) Cambridge Univ Press. Cambridge, New York. 1994: p 183-197.
167. Trimble MR. Functional Diseases. *Br Med J*. 1982; 285: 1768-1770.
168. Fabrega H. Somatization in cultural and historical Perspective. In *Current Concepts of Somatization: Research and Clinical Perspectives*. Kirmayer LL & Robbins JM. (Eds). American Psychological Press Inc. Washington. 1991.
169. Kleinman AA. Neurasthenia and depression: a study of somatization and culture in China. *Cult Med Psychiatry*. 1982; 6: 117-190.
170. Tung MPM. Symbolic meanings of the body in Chinese culture and somatization. *Cult Med & Psychiatry*. 1994; 18: 483-492.

171. Sing Lee. A Chinese perspective of somatoform disorders. *J Psychosom Res.* 1997; 43: 115-119.
172. Kirmayer LJ. Culture, affect and somatization: Part II. *Transcult. Psychiatry Res Rev.* 1984; 21: 237-262.
173. Low SM. Embodied metaphors: nerves as lived experience. In *Embodiment and Experience: the existential ground of culture and self.* Csordas TJ (Ed) Cambridge Univ Press. Cambridge, New York. 1994: 139-162.
174. Eisenbruch M. Wind illness or somatic depression? A case study in psychiatric anthropology. *Br J of Psychiatry.* 1983; 143: 323-326.
175. Pilowsky I. Primary and secondary hypochondriasis. *Acta Psychiatric Scand.* 1970; 46: 273-285.
176. Mathew RJ, Largen J, Claghorn HC. Biological symptoms and depression. *Psychosom Med.* 1979; 41: 439-443.
177. Levanthal H, Nerenz DR, Strauss A. Self-regulation and the mechanisms for symptom appraisal. In *Symptoms, Illness Behaviour and Help-seeking.* Mechanic D (Ed). Neale Watson Academic Publications Inc. New York. 1982.
178. Sifneos PE. The prevalence of alexithymic characteristics in psychosomatic patients. *Psychother Psychosom.* 1973; 22: 255-262.

179. Lesser IM, Lesser BZ. Alexithymia: examining the development of a psychological concept. *Am J Psychiatry*. 1983; 140: 1305-1308.
180. Taylor GJ, Parker JD, Bagley RM, Acklin MW. Alexithymia and somatic complaints in psychiatric outpatients. *J Psychosom Res*. 1992; 36: 417-424.
181. Bach M, Bach D, de Zwaan M. Independency of alexithymia and somatization. *Psychosomatics*. 1995; 37: 451-458.
182. Kleinman A. *Patients and Healers in the Context of Culture*. Univ of Calif Press. Berkley. 1980.
183. Fabrega H. Culture and the psychosomatic tradition. *Psychosom Med*. 1992; 54: 561-566.
184. Wegner DM, Giuliano T. Arousal induced attention to self. *J Pers Soc Psychol*. 1980; 38: 719-726.
185. Pennebaker J. *The Psychology of Physical Symptoms*. Springer-Verlag. New York. 1982.
186. Pennebaker J. Perceptual and environmental determinants of coughing. *Basic and Applied Soc Psychol*. 1980; 1: 83-91.
187. Mechanic D. Social psychological factors affecting the presentation of bodily complaints. *NEJM*. 1972; 286: 1132-1139.

188. Trethowan WH. Couvade syndrome: recent cases. *Rev Med Psychosom Psycholog Med* 1969; 11: 67-78.
189. Lipkin MJ, Lamb GS. The couvade syndrome: an epidemiological study. *Ann Int Med.* 1988; 96: 509-511.
190. Fordyce WE. Learning process in pain. In *The Psychology of Pain*. Sternbach RA. (Ed). Raven Press. New York. 1978.
191. Kliger R. Somatization: Social control and illness production in a religious cult. *Cult Med Psychiatry.* 1994; 18: 215-245.
192. Barrett RA. Cultural formulation of psychiatric diagnosis: Death on a Horse's Back: adjustment disorder with panic attacks. *Cult Med Psychiatry.* 1997; 21: 481-496.
193. Eisenberg L. Disease and illness: distinctions between professional and popular ideas of sickness. *Cult Med Psychiatry.* 1977; 1: 9-23.
194. Kirmayer LJ. Culture, affect and somatization. Part I. *Trans Cult Res Rev.* 1984; 21: 159-188.
195. Kirmayer LJ. Somatization and the social construction of illness experience. In *Illness Behaviour: A Multidisciplinary Perspective*. McHugh S, Vallis TM. (Eds). Plenum Press. New York. 1986: 111-125.

196. Kirmayer LJ, Robbins JM. Three forms of somatization in primary care: prevalence, co-occurrence and socio-demographic characteristics. *J Nerv Ment Dis.* 1991; 179: 647-655.
197. Quill TE. Somatization disorder: one of medicine's blind spots. *JAMA.* 1985; 254: 3075-3079.
198. Lipowski ZJ. Somatization: medicine's unsolved problem. (Editorial) *Psychosomatics.* 1987; 28: 294-297.
199. Robbins JM, Kirmayer LJ. Cognitive and social factors in somatization. In *Current Concepts of Somatization: research and clinical perspectives.* Kirmayer LJ & Robbins JM (Eds). American Psychiatric Press Inc. Washington. 1991: 107-141.
200. Guze SB. The validity and significance of the clinical diagnosis of hysteria (Briquet's syndrome). *Am J Psychiatry.* 1975; 132: 138-141.
201. Swartz M, Hughes D, Blazer D, George L. Somatization disorder in the community: a study of diagnostic concordance among three diagnostic systems. *J Nerv Ment Dis.* 1987; 175: 26-33.
202. Murphy M. Somatization: embodying the problem. *BMJ.* 1989; 298: 1331-1332.

203. Lloyd GG. Psychiatric syndromes with a somatic presentation. *J Psychosom Res.* 1986. 30: 113-120.
204. Swartz M, Blazer D, George L, Landerman R. Somatization disorder in a community population. *Am J Psychiatry.* 1986; 143: 1403-1408.
205. Swartz M, Blazer D, George L, Woodbury M, Landerman R. Somatization disorder in a US southern community: use of a new procedure for analysis of medical classification. *Psycholog Med.* 1986; 116: 595-609.
206. Escobar JI, Burnham A, Karno M, Forsythe A, Golding J. Somatization in the community. *Arch Gen Psychiatry.* 1987; 44: 713-718.
207. Escobar JI, Golding JM, Hough RI, Karno M, Burnam M, Wells KB. Somatization in the community: relationship to disability and use of services. *Am J of Public Health.* 1987; 77: 837-840.
208. Escobar JI, Canino G. Unexplained physical complaints: psychopathological and epidemiological complaints. *Br J Psychiatry.* 1989; 154: 24-27.
209. Katon W, Lin E, Von Korff M, Russo J, Lipscomb P, Bush T. Somatization: a spectrum of severity. *Am J Psychiatry.* 1991; 148: 34-40.
210. Pilowsky I. Dimensions of hypochondriasis. *Br J Psychiatry.* 1967; 113: 89-93.

211. Zonderman AB, Heft MW, Costa PT Jr. Does the Illness Behaviour Questionnaire measure abnormal illness behaviour? *Health Psychol.* 1985; 4: 425-436.
212. Kellner R. Psychological measurements in somatization and abnormal illness behaviour. *Adv. Psychosom Med.* 1987; 17: 101-118.
213. Barsky AJ, Coeytaux RR, Sarnie MK, Cleary PD. Hypochondriacal patient's beliefs about good health. *Am J Psychiatry.* 1993; 150: 1085-1089.
214. Barsky AJ. Patients who amplify bodily sensations. *Annals Int Med.* 1979; 91: 63-70.
215. Pennebaker JW, Lightner J. Competition of internal and external information in an exercise setting. *J Pers Soc Psychol.* 1980; 39: 165-174.
216. Pennebaker JW, Skelton. Psychological parameters of physical symptoms. *Personality & Soc Psychol.* 1978; 4: 524-530.
217. Hansell S, Mechanic D. Introspectiveness and adolescent symptom reporting. *J Human Stress.* 1985; Winter: 165-176.
218. Hansell S, Mechanic D. The socialization of introspection and illness behaviour. In *Illness Behaviour: A Multidisciplinary Model*. McHugh S, Vallis TM (Eds). Plenum press. New York. 1986: 253-260.

219. Mandler G. *Mind and Body: Psychology of Emotion and Stress*. WW Norton. New York. 1984.
220. Pennebaker JW, Watson D. The psychology of somatic symptoms. In *Current Concepts of Somatization: Research and Clinical Perspectives*. Kirmayer LJ, Robbins JM. (Eds). American Psychiatric Press Inc. Washington. 1991: 21-35.
221. Costa PT Jr, McCrae RR. Hypochondriasis, neuroticism and aging: when are somatic complaints unfounded? *Am Psychol*. 1985; 40: 19-28.
222. Croyle RT, Uretsky MB. Effects of mood on self appraisal of health status. *Health Psychol*. 1987; 6: 239-253.
223. Rosen G, Kleinman A, Katon W. Somatization in female practice: a biopsychosocial model. *J Fam Pract*. 1982; 14: 493-502.
224. Katon W, Ries R, Klerman AA. A prospective DSM-III study of consecutive somatization patients. *Comprehen. Psychiatry*. 1984; 25: 305-314.
225. Kleinman A, Kleinman J. Somatization: the interconnections among culture, depressive experiences and the meaning of pain. In *Culture and Depression*. Kleinman A, Good B. (Eds) University of California Press. 1985
226. El-Rufaie OE, Al-Quorain A, Azzoni FA et al. Emotional aspects of functional abdominal pain. *Saudi Med. J*. 1990; 11: 450-452.

227. El-Rufaie OE, Al-Sabosy MM, Bener A, Abuzeid MS. Somatized mental disorder among primary care Arab patients. 1. Prevalence and clinical and sociodemographic characteristics. *J Psychosom Res.* 1999; 46: 549-555.
228. Lobo A, Garcia-Campayo S, Campos R et al. Somatization in primary care in Spain. 1 Estimates of the prevalence and clinical characteristics. *Br J Psychiatry.* 1996; 168: 344-348.
229. Garcia-Campayo J, Campos K, Marcos G, Perez-Echeverria Ma J, Lobo A and the GMPPZ. Somatization in Primary Care in Spain. II Differences between somatizers and psychologizers. *Br J Psychiatry.* 1996; 168: 344-358.
230. Kenyon FE. Hypochondriacal states. *Br J Psychiatry.* 1976; 129: 1-14.
231. Barsky AJ, Wyshak G, Klerman G. Hypochondriasis: an evaluation of the DSM-III criteria in medical outpatients. *Arch Gen Psychiatry.* 1986; 43: 493-500.
232. Fava GA, Pilowsky I, Peirfedrici A Bernardi M, Pathak D. Depressive symptoms and abnormal illness behaviour in general hospital patients. *Gen Hosp Psychiatry.* 1982; 4: 171-178.
233. Mabe PA, Hobson DP, James LR, Jarvis RG. Hypochondriacal traits in medical patients. *Gen Hosp Psychiatry.* 1988; 10: 236-244.

234. Kenyon FE. Hypochondriasis: a clinical study. 1964; 110: 478-488.
235. Lloyd G. Somatization: a psychiatrist's perspective. *J Psychosom Res.* 1989; 33: 665-669.
236. Fink P. Psychiatric illness in patients with persistent somatization. *Br J Psychiatry.* 1995; 166: 93-99.
237. deGruy F, Columbia L, Dichebson P. Somatization disorder in a family practice. *J Fam Pract.* 1987; 25: 45-51.
238. Katon W, Russo J. Somatic symptoms and depression. *J Fam Pract.* 1989; 29: 65-69.
239. Swartz M, Landerman R, George L, Blazer D, Escobar J. Somatization disorder. In *Psychiatric Disorders in America*. Robbins LN & Regier D (Eds). New York Free Press. 1990.
240. Regier DA, Boyd JH, Burke JD, Rae DS, Myers JK, Robins LN, George LK, Karno M, Locke BZ. One month prevalence of mental disorders in the United States. Based on five Epidemiologic Catchment Area sites. *Arch Gen Psychiatry.* 1988; 45: 977-986.

241. Regier DA, Narrow WE, Rae DS, Manderscheid RW, Locke BZ, Goodwin FK. The de facto United States mental and addictive disorders service system. Epidemiologic Catchment Area prospective 1-year prevalence rates of disorders and services. *Arch Gen Psychiatry*. 1993; 50: 85-94.
242. Miranda J, Perez-Stable EJ, Menoza RF, Hargreaves W, Henke CJ. Somatization, psychiatric disorder and stress in utilization of ambulatory medical services. *Health Psychol*. 1991; 10: 46-51.
243. Escobar JI. Cross-cultural aspects of the somatization trait. *Hosp Comm Psychiatry*. 1987; 38: 174-180.
244. Kellner R, Abbott P, Pathak V, Winslow WW, Umland BE.. Hypochondriacal beliefs and attitudes in family practice and psychiatric patients. *Int J Psych Med*. 1983; 13: 127-139.
245. Barsky AJ, Wyshak G, Klerman GL, Latham KS. The prevalence of hypochondriasis in medical outpatients. *Soc Psychiatry Pshychiatr Epidemiol*. 1990; 25: 89-94.
246. Pilowsky I, Smith Q, Katsikitis M. Illness behaviour and general practice utilization: a prospective study. *J Psychosom Res*. 1987; 31: 177-183.
247. Barsky AJ, Wyshak G. Hypochondriasis and related health attitudes. *Psychosomatics*. 1989; 30: 412-430.

248. Goldberg D, Blackwell B. Psychiatric illness in general practice; a detailed study using a new method of case identification. *Br Med J.* 1970; ii: 439-443.
249. Wilson DR, Widmer RB, Cadoret RS, Judiesch K. Somatic symptoms: a major feature of depression in a family practice. *J Aff Dis.* 1983; 5: 199-207.
250. Katon W, Kleinman A, Rosen G. Depression and somatization: a review. *Am J Med.* 1982; 127-135; 241-247.
251. Weich S, Lewis G, Donmall R, Mann A. Somatic presentation of psychiatric morbidity in general practice. *Br J Gen Pract.* 1995; 45: 143-147.
252. Paulty JW. Correspondence. Somatization in general practice. *Br J Psychiatry.* 1994; 164: 562-563.
253. Craig TKJ, Boardman AP, Mills K Daly-Jones O, Drake H. The South London somatization study. I Longitudinal course and the influence of early life experiences. *Br J Psychiatry.* 1993; 163: 579-588.
254. Portegijs RJM, Van der Horst FG, Proot IM, Kraan HF, Gunther NCH, Knottneres JA. Somatization in frequent attenders of general practice. *Soc Psychiatry Psychiatr Epidemiol.* 1996; 31: 29-37.
255. Wool CA, Barsky AJ. Do women somatize more than men? *Psychosomatics.* 1994; 35: 445-452.

256. Racy J. Somatization in Saudi women: a therapeutic challenge. *Br J Psychiatry*. 1980; 137: 212-216.
257. Fosu GB. Women orientation towards help-seeking for mental disorders. *Soc Sci Med*. 1995; 40: 1029-1040.
258. Bhatt A, Tomenson B, Benjamin S. Transcultural patterns of somatization in primary care: a preliminary study. *J Psychosom Res*. 1989; 33: 671-680.
259. Westermeyer J, Bouafuely M, Neider J, Callies A. Somatization among refugees: an epidemiological study. *Psychosomatics*. 1989; 30: 34-43.
260. Westermeyer J, Neider J, Callies A. Psychological adjustment of Hmong refugees during their first decade in the United States: a longitudinal study. *J Ment Nerv Dis*. 1989; 177: 132-139.
261. Kleinman A. *Rethinking Psychiatry*. The Free Press. London. 1988.
262. Madianos MG, Stefanis CN. Changes in the prevalence of symptoms of depression and depression across Greece. *Soc Psychiatry Psychiatr Epidemiol*. 1992; 27: 211-219.
263. Dalgard OS, Tambs K. Urban environment and mental health. *Br J Psychiatry*. 1997; 171: 530-536.

264. Ghubash R, Hamdi E., Bebbington P. The Dubai Community Psychiatric Survey: I. Prevalence and sociodemographic correlates. *Soc Psychiatry Psychiatr Epidemiol.* 1992; 27: 53-61.
265. Weyerer S, Hafner H. The high incidence of psychiatrically treated disorders in the inner city of Mannheim. *Soc Psychiatry Psychiatr Epidemiol.* 1992; 27: 142-146.
266. Hendryx MS, Ahern MA. Mental health functioning and community problems. *J Commun Psychol.* 1997; 25: 147-157.
267. Flannery RB, Wieman D. Social support, life stress and psychological distress: an empirical assessment. *J Clin Psychol.* 1989; 45: 867-872.
268. McCullough JP, McCune KJ, Kaye AL, Braith JA, Friend R, Roberts WC, Belyea-Caldwell S, Norris SLW, Hampton C. Comparison of a community dysthymia sample at screening with a matched group of non-depressed community controls. *J Nerv Ment Dis.* 1994; 182: 402-407.
269. Murrell SA, Norris FH. Differential social support and life changes as contributors to the social class-distress relationship in older adults. *Psychol and Aging.* 1991; 6: 223-231.
270. Overholser JC, Norman WH, Miller IW. Life stress and social supports in depressed in-patients. *Behav Med.* 1990; 16: 125-132.

271. Paykel ES. Life events, social support, depression. *Acta Psychiatrica Scand.* 1994; 89: 50-58.
272. Schuster TI, Kessler RC, Aseltine RH. Supportive interactions, negative interactions and depressed mood. *Am J Commun Psychol.* 1990; 18: 423-437.
273. Taylor J, Henderson D, Jackson BB. A holistic model for understanding and predicting depressive symptoms in African-American women. *J Commun Psychol.* 1991; 19: 306-320.
274. Vihjalmsson R. Life events, social support and clinical depression.: a re-analysis of the literature. *Soc Sci Med.* 1993; 37: 331-342.
275. Clarke DE, Jensen MA. The effects of social support, life events and demographic factors on depression among Maori and Europeans in New Zealand rural, town and urban environments. *J Commun Psychol.* 1997; 25: 303-323.
276. Kellner R. *Somatization and hypochondriasis.* Praeger Publishers. New York. 1986.
277. Kendler K, Heath A, Marlin N, Eaves L. Symptoms of anxiety and symptoms of depression. *Arch Gen Psychiatry.* 1987; 122: 451-457.
278. Baker B, Merskey H. Parental representations of hypochondriacal patients from a psychiatric hospital. *Br J Psychiatry.* 1982; 141: 233-238.

279. Hartvig P, Sterner G. Childhood psychologic environmental exposure in women with diagnosed somatoform disorders. *Scand J Soc Med.* 1985; 13: 153-157.
280. Shapiro EG, Rosenfeld AA. *The somatizing child.* Springer-Verlag. New York. 1986.
281. Kriechman AM. Siblings with somatoform disorders in childhood and adolescence. *J Am Acad of Child and Adoles Psychiatry.* 1998; 26: 226-231.
282. Bridges K, Goldberg D, Evans B, Sharpe T. Determinants of somatization in primary care. *Psycholog Med.* 1991; 21: 473-483.
283. Gerrard TJ, Riddell JD. Difficult patients: black holes and secrets. *BMJ,* 1988; 297: 530-532.
284. O'Dowd TC. Five years of 'heartsink' patients. *BMJ.* 1988; 297: 528-530.
285. Weich S. Somatization in general practice. *Br J Psychiatry.* 1994; 164: 562.
286. Noyes R, Holt C, Kathol R. Somatization: diagnosis and management. *Arch Fam Med.* 1991; 4: 790-795.
287. Margo K, Margo G. The problem of somatization in family practice. *Am Fam Physician.* 1994; 4: 1873-1879.

288. Groves JE. Taking care of the 'hateful patient'. *NEJM*. 1978; 298: 883-887.
289. Brown JW, Robertson LS, Kosa J et al. A study of general practice in Massachusetts. *JAMA*. 1971; 216: 301-306.
290. Cabot RC. Suggestions for re-organization of hospital out-patient departments with special reference to improvements in treatment . *Maryland State Medical Journal*. 1907; 50: 81-91.
291. Kirk CA, Saunders M. Psychiatric illness in a neurological out-patient department in north-east England: use of the General Health Questionnaire in the prospective study of neurological out-patients. *Acta Psychiatrica Scand*. 1979; 60: 427-437.
292. Creed F, Firth D, Timol M et al. Somatization and irritable bowel in a neurology ward. *J Psychosom Res*. 1990; 34: 427-437.
293. McDonald AJ, Bouchier IAD. Non-organic gastrointestinal illness: a medical and psychiatric study. *Br J Psychiatry*. 1980; 136: 276-283.
294. Walker EA, Roy-Byrne PP, Katon WJ et al. Psychiatric illness and irritable bowel syndrome: a comparison with inflammatory bowel disorder. *Am J Psychiatry*. 1990; 147: 1656-1661.
295. Cottrill JA. Dermatological non-disease: a common and potentially fatal disturbance of cutaneous body image. *Br J Dermatology*. 1981; 104: 611-619.

296. Gibbons TCN. The clients of prostitutes. *Br J Vener. Dis.* 1960; 36: 113-117.
297. Greenberg M. The meaning of menorrhagia: an investigation into the association between the complaints of menorrhagia and depression. *J Psychosom Res.* 1983; 27: 209-214.
298. Kellner R, Slocumb JC, Rosenfeld RC et al. Fears and beliefs in patients with pelvic pain syndrome. *J Psychosom Res.* 1988; 32: 303-310.
299. Fink P. Admission patterns of persistent somatization patients. *Gen Hosp Psychiatry.* 1993; 15: 211-218.
300. Labott S, Preisman RC, Torosian T, Popovich J Jr., Iannuzzi M. Screening for somatizing patients in the pulmonary sub-specialty clinic. *Psychosomatics.* 1996; 37: 327-338.
301. Bass C, Wade C. Chest pain with normal coronary arteries: a comparative study of psychiatric and social morbidity. *Psycholog Med.* 1984; 14: 51-61.
302. Channer KS, Papachado M, James MA, Reis JR. Anxiety and depression in patients with chest pain and referred for exercise testing. *Lancet.* 1985; ii: 1387-1390.
303. Mayou R. Atypical chest pain. Invited Review. *J Psychosom Res.* 1989; 33: 396-406.

304. Bass CM. Chest pain and breathlessness: relationship to psychiatric illness. *Am J Med.* 1992; 92: Suppl 1A.
305. Young SJ, Alpers DH, Norland CC, Woodruff RA. Psychiatric illness and the irritable bowel syndrome. Practical implications for the primary care physician. *Gastroenterology.* 1976; 70: 162-166.
306. Farthing MJG. Irritable bowel; irritable body or irritable brain. *Br Med J.* 1995; 310: 171-175.
307. Fowlie S, Eastwood MA, Ford MJ. Irritable bowel syndrome; the influence of psychological factors on the symptom complex. *J Psychosom Res.* 1992; 36: 169-173.
308. Walker EA, Katon WJ, Jemelka RP, Roy-Byrne PR. Co-morbidity of gastrointestinal complaints, depression and anxiety in the Ecological Catchments Area Study. *Am J Med.* 1992; 92: Suppl 1A.
309. Gomez J, Dally P. Psychologically mediated abdominal pain in surgical and medical out-patient clinics. *Br Med J.* 1977; I: 1451-1453.
310. Rix KJB, Pearson DJ, Bentley SJ. A psychiatric study of patients with supposed food allergy. *Br J Psychiatry.* 1984; 145: 121-126.

311. Stewart WF, Shecter A, Liberman J. Physician consultation for headache pain and history of panic: results from a population-based study. *Am J Med.* 1992; 92: Suppl 1A.
312. Rinzer M, Varia I, Pontinen M, Devine G, Grubb B, Estes N III. Medically unexplained syncope; relationship to psychiatric illness. *Am J Med.* 1992; 92: Suppl 1A.
313. Aronoff GM. Myofascial pain syndrome and fibromyalgia: a critical assessment and alternative review. *The Clin J of Pain.* 1998; 14: 74-85.
314. Kirmayer LJ, Robbins JM, Kapusta MA. Somatization and depression in fibromyalgia syndrome. *Am J Psychiatry.* 1988; 145: 950-954.
315. Janca A, Issac M, Bennett LA, Tacchini G. Somatoform disorders in different cultures - a mail questionnaire survey. *Soc Psychiatr Pschiatric Epidemiol.* 1995; 30: 44-48.
316. Goldberg D. Detection and assessment of emotional disorders in a primary care setting. *Int J Ment Health.* 1979; 8: 30-48.
317. Hankin JR, Oktay JS. *Mental Disorder and Medical Care: an analytic review of the literature.* Dept. of Health and Human Services. National Institutes of Mental Health. Series D5. Washington DC. 1979.

318. Marks JN, Goldberg D, Hillier VF. Determinants of the ability to detect psychiatric illness. *Psycholog Med.* 1979; 9: 337-353.
319. Skuse D, Williams P. Screening for psychiatric disorder in general practice. *Psycholog Med.* 1984; 14: 365-377.
320. Blacker CVR, Clare W. Depressive disorder in primary care. *Br J Psychiatry.* 1987; 150: 737-751.
321. Brodarty H, Andrews G, Kehol L. Psychiatric illness in general practice. Why is it missed? *Aust Fam Physic.* 1982; 11: 625-631.
322. Chancellor A, Mant A, Andrews G. The general practitioner's identification and management of emotional disorder. *Aust Physic.* 1977; 6: 1137-1143.
323. Bowers J, Jorm AF, Henderson S, Harris P. General practitioner's detection of depression and dementia in elderly patients. *Med J of Aust.* 1990; 153: 192-196.
324. Goldberg D, Huxley P. *Mental Illness in the Community. The Pathways to Psychiatric Care.* Tavistock . London. 1990.
325. Boardman AP. The General Health Questionnaire and the detection of emotional disorder by general practitioners: a replication study. 1987; 151: 373-381.

326. Cavanaugh S, Clark D, Gibbons R. Diagnosing depression in the hospitalized medically ill. *Psychosomatics*. 1983; 24: 809-815.
327. Fava G, Molner G. Criteria for diagnosing depression in the setting of medical disease. *Psychother Psychosomatics*. 1987; 48: 21-25.
328. Kathol R, Petty F. Relationship of depression to medical-illness. *J Affective Disorders*. 1981; 3: 111-121.
329. Wesley AL, Gatchel RJ, Polatin PB, Kinney RK, Mayer TG. Differentiation between somatic and cognitive/affective components in commonly used measurements of depression in patients with chronic low back pain. *Spine*. 1991; 16: Suppl. S213-S215.
330. Shaw J, Creed F. The cost of somatization. *J Psychosom Res*. 1991; 35: 307-312.
331. Kashner TM, Rost K, Smith GR Jr, Lewis S. The impact of a psychiatric consultation letter on the expenditures and outcomes of care for patients with somatization disorder. *Med Care*. 1992; 30: 811-821.
332. Smith GR Jr. The course of somatization and its effect on utilization of health care resources. *Psychosomatics*. 1994; 35: 263-267.

333. Rost K, Kashner TM, Smith GR Jr. Effectiveness of psychiatric intervention with somatization disorder patients: improved outcome with reduced costs. *Gen Hosp Psychiatry*. 1994; 16: 381-387.
334. Smith GR Jr, Rost K, Kashner TM. A trial of the effect of a standardized psychiatric consultation on health outcomes and costs in somatizing patients. *Arch Gen Psychiatry*. 1995; 52: 238-243.
335. Wickramasekera I. Somatization: concepts, data and predictions from the High Risk Model of Threat Perception. *J Nerv Ment Dis*. 1995; 183: 15-23.
336. Srinivasan TN, Suresh TR. The nonspecific screening method: detection of non-psychotic morbidity based on non-specific symptoms. *Gen Hosp Psychiatry*. 1991; 13: 106-114.
337. Chaturvedi SK, Bhandari S, Beena MB, Rao S. Screening for abnormal illness behaviour. *Psychopathology*. 1996; 29: 325-330.
338. Grant B, Katon W, Beitman B. Panic disorder. *J Fam Pract*. 1983; 5: 907-914.
339. Katon W. Chest pain, cardiac distress and panic disorder. *J Clin Psychiatry*. 1990; 51: (Suppl 5) 27-30.

340. Elderkin-Thompson V, Silver RC, Waitzkin H. Narratives of somatizing and non-somatizing patients in a primary care setting. *J Health Psychol.* 1998; 3: 407-428.
341. Elderkin-Thompson V. Narratives and non-verbal communication of somatizing and non-somatizing patients in a primary care setting. Dissertation Abstracts International. 57-10, 6568B (University Microfilms No DA 9709926).
342. Cape J, Stiles W. Verbal exchange structure of general practitioner consultations with patients who present with psychological problems. *J Hlth Psychol.* 1998; 3: 5-21.
343. Katon W, Von Korff M, Lin E, Lipscomb P, Russo J, Wagner E, Polk E. Distressed high utilizers of medical care: DSM-II-R diagnoses and treatment needs. *Gen Hosp Psychiatry.* 1990; 12: 355-362.
344. Karlsson H, Lehtenen V, Joukamaa M. Psychiatric morbidity among patients in primary care. *Gen Hosp Psychiatry.* 1995; 17: 19-25.
345. Widmer RB, Cadoret RJ. Depression in primary care: changes in patterns of patients' visits and complaints during a developing depression. *J Fam Pract.* 1978; 7: 293-302.
346. Cadoret RJ, Widmer RB, Troughton EP. Somatic complaints: harbinger of depression in primary care. *J Affective Dis.* 1980; 2: 61-70.

347. Balint M. The doctor, his patient and the illness. International Universities Press. New York. 1957.
348. Matthews DA, Sledge WH, Leiberman PB. Evaluation of interns' performance by medical in-patients. *Am J Med.* 1987; 35: 936-944
349. Salmon P, Quine J. Patients intentions in primary care: measurement and preliminary investigations. *Psycholog Health.* 1989; 3: 103-110.
350. Beckman HB, Frankel RM. The effect of physicians' behaviour on the collection of data. *Am J Int Med.* 1984; 101: 692-696.
351. Marks JN, Goldberg DP, Hillier VF. Determinants of the ability of general practitioners to detect psychiatric illness. *Psycholog Med.* 1979; 9: 337-353.
352. Goldberg RJ, Novak DH, Gask L. The recognition and management of somatization. A Review Article. *Psychosomatics.* 1992; 33: 55-61.
353. Goldberg DP, Steele J, Johnson A, Smith C. Ability of primary care physicians to make accurate ratings of psychological disturbance. *Arch Gen Psychiatry.* 1982; 39: 829-833.
354. Hennrikus D. An observational study of the detection of psychological disturbance by general practitioners. Ph D Thesis. University of Newcastle. NSW. Australia. 1986.

355. Davenport S, Goldberg D, Millar T. How psychiatric disorders are missed during medical consultations. *Lancet*. 1987; ii: 439-441.
356. Tylee P, Freeling P The recognition, diagnosis and acknowledgment of depressive disorder by general practitioners. In *Depression: an Integrative Approach*. Paykel E, Herbst K. (Eds). Heinemann, London. 1989; p 216-231.
357. Goldberg DP, Jenkins L, Millar T, Faragher EB. The ability of trained general practitioners to identify psychological distress among their patients. *Psycholog Med*. 1993; 23: 185-193.
358. Robbins JM, Kirmayer LJ, Cathebras P, Yaffe MJ, Dworkind M. Physical characteristics and the recognition of depression and anxiety in primary care. *Med Care*. 1994; 32: 795-812.
359. *World Development Report: Investing in Health*. Oxford University Press. Washington DC. 1993.
360. Kellner R. Treatment approaches to somatizing and hypochondriacal patients. In *Current Concepts of Somatization: Research and Clinical Perspectives*. Kirmayer LJ, Robbins JM (Eds). American Psychiatric Press Inc. Washington. 1994.
361. Warwick HM, Marks IM. Behavioural treatment of illness phobia and hypochondriasis. *Br J Psychiatry*. 1988; 132: 239-241.

362. Svedlund J, Ottosson J-O, Sjodin I et al. Controlled study of psychotherapy in irritable bowel syndrome. *Lancet*. 1983; ii: 589-592.
363. Sjodin I, Svedlund J, Ottosson J-O, Dotevall G. Controlled study of psychotherapy in chronic peptic ulcer disease. *Psychosomatics*. 1986; 27: 187-200.
364. Sharp M, Peveler R, Mayou R. The psychological treatment of patients with functional somatic syndromes: a practical guide. *J Psychosom Res*. 1992; 36: 515-529.
365. Klimes I, Mayou RA, Pearce MJ, Coles L, Fagg JR. Psychological treatment for atypical non-cardiac chest pain; a controlled evaluation. *Psycholog Med*. 1990; 20: 605-611.
366. Guthrie E. Brief psychotherapy with patients with refractory irritable bowel syndrome. *Br J Psychotherapy*. 1991; 8: 175-188.
367. Melson MJ, Clark RD, Rynearson EK, Snyder AC, Dirtzbach J. Short-term intensive group psychotherapy for patients with functional complaints. *Psychosomatics*. 1982; 23: 689-695.
368. Bates S, Sjoden PO, Nyren O. Behavioural treatment for non-ulcer dyspepsia. *Scand J Behav Ther*. 1988; 17: 155-165.

369. Blair D. group psychotherapy for was neuroses. *Lancet*. 1943; I: 204-205.
370. Thomas KB. The consultation and therapeutic illusion. *Br Med J*. 1978; 1: 1327-1328.
371. Goldberg D, Gask L, O'Dowd T. The treatment of somatization: teaching techniques of reattribution. *J Psychosom Res*. 1989; 33: 689-695.
372. Gask L, Goldberg D, Porter R, Creed F. The treatment of somatization: evaluation of a teaching package with general practice trainees. *J Psychosom Res*. 1989; 33: 697-703.
373. Catalan J, Gath DH, Anastasides P, Bond SAK, Day A, Hall L. Evaluation of a brief psychological treatment for emotional disorders in primary care. *Psycholog Med*. 1991; 21: 1013-1018.
374. Wilkinson P, Mynors-Wallis L. Problem-solving therapy in the treatment of unexplained physical symptoms in primary care: a preliminary study. *J Psychosom Res*. 1994; 38: 591-598.
375. Baker T, Lloyd M, Gibb D. *South Australia: Horizons Beyond*. Wakefield Press. Adelaide. 1999.
376. Peterson C, Whittaker M. Glossary of terms. Monograph No. 7. Technical Advisory Group. National Centre for Epidemiology and Population Health. The Australian National University. Canberra. 1994: 40.

377. Deakin Australia. The course ahead: Advancing Primary Health Care through Management and Leadership Development in Divisions of General Practice. Divisions Strategy group. Melbourne. 1996.
378. Young D, Teng Liaw. The organization of general practice. In General Practice in Australia, 1996. Commonwealth Dept. of Health and Family Services. General Practice Branch. Canberra. 1996: pp. 107-134. .
379. Basic Community Profiles from the 1996 Census of Population and Housing (Postcodes: 5008, 5009, 5014, 5022, 5061, 5063, 5066, 5067, 5070, 5074, 5082, 5086, 5091). Australian Bureau of Statistics. Catalogue No. 2020.0. Commonwealth of Australia. 1997.
380. Pegrum R, Calcino G. General Practitioner service characteristics. In General Practice in Australia 1996. Commonwealth Department of Health and Family Services. General Practice Branch, Canberra. 1996: pp 65-106.
381. General Practice in Australia. Report from the Commonwealth Dept. of Health and Family Services - General Practice Branch. Canberra. 1996
382. Scicchitano J, Lovell P, Pearce R, Marley J, Pilowsky I. Illness behaviour and somatization in General Practice. J Psychosom Res. 1996;41:247-254.
383. Pilowsky I, Spence ND. Manual for the Illness Behaviour Questionnaire. (3rd Edit.) Dept. of Psychiatry, University of Adelaide. Adelaide. SA. 1994.

384. Pilowsky I, Spence ND. Patterns of illness behaviour in patients with intractable pain. *J Psychosom Res.* 1975; 19: 279-287.
385. Pilowsky I. Dimensions of illness behaviour as measured by the Illness Behaviour Questionnaire: a replication study. *J Psychosom Res.* 1993;37:53-62.
386. Pilowsky I, Murrell TGC, Gordon A. The development of a screening method for abnormal illness behaviour. *J Psychosom Res.* 1979;23:203-207.
387. Wyshak G, Barsky AJ, Klerman GL. Comparison of psychiatric screening tests in a general medical setting using ROC analysis. *Med. Care.* 1991; 29: 775-785.
388. Speckens A, Spinhoven P, Sloekers P, Bolk J, van Hemert A. A validation study of the Whiteley Index, the Illness Attitudes Scales and the Somatosensory Amplification Scale in general medical and General Practice patients. *J Psychosom Res.* 1996;40:95-104.
389. Kellner R, Abbott P, Winslow WW, Pathak D. Fears, beliefs and attitudes in DSM-III hypochondriasis. *J Ner Ment Dis.* 1987; 175: 20-25.
390. Pilowsky I, Spence N. Illness behaviour syndromes associated with intractable pain. *Pain.* 1976;2:61-71.

391. Pilowsky I, Spence N. Pain, anger and illness behaviour. *J Psychosom Res.* 1976;20:411-416.
392. Pilowsky I, Spence N. Is illness behaviour related to chronicity in patients with intractable pain? *Pain.* 1976;2:167-173.
393. Pilowsky I, Chapman CR, Bonica J. Pain, depression and illness behaviour in a pain clinic population. *Pain.* 1977;4:183-192.
394. Speculand B, Goss A, Spence ND, Pilowsky I. Intractable facial pain and illness behaviour. *Pain.* 1981;11 213-219.
395. Gordon A, Hitchcock ER. Illness behaviour and personality in intractable facial pain syndromes. *Pain.* 1983;17:267-276.
396. Spence ND, Pilowsky I, Minniti R. The attribution of affect in pain clinic patients: a psychophysiological study of the conversion process. *J Psycholog Med.* 1985-86;15:1-11.
397. Byrne D, Whyte H. Dimensions of illness behaviour in survivors of myocardial infarction. *J Psychosom Res.* 1975;26:317-321.
398. Fava G, Zielezny M, Pilowsky I, Trombini G. Patterns of depression and illness behaviour in general hospital patients. *Psychopathology.* 1984;17:105-109.

399. Pilowsky I, Spence ND. Ethnicity and illness behaviour. *Psycholog Med.* 1977;7:447-452.
400. Pilowsky I, Barrow G. Predictors of outcome in the treatment of chronic "psychogenic" pain with amitriptylline and brief psychotherapy. *The Clin J of Pain.* 1992;8:358-362.
401. Scicchitano J, Rounsefell B, Pilowsky I. Baseline correlates of the response to the treatment of chronic localized Myofascial Pain Syndrome by injection of local anaesthetic. *J Psychosom Res.* 1996;40:75-85.
402. Clarke D, Minas H, McKenzie D. Illness behaviour as a determinant of referral to a psychiatric consultation/liaison service. *Aust NZ J Psychiatry.* 1991;25:330-337.
403. Schweitzer R, Robertson D, Kelly B, Whiting J. Illness behaviour of patients with chronic fatigue syndrome. *J Psychosom Res.* 1994;38:41-49.
404. Trigwell P, Hatcher S, Johnson M, Stanley P, House A. "Abnormal" illness behaviour in chronic fatigue and multiple sclerosis. *BMJ .* 1995;311:15-22.
405. Binzer M, Eisemann M, Kullgren G. Illness behaviour in the acute phase of motor disability in neurological disease and in conversion disorder: a comparative study. *J Psychosom Res.* 1998; 44: 657-666.

406. Palsson N, Kaij L. Development of a screening method for probable somatizing syndromes. *Acta Psychiatr Scand.* 1985;72:69-73.
407. Goldberg D. The detection of psychiatric illness by questionnaire. Maudsley Monographs No 21. Oxford Univ Press. London. 1970
408. Medina-Mora ME, Padilla GP, Campello-Serrano C, Mas CC, Ezban M, Caraveo J, Curona J. The factor structure of the GHQ: a scaled version for a hospital's general practice service in Mexico. *Psychol Med.* 1983;13:355-362.
409. Banks MH. Validation of the General Health Questionnaire in a young community sample. *Psychol Med.* 1983;13:349-353.
410. Lobo A, Perez-Echeverria M, Artal J. Validity of the scaled version of the General Health Questionnaire (GHQ-28) in a Spanish population. *Psychol Med.* 1986;16:135-140.
411. Bridges KW, Goldberg DP. The validation of the GHQ-28 and the use of the MMSE in neurological in-patients. *Br J Psychiatry.* 1986;148:548-553.
412. Garyfallos G, Karastergiou A, Adamopolou A, Moutzoukis C, Alagiozidou E, Mala D, Garyfallos A. A Greek version of the General Health Questionnaire: accuracy of translation and validity . *Acta Psychiatr Scand.* 1991;84:371-378.

413. Cheung P, Spears G. Reliability and validity of the Cambodian version of the 28 item General Health Questionnaire. *Soc Psychiatry Psychiatr Epidemiol.* 1994;29:95-99.
414. Chan DW. The two scaled versions of the General Health Questionnaire: a comparative analysis. *Soc Psychiatry Psychiatr Epidemiol.* 1995;30:85-91.
415. Romans-Clarkson SE, Walton VA, Herbison GP, Mullen PE. Validity of the GHQ-28 in New Zealand women. *Aust NZ J Psychiatry.* 1989;23:187-196.
416. Goldberg DP, Hillier VF. A scaled version of the General Health Questionnaire. *Psychol Med.* 1979;9:139-145.
417. Graetz B. Multidimensional properties of the General Health Questionnaire. *Soc Psychiatry Psychiatr Epidemiol.* 1991;26:132-138.
418. Banks MH, Clegg CW, Jackson PR, Kemp NJ, Stafford EM, Wall TD. The use of the General Health Questionnaire as an indication of mental health in occupational studies. *J Occup Psychol.* 1980;53:187-194.
419. World Health Organization: Composite International Diagnostic Interview (CIDI):a CIDI-interview (version 1.0), b) CIDI-user manual, c) CIDI-training manual, d) CIDI-computer programmes. World Health Organization. Geneva. 1990.

420. Robins LN, Helzer JE, Croughan J, Williams J, Spitzer RE. The NIMH Diagnostic Interview Schedule, Version II. 1979 ADM-42-12-79, with History and Introduction (1980), Instructions (1979) and Computer Programmes (1980).
421. Wing JK, Cooper JE, Sartorius N. Measurement and classification of psychiatric symptoms: An Instruction Manual for the PSE and CATEGO programme. Cambridge University Press. Cambridge. 1974.
422. Robins LN, Wing J, Wittchen H-U et al. The Composite International Diagnostic Interview: an epidemiological instrument suitable for use in conjunction with different diagnostic systems and in different cultures. *Arch Gen Psychiatry*. 1988;45:1069-1077.
423. Semler G, Wittchen H-U, Joschke K, et al. Test-retest reliability of a standardized psychiatric interview (DIS/CIDI). *European Arch Psychiatry and the Neurolog Sciences*. 1987;236:214-222.
424. Wittchen H-U, Robins LN, Cottler LB, Sartorius N, Burke JD, Regier D. and Participants in the Multicentre WHO/ADAMHA Field Trials. Cross-cultural feasibility and sources of variance of the Composite International Diagnostic Interview (CIDI). *Br J Psychiatry*. 1991; 159: 645-653.
425. Hawton K, Kirk J. Problem-solving. In Hawton K, Salkovskis P, Kirk J, Clark D. (Eds.) *Cognitive Behaviour Therapy for Psychiatric Problems*. Oxford University Press. Oxford. 1989. 406-426.

426. Hawton K. Controlled studies of psychosocial interventions following attempted suicide. In *Current Research in Suicide and Parasuicide*. Kreitman N, Platt SD (Eds) Edinburgh University Press. Edinburgh. 1989.
427. Hobson RF. A conversational model of psychotherapy. *AUTP Newsletter*. 1977. 14-18.
428. Hobson RF. *The Heart of Psychotherapy*. Tavistock Publications. London. 1984.
429. Goldberg DP, Steele J, Smith C. Teaching psychiatric interview techniques to general practitioners. *Acta Psychiatr Scand*. 1979; 62: 41-47. Suppl. 285.
430. Lesser AT. Problem-based interviewing in general practice. *Medical Education*. 1985; 19: 299-304.
431. Kreitler S, Aronson M, Berliner S, Kreitler H, Weissler K, Arber N. Life events and personal problems: their physiological and emotional effects. *Person Individ Diff*. 1995; 18: 101-116.
432. Nezu A, Ronan G. Social problem-solving as a moderator of stress-related depressive symptoms: a prospective analysis. *J Counseling Psychol*. 1988; 35: 134-138.
433. Klein K, Barnes D. The relationship of life stress to problem-solving: task complexity and individual differences. *Social Cognition*. 1994; 12: 187-204.

434. Heppner PP, Hubel J, Neal GW, Weinstein CL, Rabinowitz FE. Personal problem-solving: a descriptive study of individual differences. *J Counselling Psychol.* 1982; 29: 580-590.
435. Goldberg DP, Hobson RF, Maguire GP, Margison FR, O'Dowd T, Osborn M, Moss S. The clarification and assessment of a method of psychotherapy. *Br J Psychiatry.* 1984; 144: 567-575.
436. Gray J. *The neuropsychology of anxiety.* Oxford University Press. Oxford. 1982.
437. Seligman M. *Helplessness: on depression, development and death.* Freeman, San Francisco. 1975.
438. Chapman CR, Sola AE, Bonica JJ. Illness behaviour and depression compared in pain centre and private practice patients. *Pain.* 1979; 6: 1-7.
439. Borus JF, Howes MJ, Devins DP, Rosenberg R, Livingstone WN. Primary health care provider's recognition and diagnosis of mental health disorders in their patients. *Gen Hosp Psychiatry.* 1988; 10: 317-321.
440. Neilsen AC, Williams TA. Depression in ambulatory medical patients: prevalence by self-report questionnaire, and recognition by non-psychiatric physicians. *Arch Gen Psychiatry.* 1980; 37: 999-1004.

441. Verhaak P. Detection of psychiatric complaints by general practitioners. *Med Care* 1988; 26: 1009-1020.
442. Wells K, Hays R, Burnam M, Rogers W, Greenfield S, Ware S. Detection of depressive disorder for patients receiving fee-for-service care. *JAMA*. 1989; 23: 3298-3302.
443. Schulberg HC, Burnam BJ. Mental disorders in primary care: epidemiology, diagnostic and research directions. *Gen Hosp Psychiatry*. 1988; 10: 79-87.
444. Katon W, Von Korff M. Caseness criteria for major depression for the primary care clinician and the psychiatric epidemiologist. In *Depression in Primary Care*. Atkinson CC, Zich JM (Eds). Routledge. New York. 1990.
445. Von Korff M, Shapiro S, Burke JD, Teitlebaum M, Skinner EA, Greenan P, Turner RW, Klein L, Burns B. Anxiety and depression in a primary care clinic: comparison of the DIS, the GHQ and practitioner assessments. *Arch Gen Psychiatry*. 1987; 44: 152-156.
446. Coulehan JL, Schulberg HC, Block MR. The efficiency of depression questionnaires for case finding in primary medical care. *J Gen Intern Med*. 1989; 4: 541-547.
447. Sireling LI, Freeling P, Paykel ES, Rao BM. Depression in general practice: case thresholds and diagnosis. *Br J Psychiatry*. 1985; 147: 113-119.

448. Coyne JC, Fechner-Bates S, Schwenck TL. The prevalence, nature and comorbidity of depressive disorders in primary care. *Gen Hosp Psychiatry*. 1994; 16: 267-276.
449. Freeling P, Rao BM, Sireling LI, Burton RH. Unrecognized depression in general practice. *Br Med J*. 1985; 290: 1880-1883.
450. Noyes R, Kathol RG, Fisher MM, Phillips BM, Swetzer MT, Holt CS. The validity of DSM-III-R hypochondriasis. *Arch Gen Psychiatry*. 1993; 50: 961-970.
451. Wilson-Barnett J, Trimble MR. An investigation of hysteria using the IBQ. *Br J Psychiatry*. 1985; 146: 601-608.
452. Gardner MJ, Altman DG. Confidence Intervals rather than 'P' values: estimation rather than hypothesis testing. *B M J*. 1986; 292: 746-750.
453. Berry G. Statistical significance and confidence intervals. *Med J Aust*. 1986; 144: 618-619.
454. Pilowsky I. Psychodynamic aspects of pain experience. in *The Psychology of Pain*. Sternbach RA (Ed). Raven Press. New York. 1978: pp 203-217.
455. Pilowsky I, Bassett D, Barrett R, Petrovic L, Minnitti R. The Illness Behaviour Assessment Schedule: reliability and validity. *Int J Psychiatry in Med*. 1983; 13: 11-28.

456. Kroenke K, Manelsdorff AD. Common symptoms in ambulatory care: incidence, evaluation, therapy and outcomes. *Am J Med.* 1989; 86: 262-266.
457. Kroenke K. Symptoms in medical patients: an untended field. *Am J Med.* 1992; 92: Suppl 1A: 3S-6S.
458. Feinstein AR. *Clinical Epidemiology: The Architecture of Clinical Research.* WB Saunders. 1985.
459. McCrone J. *Going Inside. A tour round a single moment of consciousness.* Faber & Faber. London. 1999.
460. Tansella M, Williams PC. The Italian experience and its implications. *Psycholog Med.* 1987; 17: 283-289.
461. Sytma S, Laciga J, Giel R, Prevratil V. Inpatient care in an eastern and western European area: a comparative case-register study. *Soc Psychiatr Psychiatric Epidemiol.* 1992; 27: 274-279.
462. Summergrad P. Medical psychiatric units and the roles of the inpatient psychiatric service in the general hospital. *Gen Hosp Psychiatry.* 1994; 16: 20-31.
463. Summergrad P. General Hospital inpatient psychiatry in the 1990's. Problems and Possibilities. *Gen Hosp Psychiatry.* 1991; 13: 79-82.

464. Geraty R, Bartlet J, Hill et al. The impact of managed behaviour healthcare on the costs of psychiatric and clinical dependency. *Treatment Behaviour Healthcare Tomorrow*. 1994; 3: 18-30.
465. Geraty RD. General Hospital Psychiatry and the new behaviour healthcare delivery system. *Gen Hosp Psychiatry*. 1995; 17: 245-250.
466. Hales RE. The benefits of a psychaitric consultation-liaison service in a general hospital. *Gen Hosp Psychiatry*. 1985; 7: 214-218.
467. Saravey SM, Steinburg MD, Wenschel B, Pollack S, Aloviz N. Psychological co-morbidity and length of stay in the general hospital. *Am J Psychiatry*. 1991; 148: 324-329.
468. Uldall KK, Koutsky LA, Bradshaw DH, Hopkins SG, Katon W, Kafferty W. Psychiatric co-morbidity and length of stay in hospitalized AIDS patients. *Am J Psychiatry*. 1994; 151: 1475-1478.
469. Clarke DM, Minas H, Stuart GW. The prevalence of psychiatric morbidity in general hospital inpatients. *Aust NZ J Psychiatry*. 1991; 25: 322-329.
470. Engel G. The need for a new medical model: a challenge for biomedicine. *Science*. 1977; 196: 129-136.
471. Henderson AS. *An introduction to social psychiatry*. Oxford University Press. Oxford. 1988.

472. Goldberg D, Tantom D. The public health impact of mental disorder. Hogrefe & Hubert Publishers. Toronto. 1990.
473. Hurry J, Bibbington P, Tennant C. Psychiatric symptoms, social disablement and illness behaviour. *Aust NZ J Psychiatry*. 1987; 21: 68-73.
474. Thompson JW, Burns BJ, Taube CA. The severely mentally-ill in general hospital psychiatric units. *Gen Hosp Psychiatry*. 1988; 10: 1-9.
475. Sartorius N, Ustun TB, Lecrubier Y, Wittchen HV. Depression co-morbid with anxiety. Results from the WHO study of psychological disorders in primary health care. *Br J Psychiatry*. 1996; 168. Suppl 30. S38-43.
476. Montano CB. Recognition and treatment of depression in a primary care setting. *J Clin Psychiatry*. 1994; 55. Suppl 12: S18-24.
477. Goldberg D. Epidemiology of mental disorders in primary care settings. *Epidemiol Rev*. 1995; 17: 182-190.
478. Piterman L, Blashki G, Liaw T. Depression in general practice. *Aust Fam Physician*. 1997; 26: 720-725.
479. Paykel ES, Priest RG. Recognition and management of depression in general practice: consensus statement. *Br Med J*. 1992; 305: 1198-1202.

480. Goldberg DP. The concept of a psychological case in general practice. *Soc Psychiatry Psychiatric Epidemiol.* 1978; 17: 61-65.
481. Picinelli M, Rucci P, Ustan B, Simon G. Typologies of anxiety, depression and somatization symptoms among primary care attenders with no formal mental disorder. *Psycholog Med.* 1999; 29: 677-688.
482. Andrews G, Stewart GW, Morris-Yates A, Holt P, Henderson S. Evidence for a general neurotic syndrome. *Br J Psychiatry.* 1990; 157: 6-12.
483. Tyrer P. *The classification of neurosis.* John Wiley. Chichester. 1989.
484. Williams P, Tarnopolsky A, Hand D, Shepherd M. Minor psychiatric morbidity and general practice consultations. The West London Survey. *Psycholog Med. Monograph Supplements.* 9: 1986.
485. Bowman FM, Garralda ME. Psychiatric morbidity among children in general practice. *Br J Gen Pract.* 1993; 43: 6-9.
486. Gerber PD, Barrett JE, Barrett JA, Oxman TE, Mankeimer E, Smith Rm Whiting RD. The relationships of presenting physical complaints to depressive symptoms in primary care patients. *J Gen Intern Med.* 1992; 7: 170-173.
487. Catheras PJ, Robbins JM, Kirmayer LJ, Hayton BC. Fatigue in primary care: prevalence, psychiatric co-morbidity, illness behaviour and outcome. *J Gen Intern Med.* 1992; 7: 276-286.

488. Kisley SR, Goldberg DP. The effects of physical illness on psychiatric disorder. *J Psychopharmacol.* 1993; 7: 119-125.
489. Kirmayer LJ, Robbins JM, Dworkind M, Yaffe M. Somatization and the recognition of depression and anxiety in primary care. *Am J Psychiatry.* 1993; 150: 734-741.
490. Von Korff M. Case definition in primary care: the need for clinical epidemiology. *Gen Hosp Psychiatry.* 1992;14: 293-295.
491. Bayer J, Paey M. Predicting intentions to seek help from professional mental health services. *Aust NZ J Psychiatry.* 1997; 31: 504-513.
492. Pilowsky I. Abnormal Illness Behaviour. *Psychother Psychosom.* 1995; 63: 1-8.
493. Pilowsky I. Diagnostic criteria and classification in psychosomatic research. *Psychother Psychosom.* 1996; 65: 115-116.
494. Poppen R. *Behavioural Relaxation Training and Assessment.* Pergamon. New York. 1988.
495. Meichenbaum D. *Stress Inoculation Training.* Pergamon. New York. 1985.
496. Schwartz MS et al. *Biofeedback: a practitioner's guide.* Guilford. New York. 1987.

497. Salkovskis PM. Somatic Problems. In *Cognitive Behaviour Therapy for Psychiatric Problems: a practitioner's guide*. Hawton H, Salkovskis PM, Kirk J, Clark DM (Eds). Oxford University Press. Oxford. 1989.
498. Sharpe M, Peveller R, Mayou R. The psychological treatment of patients with functional somatic symptoms: a practical guide. *J Psychosom Res.* 1992; 36: 515-529.
499. Speckens AEM, Van Hemert AM, Spinhoven P, Hawton K, Bolk JH, Rooijmans HGM. Cognitive behaviour therapy for medically unexplained symptoms: a randomized controlled trial. *Br Med J.* 1995; 311: 1328-1332.
500. Dunker K. On problem-solving. *Psychological Monographs.* 1945; No 270.
501. Wickelgren WA. *How to solve problems*. Freeman. San Francisco. California. 1974.
502. Heppner PP, Petersen CH. The development and implications of a personal problem-solving inventory. *J Counselling Psychol.* 1992; 29: 66-75.
503. Heppner PP, Anderson WP. The relationship between problem-solving, self-appraisal and psychological adjustment. *Cog Ther Res.* 1985; 9: 415-427.
504. Nezu A. Differences in psychological disturbance between effective and ineffective problem-solvers. *J Counsell Psychology.* 1985; 32: 135-138.

505. Platt JJ, Spivak G. Problem-solving thinking of psychiatric patients. *J Counselling Clin Psychol.* 1972; 39: 148-151.
506. Platt JJ, Spivak G. Social competence and effective problem-solving thinking in psychiatric patients. *J Clin Psychol.* 1972; 28: 3-5.
507. Linehan MM, Camper P, Chiles JA, Strosahl K, Shearin E. Interpersonal problem-solving and parasuicide. *Cog Ther Res.* 1987; 11: 1-12.
508. Coche E, Flick A. Problem-solving training groups for hospitalized psychiatric patients. *J of Psychol.* 1975; 91: 19-29.
509. Malan DH. The outcome problem in psychotherapy research: A historical review. *Arch Gen Psychiatry.* 1973; 30: 719-729.
510. Luborsky L, Singer B, Luborsky L. Comparative studies of psychotherapies. Is it true that, "Everyone has won and all must have prizes"? *Arch Gen Psychiatry.* 1975; 32: 995-1008.
511. Schlesinger HJ, Mumford E, Glass GV. Mental health services and medical utilization. In *Psychotherapy: Practice, Research, Policy.* Vendenbos GR (Ed.) Sage. Beverley Hills. 1980.
512. Conte HR, Karasu TB. Psychotherapy for medically-ill patients; review and critique of controlled studies. *Psychosomatics.* 1981; 22: 285-290.

513. Earll L, Kincey J. Clinical psychologists in general practice: a controlled trial evaluation. *J Royal Coll Gen Practitioners*. 1982; 32: 32-71.
514. Marks I. Controlled trial of psychiatric nurse therapists in primary care. *Br Med J*. 1985; 290: 1181-1184.
515. Brodaty H, Andrews G. Brief psychotherapy in general practice: a controlled prospective intervention trial. *Br J Psychiatry*. 1983; 143: 11-19.
516. Salkovskis PM, Atha C, Storer D. Cognitive-behavioural problem-solving in the treatment of patients who repeatedly attempt suicide: a controlled trial. *Br J Psychiatry*. 1990; 157: 871-876.
517. Mynors-Wallis LM, Gath DH, Lloyd-Thomas AR, Tomlinson D. Randomized- controlled trial comparing problem-solving treatment with amitriptyline and placebo for major depression in primary care. *Br Med J*. 1995; 310: 441-445.
518. Tennant C, Bebbington P, Hurry J. The short-term outcome of neurotic disorders in the community: the relation of remission to clinical factors and to 'neutralizing' life events. *Br J Psychiatry*. 1981; 139: 213-220.
519. Hagnell O. The incidence and duration of mental illness in a total population. In *Psychiatric Epidemiology*. Hare EH, Wing JK (Eds). Oxford University Press. London. 1970.

520. Beisner M. Personal and social factors associated with the remission of psychiatric symptoms. *Arch Gen Psychiatry*. 1976; 33: 941-945.
521. Speckens AEM, Van Hemert AM, Bolk JH, Rooijmans HGM, Hengeveld MW. Unexplained physical symptoms: outcome, utilization of medical care and associated factors. *Psycholog Med*. 1996
522. Speckens AEM, Van Hemert AM, Bolk JH, Hawton KE, Rooijmans HGM. The acceptability of psychological treatment in patients with medically inexplicable physical symptoms. *J Psychosom Res*. 1995; 39: 855-863.
523. Tognoni G, Alli C, Avanzini F, Bettelli G, Colombo F, Corso R, Marchioli R, Zussino A. Randomized clinical trials: lessons from a failure. *BMJ*. 1991; 303: 969-971.
524. King M, Broster G, Lloyd M et al. Controlled trials in the evaluation of counselling in general practice. *Br J Gen Pract*. 1994; 44: 229-232.
525. Gournay K, Brooking J. The community psychiatric nurse in primary care: an economic analysis. *BJ Psychiatry* 1994; 164: 231-238.
526. Ginsberg G, Marks L, Waters H. Cost benefit analysis of a controlled trial of nurse therapy for neurosis in primary care. *Psycholog Med*. 1984; 14: 683-690.

527. Wilkinson G, Allen P, Marshall G, Walker J, Browne W, Mann AH. The role of the practice nurse in the management of depression in general practice treatment adherence to anti-depressant medication. *Psycholog Med.* 1993; 23: 229-239.
528. Mynors-Wallis L, Davies I, Gray A, Barbour F, Gath D. A randomized controlled trial and cost analysis of problem-solving therapy for emotional disorders given by community nurses in primary care. *Br J Psychiatry.* 1997; 170: 113-119.
529. Brown C, Schulberg HC. The efficacy of psychosocial treatments in primary care. *Gen Hosp Psychiatry.* 1995; 17: 414-424.
530. Kellner R. Somatization. Theories and Research. *J Nerv Ment Dis.* 1990; 178: 150-160.
531. Katon W, Reis R, Kleinman A. A prospective study of consecutive somatizing patients. Part II. *Comprehens Psychiatry.* 1984; 25: 305-314.
532. Ford CV. *The Somatizing Disorders. Illness as a Way of Life.* Elsevier. New York. 1983.
533. Ford CV. The somatizing disorders. *Psychosomatics.* 1986; 27: 327-337.

534. Pennebaker J, Burnam MA, Schaeffer MA et al. Lack of control as a determinant of perceived physical symptoms. *J Pers Soc Psychol.* 1977; 35: 167-174.
535. Reidenberg MM, Lowenthal DT. Adverse non-drug reactions. *NEJM.* 1968; 279: 678-679.
536. White KC, Williams TF, Greenburg BG. The ecology of medical care. *NEJM* 1961; 265: 885-892.
537. Livingstone R, Witt A, Smith GR. Families who somatize. *J Dev Behav Paediatr.* 1995; 16: 42-46.
538. Kirmayer LJ, Robbins JM, Paris J. Somatoform disorders. Personality and the social matrix of somatic distress. *J Abn Psychol.* 1994; 103: 125-136.
539. Mack AH, Forman L, Brown R, Francis A. A brief history of psychiatric classification: from the Ancients to DSM-IV. *History of Psychiatry. Psychiatric Clinics of North America.* 1994; 17: 515-523.
540. Escobar JI, Gara MA. DSM-IV Somatoform disorders: do we need a new classification? *Gen Hosp Psychiatry.* 1999; 21: 154-156.
541. Rief W, Hiller W. Toward empirically based criteria for the classification of somatoform disorders. *J Psychosom Res.* 1999; 46: 507-518.

542. Coryell W, House D. The validity of broadly defined hysteria and DSM-III conversion disorder: outcome, family history and mortality. *J Clin Psychol.* 1984; 45: 252-256.
543. Gureje O, Simon G. The natural history of somatization in primary care. *Psychological Medicine.* 1999; 26: 669-676.
544. McWhinney IR, Epstein RM, Freeman TR. Re-thinking somatization. *Annals of Int Med.* 1997; 126: 747-750.
545. Kirmayer LJ, Robbins JM. Concepts of somatization. in *Current Concepts of Somatization.* Kirmayer LJ, Robbins JM (Eds). American Psychiatric Press. Washington. 1991: p 181-199.
546. Tyrer P, Lee I, Alexander J. Awareness of cardiac function in anxious, phobic and hypochondriacal patients. *Psycholog Med.* 1980; 10: 171-174.
547. Merskey HA, Evans PR. Variations in pain complaint threshold in psychiatric and neurologic patients with pain. *Pain.* 1964; 1: 444-453.
548. Zeisat H. Correlates of the tourniquet ischaemia pain ratio. *Percept Motor Skills.* 1978; 47: 425-436.
549. Hanback JR. Arousal and perceptual sensitivity in hypochondriasis. *J Abn Psychol.* 1978; 87: 523-530.

550. Brownlee S, Levanthal H, Balaban M. Autonomic correlates of illness imagery. *Psychophysiol.* 1992; 29: 142-153.
551. Kirmayer LJ, Young A, Robbins JM. Symptom attribution in cultural perspective. *Can J Psychiatry.* 1994; 39: 584-595.
552. Nilchaikovit T, Hill JM, Holland JC. The effects of culture on illness behaviour and medical care. Asian and American differences. *Gen Hosp Psychiatry.* 1993; 15: 41-50.
553. Read J, Law A. The relationship of causal beliefs and contact with users of mental health services to attitudes to the 'mentally ill'. *Int'l J Soc Psychiatry.* 1999; 45: 216-229.
554. Murray J, Corney R. Not a medical problem? An intensive study of the attitudes and illness behaviour of low attenders with psychosocial difficulties. *Soc Psychiatry Psychiatric Epidemiol.* 1990; 25: 159-164.
555. Cape J, McCulloch Y. Patients' reasons for not presenting emotional problems in general practice consultations. *Br J Gen Pract* 1999; 49: 875-879.
556. Gething L. Providing services in remote and rural Australian communities. *J. Commun. Psychol.* 1997; 25: 209-226.
557. Gregoire A, Thornicroft G. Rural mental health. *Psychiatric Bulletin.* 1998; 22: 273-277.

558. Smith AJ, Ramana R. Mental health in rural areas: experience in South Cambridgeshire. *Psychiatric Bulletin*. 1998; 22: 280-284.
559. Starcevic V. Reassurance and treatment of hypochondriasis. *Gen Hosp Psychiatry*. 1991; 13: 122-127.
560. Pennebaker JW. Confession, inhibition and disease. *Advances in Experimental Social Psychology*. 1989; 22: 211-244.
561. Murrell T, Marley J. *Life on the Outside*. Openbook Publishers. Adelaide. 1994.
562. Olesen F, Dickensen J, Hjortdahl R. General Practice - time for a new definition. *Br Med J*. 2000; 320: 354-357.
563. Eisenberg L. Is psychiatry more mindful or brainier than it was a decade ago? *Br J Psychiatry*. 2000; 176: 1-5.