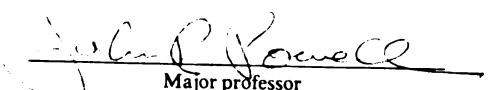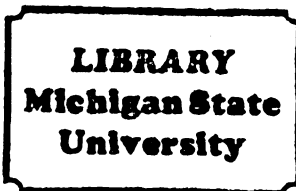This is to certify that the

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The Relationship Between
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And Concomitant Psychiatric Syndromes

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Patrice Elizabeth Gerard

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Doctor of _Philosophy_ degree in _Counseling_ Psychology

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THE RELATIONSHIP BETWEEN

SOMATIZATION DISORDER

AND CONCOMITANT PSYCHIATRIC SYNDROMES

BY

Patrice Elizabeth Gerard

A DISSERTATION

submitted to

Michigan State University
in the partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Counseling, Educational
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ABSTRACT

THE RELATIONSHIP BETWEEN SOMATIZATION DISORDER
AND CONCOMITANT PSYCHIATRIC SYNDROMES

By

Patrice Elizabeth Gerard

The relationship between somatization disorder and
additional Axis I and Axis II diagnoses was investigated in
a sample of 25 patients, referred because they were thought
to suffer from somatization disorder. Each individual was
assigned multi-axial DSM-III-R diagnoses using both the
Structured Interview for DSM-III-R (SCID) and the Millon
Clinical Inventory, second edition (MCMI-II).

As hypothesized, those individuals receiving a
somatization disorder diagnosis evidenced a higher rate of
personality disorders (Axis II syndromes) than expected in
the overall population. In addition, the hypothesis
predicting that the somatization disorder group would
evidence at least one other Axis I diagnosis was supported.
The hypothesis predicting that antisocial and histrionic
personality disorders would be the most frequently occurring
personality disorders among the somatization disorder group
was not supported. Instead, dependent, borderline, and
passive-aggressive were the most frequently assigned
personality disorders. The significance of these findings
was obscured by the low number of somatization disorder
diagnoses assigned in the study.

Post hoc analyses demonstrated that the entire sample was noteworthy in terms of number of assigned Axis I and Axis II diagnoses. The subjects receiving somatoform diagnoses were indistinguishable from the rest of the sample in terms of these Axis I and Axis II disorders. Analysis of the instruments used in the study (SCID and MCMI-II) indicated a low level of concordance between the two, despite the fact that they were both designed to measure DSM-III-R clinical syndromes.

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To my husband, Kenny

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My largest debt of gratitude goes to my husband, Kenny. Without your unwavering love and support, this undertaking could never have been completed. I look forward to getting to know you again.

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TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF APPENDICES

CHAPTER I

Introduction

Somatization, a tendency to experience and communicate somatic distress in response to psychosocial stressors, is a significant health care problem that straddles the borderland between psychiatry and medicine (Lipowski, 1988). Because of their recurrent, multiple and unexplained physical symptoms, somatizing patients have long posed diagnostic and therapeutic challenges to health care providers (Smith, 1985).

Somatization disorder is one of a group of disorders termed "Somatoform disorders" in the Diagnostic and Statistical Manual III (DSM-III) and Diagnostic and Statistical Manual III, Revised (DSM-III-R) nomenclature (American Psychiatric Association, 1980 and 1987). The essential feature of this grouping is the presentation of physical symptoms suggesting physical disorders for which there are no demonstrable organic findings (Lloyd, 1986). The sub-categories of Somatoform disorder are:

1. Body Dysmorphic disorder

2. Conversion disorder

3. Hypochondriasis

4. Somatization disorder

5. Somatoform Pain disorder

6. Undifferentiated Somatoform disorder

7. Somatoform disorder not otherwise specified.

1

The concept of somatization disorder has evolved over the past three decades and incorporates some prior uses of the terms "Hysteria" and "Briquet's syndrome" (Smith, Monson, and Livingston, 1985). The primary feature of somatization disorder is the presence of recurrent and multiple somatic complaints of several years duration, for which medical attention has been sought, but which do not derive from a specific physical disorder. In order to fulfill the criteria for the diagnosis of somatization disorder, the patient must have at least 13 of 25 symptoms. These symptoms must begin before the age of 30. In addition, they must require the patient to take medication other than aspirin, to change his or her pattern of living, or to consult a physician.

Historical Perspective

Syndromes resembling what is termed "somatization disorder" in DSM-III-R (American Psychiatric Association, 1987) have been noted since early medical and psychological documentation (Martin, 1988). Controversy has always existed regarding the implications of this diagnosis and its relationship to personality variables.

Pre-Hippocrates Egyptians maintained that "wandering of the uterus" resulted in numerous physical symptoms (Veith, 1965). Hippocrates embraced this notion and developed it, suggesting a uterine etiology for many symptoms to which the adjective "hysterical" was attached

(Martin, 1988). Over time the uterine theory fell out of favor but the term "hysteria" endured. The first systematic evaluation of hysteria was reported by Briquet in his 1859 Treatise on Hysteria. Despite the movement away from the previously noted anatomical hypothesis, hysteria became linked with personality variables distinctly separate from a tendency toward dramatic and excessive somatic complaints (Martin, 1988). Mai and Merskey (1980) noted Briquet's emphasis on personality traits such as lability of mood, intense reactive emotionality, over-sensitivity and liveliness. These traits were thought to be antecedents to somatic symptoms. Briquet maintained that "brain neurosis" and poor physical health also were etiological factors in the development of "hysteria"; however, attention to personality variables came to supersede the somatic facet of the originally described disorder (Martin, 1988).

In the past four decades several studies have attempted to refine and clarify the diagnosis of "hysteria." Purtell, Robins, and Cohen (1951) used the term "hysteria" to denote a disorder of dramatic nature, with an onset early in life and marked by many medically unexplained complaints. The diagnosis was limited to women. Despite reference to the friendly, verbose and dramatic manner of these patients, personality factors were not part of the diagnostic criteria.

Chodoff and Lyons (1958) emphasized that hysteria denoted "a pattern of behavior exhibited by certain

individuals said to be hysterical personalities or characters" (p. 1401). They also linked hysteria with conversion reactions, anxiety neurosis and "a particular psycho-pathological pattern" (p. 1402).

DSM-II (American Psychiatric Association, 1968) used the term "hysterical neurosis" to describe what had previously been referred to as "hysteria," thus distinguishing it from hysterical personality which was characterized by "excitability, emotional instability, over-reactivity and self-dramatization." Hysterical neurosis was marked by "psychogenic loss or disorder of function." Anxiety was noted as the main symptom.

Prior to the publishing of DSM-II (American Psychiatric Association, 1968), researchers in the field were seeking to re-establish a medical complaint-based definition of hysteria (Martin, 1988). Perley and Guze (1962) refined the concept of hysteria by requiring at least 29 unexplained symptoms in at least nine of 10 symptom groups. Personality factors were only described as they pertained to the manner in which the patient reported his or her medical history. The culmination of this movement occurred in 1970 when Guze suggested calling "hysteria" "Briquet's syndrome" in order to isolate it from other concepts of hysteria. He also intended to avoid the pejorative associations derived from the hysterical personality concept. The diagnosis required a complicated and dramatic medical history beginning before age 30 that

consisted of the presence of a minimum of 25 of 59 medically unexplained symptoms in at least nine of 10 symptom groups (see Table 1.11).

In 1980, the Task Force on Nomenclature and Statistics of the American Psychiatric Association separated hysteria from conversion, psychogenic pain and hypochondriacal disorder and called it "somatization disorder" (American Psychiatric Association, 1980). The diagnostic criteria which comprised Briquet's syndrome were revised as follows:

1. The total symptom list was reduced from 60 to 37 symptoms and all depressive symptoms were eliminated.

2. Ten symptom groups were reduced to seven and the requirement that the symptoms be distributed over groups was dropped.

3. The total number of symptoms required for a positive diagnosis were reduced from 25 to 14 symptoms in women and 12 symptoms in men.

The current DSM-III-R diagnosis of somatization disorder (see Appendix A) further reduces the required number of symptoms to 13 for both men and women. In addition, the presence of the following seven symptoms constitutes a screening index for the disorder:

Table 1.11

Briquet's Syndrome, Perley and Guze (1962, p. 421)

Group 1
  Headaches
  Sickly

Group 2
  Blindness
  Paralysis
  Anesthesia
  Aphonia
  Fits or convulsions
  Unconsciousness
  Amnesia
  Deafness
  Hallucinations
  Urinary retention
  Trouble walking
  Other conversion symptoms

Group 3
  Fatigue
  Lump in throat
  Fainting spells
  Visual blurring
  Weakness
  Dysuria

Group 4
  Breathing difficulty
  Palpitation
  Anxiety attacks
  Chest pain
  Dizziness

Group 5
  Anorexia
  Weight loss
  Marked fluctuations in weight
  Nausea
  Abdominal bloating
  Food intolerances
  Diarrhea
  Constipation

Group 6
  Abdominal pain
  Vomiting

Group 7
  Dysmenorrhea
  Menstrual irregularity
  Amenorrhea
  Excessive bleeding

Group 8
  Sexual indifference
  Frigidity
  Dyspareunia
  Other sexual difficul-
    ties
  Vomiting during 9
    months of pregnancy
    or hospitalized for
    hyperemesis gravi-
    darum

Group 9
  Back pain
  Joint pain
  Extremity pain
  Burning pains of
    sexual organs, mouth
    or rectum
  Other bodily parts

Group 10
  Nervousness
  Fears
  Depressed feelings
  Need to quit working
    or inability to
    carry on regular
    duties because of
    feeling sick
  Crying easily
  Feeling life was
    hopeless
  Thinking a good deal
    about dying
  Wanting to die
  Thinking suicide
  Suicide attempts

1. vomiting (other than during pregnancy)

2. pain in extremities

3. shortness of breath when not exerting oneself

4. amnesia

5. difficulty swallowing

6. burning sensation in sexual organs or rectum
    (other than during intercourse)

7. painful menstruation

The presence of two or more of these items suggests a high likelihood of the disorder. As in DSM-III, anxiety and depressive symptoms are omitted.

Prevalence and Gender Distribution

Estimates of the prevalence of somatization disorder among women vary from 0.2 to 2% depending on sample demographic variables (Woodruff, Clayton, and Guze, 1971; Robins, Helzer, and Weissman, 1984). Somatization disorder is reported to occur far less frequently in men (Smith et al., 1985). However, Lipowski (1988) cautions that both men and women can exhibit it. Studies addressing the prevalence and gender distribution of somatization in general are consistent with these findings. Slavney and Teitelbaum (1985) found that patients with psychogenic pain disorder were equally likely to be male or female. In a study of 139 outpatients referred by the medical and surgical services of a general hospital for evaluation by a psychiatry unit, Leon, Saiz-Ruiz, Chinchilla, and Morales (1987) found

somatization by females was only slightly greater than males, and not reaching statistical significance. The traditional notion of women somatizing more than men has become so prevalent that even physician's view women as potential somatizers (Armitage, Schneiderman, and Bass, 1979). Despite the fact that somatization disorder is not a prevalent condition in the population at large, reviews suggest that somatization disorder occurs with enough frequency in family practice settings for the physician to make the diagnosis on an almost daily basis (Kaplan, Lipkin, and Gordon, 1988; Like, Rogers, and McGoldrick, 1988). In fact, de Gruy, Columbia, and Dickinson (1987) have estimated the prevalence rate for somatization disorder in the primary care setting may be as high as 5%.

Statement of the Problem

Few descriptive studies have addressed the somatizing patient yet somatization disorder has a significant impact on both the patient's quality of life and the primary care physician's time, energy and morale (Rasmussen and Avant, 1989). The course of somatization is usually chronic, unrelenting and disabling. Only 31% of patients have been found to recover at 15-year follow-up assessments (Coryell and Norton, 1981). Misdiagnosis and the absence of effective treatment regimes result in unnecessary physician visits, surgery and medical testing (Katon, 1985). The failure to accurately diagnose somatization disorder may

result in the prescription of unnecessary medications with possible complications and adverse reactions (Rasmussen and Avant, 1989). Perley and Guze (1962) note that drug and alcohol abuse frequently accompany somatization disorder. Interestingly, patients with somatization disorder are also subject to an increased number of physical illnesses (Oxman, Harrigan, and Kues, 1983).

Patients with somatization disorder also suffer psychological and social consequences as a result of their illness. Katon, Ries, and Kleinman (1984) state that somatization disorder can impact family homeostasis, vocational adjustment, social relations and the patient's coping mechanisms. Zoccalillo and Cloninger (1986) note that somatization disorder is almost always associated with chronic and pervasive social disability. They cite a high incidence of marital discord and divorce noted by researchers in the field (Robins, 1966; Guze, 1968; and Guze, 1976). In addition, Zoccalillo and Cloninger have found that women with somatization disorder are significantly more likely to abuse or neglect their children, and do poorly at work.

Patients who continually present with multiple physical symptoms but no apparent disease take up an excessive amount of the primary care physician's time and energy. Regier, Goldberg, and Taublo (1978) and Hankin and Oktay (1979), in studies sponsored by the National Institute of Mental Health, demonstrated that 50 to 60% of patients with

mental illness are exclusively treated in a primary care setting. Of that percentage, 25% present with somatic complaints devoid of organic etiology (de Gruy et al., 1987; Katon, 1985). Smith (1985) reports that the somatizing patient accounts for at least 40% of the medical outpatient population. Recent studies, as previously noted, have put the prevalence rate for somatization disorder in primary care settings as high as 5%. Rasmussen and Avant (1989) note that such a prevalence rate would rank somatization disorder as the fourth most common disorder encountered in family practice.

The first major obstacle encountered by the primary care physician in dealing with somatization disorder is making the diagnosis (Brown and Smith, 1988). Despite its reported prevalence in primary care settings, medical practitioners often fail to recognize this diagnostic entity. Oxman et al. (1983) note that reluctance to use DSM-III terminology often results in the physician's failure to even consider the disorder. They underscore that prevention and treatment of somatization disorder will be tedious unless the primary care physician is given training in practical and non-stigmatizing means of diagnosing this disorder. These authors call for increased psychiatric consultation as well as a comprehensive biopsychosocial assessment.

Katon et al. (1984) also call attention to the primary care physician's difficulty in diagnosing somatization and

other somatoform disorders. They note that primary care
physicians are taught psychiatric nosology in psychiatric
settings where, for the most part, patients are aware of
psychological precipitants and symptoms. These physicians
usually have less training in diagnosing emotional illness
in patients who present somatically. Katon et al. decry the
lack of research aimed at describing the prevalence,
incidence and phenomenology of DSM-III type diagnoses within
primary care settings.

The differential diagnosis of multiple unexplained
physical problems can be taxing and time consuming.
Rasmussen and Avant (1989) underscore the need to rule out
organic or physical disorders that also present with
multiple, vague somatic symptoms, such as multiple
sclerosis, systemic lupis erythematosus and
hyperparathyroidism.

Somatization disorder as seen in primary care settings
involves not only physical complaints but also a wide array
of concomitant psychiatric diagnoses. Rasmussen and Avant
(1989) note the following comorbidities:

1. affective disorders (e.g. masked depression)

2. psychosis (e.g. Schizophrenia with multiple
   somatic delusions)

3. anxiety disorders (e.g. generalized anxiety
   disorders)

4. other Somatoform disorders (Conversion disorder,
   Hypochondriasis, Psychogenic pain)

5.   personality disorders (e.g. Histrionic
     personality disorder)

6.   adjustment disorders (e.g. Adjustment disorder
     with physical complaints)

7.   factitious disorders (e.g. Factitious disorder with
     physical symptoms)

Liskow, Othmer, Penick, DeSouza, and Gabrielle (1986b) studied 78 patients diagnosed as having Briquet's syndrome. Seventy-seven of 78 fulfilled inclusive criteria for one or more other psychiatric syndromes (see Table 1.12). Thus even after a physical disorder is ruled out, the differential diagnosis of somatization disorder may be complex and tedious due to considerable symptom overlap and similarity among other psychiatric disorders and somatization disorder.

Rasmussen and Avant (1989) note that physicians experience considerable frustration in their attempts to treat the patient who presents with multiple physical symptoms but no discernible physical or psychiatric disease. This type of patient may elicit negative feelings in the physician who is apt to feel depleted by the patient's excessive demands for emotional support and medical attention, especially when positive outcomes are minimal or nonexistant.

Lichstein (1986) states that in addition to thwarting the well-intentioned therapeutic efforts of the physicians, somatizers are less than enjoyable patients because they challenge the physician's tolerance of diagnostic uncertainty.

Table 1.12

Lifetime Prevalence of Additional Psychiatric Syndromes of 78 Female Psychiatric Outpatients with Briquet's Syndrome, Liskow et. al. (1986b, p. 627).

Psychiatric Syndrome	N	%
Organic mental disorder	1	1.3
Alcohol dependence	13	16.7
Drug dependence	18	23.1
Mania	31	39.7
Major depressive disorder	68	87.2
Schizophrenia	21	26.9
Antisocial personality	13	16.7
Anorexia nervosa	5	6.4
Obsessive-compulsive disorder	21	26.9
Phobic disorder	30	38.5
Panic disorder	35	44.9
Mental retardation	1	1.3
Homosexuality	3	3.8
Transsexualism	0	0

Katon et al. (1984) suggest that the medical system may reinforce somatization. They offer that physicians, by virtue of their highly technological training, preferentially look for and treat somatic complaints. Thus, somatizing patterns can be reinforced by medical concerns and substantial work-ups.

Smith (1985) posits that poor physician relationships with somatizing patients are the rule rather than the exception. Somatizers are not "good patients." They do not present with a clear cut and treatable organic disease and they make frequent demands on their physician. In view of the fact that a positive physician-patient relationship is crucial to the successful management of somatization disorder, research aimed at more accurate recognition and effective treatment of somatizing patients should be a high priority (Katon, 1985).

Patients who suffer from somatization disorder not only tax the physician's time and energy, they consume an inordinate proportion of the health care dollar (Katon et al., 1984). The per capita expenditure for health care of patients with somatization disorder is up to nine times the average per capita amount (Smith et al., 1985). Of particular significance is this population's excessive use of inpatient services. Smith et al. (1985) report that patients with somatization disorder spend an average of 7.6 days in the hospital per year, per person, although the majority of this hospitalization is unnecessary. In 1981,

Cummings and Vanden Bos stressed that the somatizing
patient's overuse of health care services could eventually
lead to bankruptcy in the health care financing system.

Need for the Study

Research aimed at examining the relationship between
somatization disorder and personality disorders is
needed in order to further refine and clarify the diagnosis
of somatization disorder, per se, and to gain increased
understanding of this group of patients with the hope of
thereby developing viable avenues of treatment.

Zoccalillo and Cloninger (1986) found the DSM-III
diagnosis of somatization disorder problematic. They argue
that reliance on physical symptoms alone, the renaming of
the disorder, as well as removal of all psychological
symptoms from the diagnostic criteria, obscures the many
other symptoms and problems associated with somatization
disorder. They hypothesize that patients with somatization
disorder will present with many and varied psychological
symptoms and will frequently meet inclusion criteria for
other psychiatric diagnoses, including personality
disorders.

Liskow et al. (1986b) also highlight the need for
studies examining the relationship between somatization
disorder and concurrently occurring psychiatric disorders.
They are especially interested in how these disorders may

interact to affect the course, prognosis and treatment of either syndrome.

Katon et al. (1984) call for more studies to ascertain the psychiatric characteristics of patients with somatization disorder. These authors use Goldberg and Blackwell's (1971) term the "hidden psychiatric morbidity" to refer to the substantial numbers of patients whose emotional problems are unrecognized by primary care physicians.

Liskow, Penick, Powell, Haegle, and Campbell (1986a) suggest that somatization disorder may be a heterogenous entity. While there may be a homogenous subset of patients with this disorder evidencing stable characteristics, there also may exist a subset who suffer from additional psychiatric disorders that are more amenable to treatment. Liskow and his associates call for additional research to determine if such a subset exists. They caution that until such studies are conducted, it may be premature to suggest that the diagnosis and treatment of somatization disorder be made routinely by the non-psychiatrically trained physician.

Martin (1988) states that the basis of effective treatment is most often founded upon accurate diagnosis. As previously noted, the co-existence of a wide array of concomitant psychiatric diagnoses with somatization disorder appears to have not only confounded the diagnostic process, but may have impeded efforts to treat patients presenting with somatization disorder. A search of the literature

reveals only two controlled treatment studies despite the documented poor recovery rate cited by Coryell and Norton (1981) of 31 percent. Neither of these studies addressed the presence of the co-morbidities found to be associated with somatization disorder. Scallet, Cloninger, and Othmer (1976) conducted a double-blind trial of electrosleep with patients diagnosed as having Briquet's syndrome (somatization disorder). The results suggest no advantages for electrosleep over relaxation taught by autogenic training. Smith, Monson, and Ray (1986) addressed the role of psychiatric consultation in the treatment of somatization disorder. They demonstrate that patients with somatization disorder can receive more appropriate care if collaborative efforts are made between psychiatrists and primary care physicians. Quarterly health care charges declined by 53% in the treatment group after a psychiatric consultation, while functional health status was maintained.

An examination of the personality variables associated with somatization disorder may aid in the treatment of the disorder. Kaminsky and Slavney (1976) state that in view of the association between personality and abiding response patterns, the presence of a personality disorder may give somatization disorder both its stability and its recalcitrance to treatment. They suggest that the examination of the genesis and treatment of this condition should be shifted to a characterological approach. Lipowski (1988) offers that a patient's personality traits and early learning experiences constitute the predisposition to the

development and persistence of somatization. Kahana and
Bibring (1964) believe that the diagnosis of personality
types can aid in the medical management of patients who
somatize. They suggest that personality type
characteristics predict behavior management problems. As
such, they suggest that personality type diagnoses be
routinely assigned in order to assist in the treatment and
management of the patient. Fishbain, Goldberg, Meagher,
Steele, and Rosomoff (1986) state that patients with
personality disorders have a tendency to overreact to
disease in the characteristic pattern of their personality
disorder diagnosis. Research targeted at identifying these
patients will not only assist in predicting their
overresponse to their illness, it may also enable the
clinician to better tailor treatment to the patient's
individual personality constellation.

Theory

While a wide range of etiological factors have been
proposed to account for somatization, those underlying the
association of personality variables with somatization
disorder are seldom noted in the literature. In addressing
the association between somatization and a vast array of
psychiatric disorders, Escobar (1987) proposes that
somatization may in itself be a personality trait. Liskow
et al. (1986a) note that predisposing factors underlying
somatization include genetic, developmental, learning,

personality and sociocultural variables. Ford (1987) also suggests a genetic predisposition toward somatization. He notes that a significant proportion of women who are diagnosed with somatization disorder evidence antisocial and hysterical personality traits and/or disorders. He also emphasizes the significantly high percentage of their male relatives evidencing sociopathy or alcoholism. In view of this marked familial incidence, he suggests that somatization disorder and male sociopathy are essentially the same disorder, with the symptomatic expression being determined by gender. Research exploring this interesting hypothesis will be reviewed in Chapter Two.

In 1986, Cloninger proposed a biosocial theory of personality which could be relevant to somatization disorder. In this theory, he ties somatization and personality variables together, linking both to an underlying physiology.

Personality traits are seen as basic response patterns with underlying neurobiological bases. Somatic anxiety is defined as "global uneasiness or alarm without specific premonitory cues, frequent body pains due to low sedation thresholds and slow fatigability" (p. 170). Somatic anxiety is related to the trait of high novelty seeking which, accompanied by low harm avoidance and high reward dependence, are related to second order traits of impulsiveness, gullibility or emotional vulnerability and narcissism. This pattern, according to Cloninger,

approximates histrionic personality. Neurobiologically speaking, high novelty seeking is associated with high serotonergic activity and reward dependence is associated with low basal noradrenerigic activity.

Cloninger in a similar fashion links the antisocial personality with somatization disorder. He notes that both antisocial personality and somatization disorder have associated neuropsychological deficits that are similar to those observed in patients with bilateral frontal lobe lesions and/or lesions of the septum and hippocampus. He, like Ford (1987), suggests that these disorders are different expressions of the same underlying genetic predisposition.

Lipowski (1988) stresses that somatization may develop as a coping strategy enabling the individual to deal with psychological needs and conflicts, feelings of guilt and anger, and low self-esteem. Such a conceptualization dovetails with Millon's (1988) notion that personality, ideally, represents a defense system against external psychological stressors. He compares Axis I disorders to break-down symptoms while Axis II disorders represent a line of defense. Such a model provides an intriguing way to view the association between somatization disorder and personality variables. The exact role personality variables play in somatization disorder is unclear at this time. However, they do appear to represent a significant etiologic dimension.

Summary

Somatization disorder, a syndrome characterized by the presence of multiple physical symptoms devoid of discernable organic etiology, poses a significant health care problem. Few descriptive studies have addressed this syndrome despite the significant impact that somatization disorder has on the patient's quality of life, the health care provider's time, energy and morale, and the health care system's financial status. Pertinent research highlights the heterogenous nature of somatization disorder and suggests that individuals diagnosed with this syndrome will frequently meet inclusion criteria for other psychiatric diagnoses, including personality disorders.

Purpose of the Study

The purpose of this study was to examine the relationship between somatization disorder and concomitant psychiatric diagnoses. The overall and relative incidence of Axis I diagnoses were assessed by the Millon Clinical Multiaxial Inventory, Second Edition (MCMI-II) and the Structured Clinical Interview for DSM-III-R (SCID).

The study specifically examined the association between somatization disorder and personality disorders (as measured by the Millon Clinical Multiaxial Inventory, Second Edition (MCMI-II) and the Structured Clinical Interview for DSM-III-R (SCID)) in a population of patients suspected of

suffering from somatization disorder. More specifically, this study addressed the following research questions:

Research Questions

1. Of those patients referred with somatization problems, how many meet DSM-III-R criteria for somatization disorder?

2. What other Axis I diagnoses occur concomitantly with patients diagnosed as having somatization disorder?

3. What is the incidence and distribution of these Axis I diagnoses?

4. What personality disorders are associated with somatization disorder?

5. Is the incidence of personality disorders in the research sample higher than would be expected in the overall population?

6. What is the distribution of these personality disorders within the sample?

CHAPTER II

REVIEW OF THE LITERATURE

In this chapter, four areas of relevant theory and
research are reviewed. First, research addressing the
association between somatization disorder and personality
patterns is presented. Next, an overview of personality
disorders is set forth. Millon's theory of personality is
examined next, and validation research employing the
operationalization of his theory is briefly highlighted.
Finally, the history and evolution of the Structured
Clinical Interview for DSM-III-R (SCID) is examined.

Somatization Disorder and Personality Patterns

Patients who somatize frequently evidence other
psychiatric disorders. While a body of research has
addressed the overall presence of these additional
syndromes, less work has been done in determining the role
personality variables play in the expression of
somatization. In this section pertinent research addressing
the relationship between somatization disorder and
personality patterns is reviewed. Studies involving
somatization disorders diagnostic precursors (Briquet's
syndrome and hysteria), as well as those covering
somatization from a general perspective will be included. A
review of the literature revealed that for the most part
these studies addressed the hysterical/histrionic

personality and/or the antisocial personality. Therefore, the literature will be presented accordingly.

Somatization Disorder and Hysterical/Histrionic Personality Patterns

A histrionic personality style is frequently associated with somatization disorder and, according to some researchers, is what defines the syndrome (Woodruff, Goodwin, and Guze, 1974; Ford, 1983). In 1951, Purtell, Robins, and Cohen studied 50 women diagnosed as having hysteria. They note that in contrast to the 50 women in the control group, the hysterics described their symptoms in a vague, exaggerated and colorful way. In 1975, Kimble, Williams, and Agsas compared Briquet's syndrome with the definition of hysterical personality set forth in DSM-II (American Psychiatric Association, 1968). They found close agreement between the diagnoses of hysterical personality and Briquet's syndrome. Of the 10 subjects diagnosed as hysterical personalities, nine met the criteria for Briquet's syndrome. Conversely, of the 11 subjects who met the criteria for Briquet's syndrome, nine were clinically diagnosed as hysterical personalities. The authors concluded that the DSM-II diagnosis of hysterical personality was very similar to Briquet's syndrome. They offer that this finding suggests that the two diagnoses describe different phenomenological aspects of the same psychiatric illness.

Kaminsky and Slavney (1976) described a case of Briquet's syndrome in a male patient and discussed the relationship between that disorder and personality features. They concluded that Briquet's syndrome is a set of behaviors which stems from personality traits. They equated their subject's dependent, emotionally labile, excitable and attention-seeking personality style with the diagnosis of hysterical personality disorder. In addition, they noted the presence of obsessions and ruminations in the overall style of personality evidenced by this patient.

Liskow, Clayton, and Woodruff (1977) were also interested in studying the relationship between hysterical personality and Briquet's syndrome. They seriously questioned the movement in the field to separate Briquet's syndrome from all other concepts related to hysteria (i.e. hysterical personality; hysterical neurosis, conversion type; and hysterical neurosis, dissociative type), and noted that such a proposal was under consideration for DSM-III. They cited the Kimble (1975) study as evidence supporting the relationship between Briquet's syndrome and hysterical personality disorder. In order to broaden this comparison, they compared the MMPI scores of 29 inpatients diagnosed as having hysterical personality and 21 outpatients diagnosed as having Briquet's syndrome. The two groups of patients differed significantly on the MMPI lie scale and on the MMPI hypochondriasis scale, but not on any of the other MMPI scales. They note that this finding indicates the

possibility that patients diagnosed as having hysterical personalities are similar to or perhaps indistinguishable from those diagnosed as having Briquet's syndrome. They cite Kimble and associates (1975) finding as lending their hypothesis additional credence.

In 1980, DSM-III (American Psychiatric Association) changed the name of Briquet's syndrome to somatization disorder. Thus, as noted in Chapter One, all psychological symptoms were removed from the diagnostic criteria, and the syndrome was separated from all other entities related to hysteria. Despite this attempt to place the original diagnosis of "hysteria" completely within the medical realm, many researchers in the field continued to note the association between somatization disorder (Briquet's syndrome) and hysterical personality.

Kaminsky and Slavney (1983) cited previous studies noting the presence of obsessional features in patients diagnosed with a disorder similar to somatization disorder, namely hypochondriasis (Pilowsky, 1970; Kenyon, 1976). They too had found obsessional traits in a patient studied earlier (1976), who also presented with Briquet's syndrome and hysterical personality patterns. In line with previous research cited, they posited that patients with somatization disorder would not only resemble those with hysterical personality disorder, they would also be more obsessional than the latter group. This hypothesis was tested by comparing patients meeting criteria for somatization disorder

(N=20) and patients diagnosed as having hysterical personality disorder (N=20). These patients were assessed using clinical interviews, mental status exams, and personality inventories (the Eysenck Personality Inventory, the Hysteroid-Obsessoid Questionnaire, and the Lazare-Klerman-Armour Personality Inventory). The results of this study confirmed past findings that many patients with the diagnosis of somatization disorder have prominent hysterical traits. Consistent with the aforenoted hypothesis, the somatization disorder patients evidenced more obsessional features than did the patients with hysterical personality disorder. The authors suggest that a combination of obsessional and hysterical traits of personality may constitute an important ingredient in the complaining behavior symptomatic of somatization disorder.

Katon et al. (1984) reviewed the five Axis DSM-III diagnoses of 100 consecutive somatizing patients. The authors defined somatization as "an idiom of distress in which patients with psychosocial and emotional problems articulate their distress primarily through physical symptomatology" (p. 305). A comparison of the somatizing patients was made to the control group (N=161) of nonsomatizing patients. The most prevalent diagnosis on Axis I was major depressive disorder. Somatizing patients received this diagnosis 2.5 times more often than the nonsomatizing group. The authors also noted that personality disorders or maladaptive traits were twice as common (51%) in

somatizers as in nonsomatizers (27%). The most prevalent personality disorder was histrionic, with a 12% incidence in the somatization group. Borderline personality disorder was diagnosed in 6% of the somatizers. The remaining personality diagnoses noted for the somatizing group were histrionic and borderline traits. While the authors note that these findings were theoretically expected in view of prior studies, they stress that personality disorders are among the least studied and poorly validated aspects of DSM-III diagnostic categories. As such they call for future follow-up studies to validate their findings.

The relationship between DSM-III Axis I and Axis II diagnoses was also explored by Koenigsberg, Kaplan, Gilmore, and Cooper (1985) in a review of 2,462 medical center patients. They found that personality disorders were most often associated with substance use disorders, anxiety, and somatoform disorders. The somatoform group was not broken down into diagnostic categories. However, of the 27 patients found to be somatizers, eight received personality disorder diagnoses. Three were noted to be dependent personality disorders, three mixed personality disorders, and two histrionic.

In an interesting study conducted by Slavney and Teitelbaum (1985), the judgement of physicians regarding histrionic traits in patients they referred for psychiatric evaluation of medically unexplained somatic complaints was assessed. The purpose of the study was to compare the

physician's assessments with the psychiatrist's diagnoses. The authors found that histrionic traits as rated by referring physicians did not correlate with the psychiatrist's diagnoses of somatoform disorders. Of the 100 patients evaluated, nine were diagnosed as having somatization disorder, eight hypochondriasis, and three atypical somatoform disorder. Personality disorders were noted in four patients, two of which were classified as histrionic personality disorders. In considering reasons for this lack of association, the authors note that the referring physicians and the consultant psychiatrists faced different tasks: the former to rate traits, the latter to make diagnoses. They also suggest that patients referred for psychiatric consultation in general may be more readily assessed by their referring physicians as having histrionic traits than patients not so referred.

In 1985, Slavney and Teitelbaum examined the DSM-III diagnoses and demographic characteristics of 100 patients referred for evaluation of medically unexplained symptoms suggesting physical disorders. Eight were diagnosed as having somatization disorder, and an additional four were assigned personality disorder diagnoses (two histrionic and two mixed). The authors underscore that 77% of these referrals were women, and that seven out of eight of those diagnosed with somatization disorder were female. They account for this female prevalence rate by noting the

historical linkages between women and the concept of
hysteria.

Somatization, hypochondriasis, and hysteria were
investigated by Snyder and Pitts (1986) as possible
associated features of the borderline personality disorder.
Inpatients with DSM-III borderline personality diagnoses
were compared with controls assigned a dysthymia diagnosis,
using the MMPI and the Hamilton Depression Scale. Although
the hysteria-obvious and hypochondriasis scales of the MMPI,
and the Hamilton Depression Scale item measuring
hypochondriasis were elevated in the borderline group, there
were no significant between group differences noted.

Large (1987) assessed 50 consecutive patients with
chronic pain in terms of DSM-III nosology. Four were found
to have Axis I somatization disorder diagnoses. Of these
four patients all received personality disorder diagnoses.
One was rated histrionic, one dependent and two were given
mixed personality disorder diagnoses.

In 1987, Leon et al. studied 131 patients referred for
psychiatric consultation. They divided these patients into
somatizing (N=56) and nonsomatizing (N=75) groups according
to somatization diagnostic criteria established by Bridges
and Goldberg (1985). A statistically significant difference
was noted between the groups on the dimension of personality
disorder and pathologic personality traits. Histrionic
personality disorder or personality trait was significantly
more frequent in the somatizing group. The authors relate

these findings to Katon's (1984) study suggesting that
somatizers have more hysterical/histrionic traits. The
following section of Chapter Two highlights research
addressing the relationship between somatization disorder
and antisocial personality patterns.

Somatization Disorder and Antisocial Personality Patterns

Evidence supporting an association between sociopathy
and somatization disorder has been mounting for nearly a
century (Lilienfield, VanValkenburg, Larntz, and Akiskal,
1986). This movement often parallels and at times overlaps
with the similar movement previously noted linking
somatization disorder with hysterical/histrionic personality
variables. In an historic review of the literature,
Lilienfield et al. note that in 1884 Moravesik reported a
high incidence of criminal histories among hysterical
subjects. They also cite Kraepelin's (1915) report of a
frequent co-occurrance of hysterical and antisocial symptoms
within individuals. Research within the last four decades
has substantiated these early observations.

In 1952, Robins and associates noted that in a sample
group of 44 men diagnosed with hysteria, six had
psychopathic personalities. None of the control subjects
were diagnosed as such. In 1966, L.N. Robins found further
evidence indicating a link between the two conditions. He
found that of 76 girls referred to a child guidance clinic
for antisocial behavior, 20 met criteria for hysteria as

adults. There were no cases noted among the 100 normal control subjects. It is interesting to note that as adults the 20 women showed little or no antisocial behavior.

In 1970, Cloninger and Guze interviewed 66 female felons to determine what psychiatric illnesses are characteristic of the adult antisocial female. In addition, they were interested in studying the association between antisocial behavior and hysteria. All of the women received at least one psychiatric diagnosis. The most frequent diagnosis found was sociopathy (65%). Thirty-nine percent of the women received a diagnosis of hysteria. The authors note sociopathy or hysteria were found in 80% of the subjects. They stress that this high prevalence of hysteria represented 20 times that seen in the general population. The results of this study, according to these researchers, confirms the existence of a significant association between sociopathy and hysteria. Cloninger and Guze further posit that hysteria and sociopathy may share a common etiology. They reason that since hysteria is characteristically a disorder inflicting women, and is rarely seen in men, and since sociopathy is chiefly noted in men, although it may occur in women, "depending upon the sex of the individual, the same etiologic and pathogenetic factors may lead to different, although sometimes overlapping clinical pictures" (p. 310).

In 1975, Guze reported on a review of the literature he undertook to help clarify the development of both hysteria and

sociopathy. He noted that Mendelson et al. (1971) found that hyperactive children appear to carry an increased risk of delinquency and sociopathy. The results of two studies of the families of hyperactive children (Morrison and Stewart, 1971; Cantwell, 1972) were reported. Guze notes that each of these studies reports an increased incidence of sociopathy in the fathers and hysteria in the mothers of hyperactive children as compared with parents of control children. Interestingly, Guze observes that similar findings were not reported in a study of adoptive parents of hyperactive children (Morrison and Stewart, 1973).

Guze (1975) continued to review studies linking hysteria with sociopathy (Arkonac and Guze, 1963; Woerner and Guze, 1968). He noted that 20% of first-degree female relatives of female hysterics also may suffer from hysteria. In addition, male relatives evidence an increased incidence of alcoholism and sociopathy. Conversely, first-degree female relatives of male sociopaths evidence an increased prevalence of hysteria (Guze et al., 1967). Finally, Guze, in his review, calls attention to a pattern of mating between hysterical women and sociopathic men. Sociopathy is increased in husbands of hysterical women and hysteria is more prevalent in the wives of sociopathic men (Woerner and Guze, 1968; Guze, Goodwin, and Crane, 1970). He summarizes by stating that Briquet's syndrome (hysteria) follows a predictable course and clusters in some families. He notes the strong association between sociopathy and Briquet's

syndrome and suggests that the two disorders share similar
pathogenetic factors.

Liskow et al. (1986a) reported on a six year study in
which 1,437 female outpatients at a psychiatric clinic were
administered a structured diagnostic interview. Of the 78
females who met the criteria for Briquet's syndrome, 77 also
fulfilled inclusive diagnostic criteria for one or more
additional psychiatric syndromes. (See Table 1.13, Chapter
One.) Antisocial personality occurred in 16.7% of these
patients. The authors note that this rate is consistent
with associations noted in prior studies. Obsessive-
compulsive disorder was observed in 26.9% of the Briquet's
syndrome patients. This finding is interesting in light of
Kaminsky and Slavney's (1976, 1983) observations of
obsessional features in somatizing patients.

Liskow et al. (1986b) compared 16 psychiatric inpatients
diagnosed with Briquet's syndrome with 32 age and sex-matched
psychiatric inpatient controls. These groups were compared
by using a structured diagnostic interview (Psychiatric
Diagnostic Interview) and the MMPI. Among the individual
syndromes, only antisocial personality occurred with
statistically greater prevalence in the Briquet's group as
compared with the control group; however, the study
indicated that the Briquet's group had several additional
psychiatric syndromes and more of these syndromes than the
control group. The MMPI results show that the Briquet's
group can be clearly distinguished from the age and

sex-matched controls by their greater elevation on seven of 13 basic MMPI scales (F, 1, 3, 6, 7, 8 and 9). The authors note that female psychiatric inpatients with MMPI profiles on which scale eight plus three or more other clinical scales was greater than 70, were found to have Briquet's syndrome with an accuracy of 75%. They suggest that the MMPI may be a useful screening instrument for Briquet's syndrome.

Cloninger, Martin, Guze, and Clayton (1986) evaluated 277 females and 129 males and their families for the presence of somatization disorder using DSM-III and Briquet's syndrome criteria. Results differed depending on gender. In women, the prevalence for somatization disorder was 22%. The DSM-III criteria for somatization disorder showed high concordance with the criteria for Briquet's syndrome in this population. Most striking, however, is the fact that these women had nearly three times as many female relatives with the same diagnosis as the control group. There was no excess of somatization disorder in the male relatives of female somatizers. The males evaluated were most noteworthy for anxiety symptoms. Only a minority had somatization disorder, and the prevalence of somatization disorder in their relatives was not noteworthy. The findings suggest that somatization has a different clinical picture and different familial antecedents in men than in women. An additional finding in this study was that 13.2% of the men diagnosed with somatization disorder were also

diagnosed as having antisocial personality disorder. Only 3.6% of those women found to have somatization disorder received this diagnosis.

Zoccalillo and Cloninger (1986) examined 50 outpatient women with somatization disorder and 25 control women with major depression disorder. They found that 60% of the somatizers had at least one other psychiatric diagnosis including histrionic and antisocial personality traits. In addition to these statistically significant differences, the somatization disorder group was significantly more likely to abuse or neglect their children and do poorly at work. The authors note that these findings of excessive psychological symptomatology and social disability among women with somatization disorder are important in terms of managing, classifying, and finding the cause of the disorder.

This review of the literature thus far suggests a strong association between personality disorders and somatization disorder. While several personality disorders have been reported to co-exist with somatization disorder, most studies have underscored the strong association between antisocial and/or histrionic personality and somatization disorder. The possibility that these are not three distinct illnesses, but, rather, different but often co-occurring stages or endpoints of a shared pathogenesis has been noted. In an attempt to lend support to this theory, Lilienfeld et al. (1986) examined the association of antisocial

personality disorder, somatization disorder, and histrionic personality disorder, both within individuals and within families, in 250 patients. They conducted diagnostic interviews in a variety of inpatient, outpatient and consultation settings. The results strongly confirm previous reports of an association between antisocial personality disorder and somatization disorder within individuals (rq=.55; x^2=13.49, df=1, p<.001). This relationship was statistically significant for both men (rq=.56; x^2=4.84, df=1, p<.03) and women (rq=.66; x^2=10.74, df=1, p<.001). In addition, a significantly greater proportion of subjects with somatization disorder than subjects without somatization disorder reported having at least one first-degree relative with antisocial personality (rq=.63; x^2=10.69, df=1, p<.001).

Somatization disorder and histrionic personality disorders were also significantly related within individuals (rq=.60; x^2=17.06, df=1, p<.001). In addition, a significant association within individuals was found between antisocial personality disorder and histrionic personality disorder (rq=.81; x^2=52.86, df=1, p<.001). Fitting these data to a log-linear model, these authors found that histrionic personality disorder was more strongly correlated with antisocial personality disorder than was somatization disorder. However, the relationship between histrionic personality disorder and prevalence of antisocial

personality disorder among first-degree relatives was not significant.

The authors summarize their results by contending that histrionic personality disorder, antisocial personality disorder and somatization disorder are not three separate illnesses, but rather, different, but often co-existing stages or endpoints of a shared pathogenesis. They feel that the extensive overlap among the three syndromes suggests that present classification schemes may be attributing separate diagnoses to diverse manifestations of a single disease. Further studies are needed to expand and test this provocative hypothesis. This review of the literature addressing the role personality disorders play in the expression of somatization disorder has yielded mixed findings. However, certain trends are evident. Specifically, pertinent research suggests a strong association between antisocial and/or histrionic personality disorders and somatization disorders. The next section of Chapter Two puts forth an overview of the personality disorder diagnosis and its prevalence in clinical settings.

An Overview of Personality Disorders

The provision in DSM-III (American Psychiatric Association, 1980) for a separate axis devoted to the diagnosis of personality disorders has resulted in increased clinical and research interest in this domain. Prior to DSM-III, personality diagnoses were often overlooked in the

presence of more clinically prominent syndromes. Goldsmith,
Jacobsberg, and Bell (1989) note that the multiaxial
evaluation format set forth in DSM-III underscores the
contribution and interrelationship of long-term trait
factors in the development of psychiatric symptoms and
disorders. Germane to this study, Millon (1981) stressed
that the diagnosis of personality disorders on Axis II is
especially important because it may be both in and of itself
an indication for treatment. Specifically, a personality
disorder diagnosis may alter the presentation, course and
treatment of either an Axis I clinical syndrome (e.g.,
somatization disorder) or of a psychiatric symptom.

Table 2.11 (Blashfield and McElroy, 1989) schematizes
the development of personality disorders from a clinical
perspective from DSM-I to DSM-III-R. DSM-I (American
Psychiatric Association, 1952) set forth five categories of
personality disorder:

1.   personality pattern disturbance

2.   personality trait disturbance

3.   sociopathic personality disturbance

4.   special symptom reaction

5.   transient situational personality disorders

Personality pattern disturbances were severe disorders
impacting the entire personality structure, while personality
trait disturbances were limited to isolated, rigid and
maladaptive personality variables. The sociopathic category
referred to individuals expressing deviance in many forms

Table 2.11

Ontological Evolution of Personality Disorders, Blashfield and McElroy (1989, p. 130).

DSM-I	DSM-II	DSM-III/DSM-III-R
Personality Pattern Disturbance		CLUSTER A
Inadequate	Inadequate	
Paranoid	Paranoid	Paranoid
Cyclothymic	Cyclothymic	Schizotypal
Schizoid	Schizoid	Schizoid
Personality Trait Disturbance		CLUSTER B
Emotionally unstable	Hysterical	Histrionic
Passive-aggressive		Antisocial
dependent		
passive-aggressive	Passive-aggressive	Borderline
aggressive		Narcissistic
Compulsive	Obsessive compulsive	
Sociopathic Personality Disturbance		CLUSTER C
Antisocial	Antisocial	Passive-aggressive
Dyssocial		Compulsive (DSM-III)
Sexual deviation		or Obsessive compulsive
Alcoholism	Asthenic	(DSM-III-R)
Special Symptom Reaction		
Learning disturbance, etc.	Explosive	Dependent
		Avoidant
Transient Situational Personality		
Disorders		APPENDIX (DSM-III-R)
Gross stress reaction, etc.		Sadistic
		Self-defeating

including antisocial behavior, alcoholism, and drug addiction. Disorders such as learning disability and enuresis were subsumed under special symptom reaction. Finally, the transient category is the diagnostic forebear of what is now noted as posttraumatic stress disorder.

DSM-II (American Psychiatric Association, 1968) sought to narrow the personality disorder headings. The situational symptom reactions and the transient personality disorders along with disorders of alcoholism and substance abuse were placed elsewhere in the classification. The differentiation among personality trait and personality pattern was dropped. Instead, nine different personality disorders were grouped under one heading.

DSM-III (American Psychiatric Association, 1980) returned to the utilization of subheadings. Eleven personality disorders were organized into three clusters. Cluster A referred to the "odd" or strange personality. Cluster B was noteworthy for being "dramatic," or emotional and the most likely to be seen in clinical practice. Cluster C was called the "anxious" group.

The chief difference between the DSM-III and DSM-III-R classifications involves the diagnostic criteria utilized to define the personality disorders. Specifically, definitions of dependent, histrionic, paranoid and passive-aggressive personalities have been altered. The addition of self-defeating and sadistic personality

disorders is the main categorical difference between DSM-III and DSM-III-R. The controversy surrounding the inclusion of these new personality disorders is reflected in their being placed in an appendix to the DSM-III-R rather than in the personality disorders section (Blashfield and McElroy, 1989).

Despite the many changes that have been made, inconsistencies in the diagnosis of personality disorders remain. Zimmerman and Coryell (1989) suggest that unlike Axis I disorders, Axis II disorders are based more on clinical consensus than research-generated operational criteria. In particular, they note that almost all research on DSM-III and DSM-III-R personality disorders has been conducted on patient samples. In order to obtain a more accurate estimate of the prevalence of personality disorders in the community they assessed 797 first-degree relatives of normal controls and patients with a variety of psychiatric diagnoses. Slightly more than one-sixth of the sample received a personality disorder diagnosis (n=143, 17.9%). The most prevalent diagnoses were mixed (n=29, 3.6%), passive-aggressive (n=26, 3.3%), antisocial (n=26, 3.3%), histrionic (n=24, 3.0%), and schizotypal (n=23, 2.9%). The authors conclude that while the overall rate of personality disorders in the community may be between 10 and 20%, the rates of specific disorders are very low.

Widiger and Rogers (1989) reviewed eight studies in an attempt to clarify prevalence estimates of personality

disorders (see Table 2.12). While these rates varied as a function of population and interview-format, some consistencies emerged, particularly in terms of the rank order of the prevalence estimates. The most prevalent personality disorder, both in inpatient and outpatient settings, was borderline personality disorder. These authors suggest that across studies this diagnosis is seen in 1 to 2% of the community, 8% of all outpatients, and 15% of all inpatients. They offer that the next most common personality disorders tend to be schizotypal and histrionic, followed by dependent, avoidant, antisocial, passive-aggressive, paranoid, and narcissistic.

In summary, the diagnosis of personality disorder has undergone considerable modification from the original DSM-I (American Psychiatric Association, 1952) designated criterion to the present DSM-III-R (American Psychiatric Association, 1987) conceptualization. Personality disorders are prevalent in both inpatient and outpatient clinical settings. In addition, they are likely to be encountered in nonpsychiatric medical settings. Widiger and Rogers (1989) suggest that their presence should be evaluated in every patient, including those in primary-care medical settings, because these personality variables can considerably influence the diagnosis and treatment of psychiatric disorders.

Table 2.12

Prevalence of DSM-III Personality Disorders in Eight Studies, Widiger and Rogers (1989, p. 133).

Study	No. of Patients	Personality Disorder										
		PRN	SZD	SZT	ATS	BDL	HST	NAR	AVD	DPD	OCP	PAG
Dahl (1986)	103 inpatients	.01	.03	.22	.18	.20	.19	.02	.09	.02	.01	.02
Frances et al. (1984)	76 outpatients	.08	.01	.13	.03	.34	.22	.16	.21	.26	.09	.09
Kass et al. (1985)	609 outpatients	.05	.01	.04	.02	.11	.06	.03	.05	.08	.02	.02
Loranger et al. (1987)	60 inpatients	.03	.01	.33	.12	.30	.15	.05	.07	.05	.08	.00
Morey (1988)	291 mostly out-patients	.07	.01	.17	.06	.32	.22	.06	.11	.14	.09	.08
Pfohl et al. (1986)	131 mostly inpatients	.01	.01	.09	.04	.22	.19	.04	.11	.13	.05	.14
Widiger et al.(1987)	84 inpatients	.20	.08	.64	.37	.63	.45	.11	.33	.48	.02	.52
Zanarini et al.(1987)	43 inpatients	.12	.00	.35	.23	.60	.42	.16	.35	.30	.12	.19

The next section of Chapter Two will examine a specific theory of personality; that of T. Millon. Research using Millon's theory and its operationalization, the Millon Clinical Multiaxial Inventory, will be highlighted.

Millon's Theory of Personality

The guiding theoretical system for the development of the MCMI-II is based on Millon's theory of personality (Millon, 1981). This theory suggests 10 basic styles of personality functioning that can be constructed logically from a 5x2 matrix consisting of two basic dimensions. According to Millon, the first dimension is based upon the individual's perception of sources of reinforcement (positive or negative). The manner in which one obtains comfort and satisfaction in life constitutes positive reinforcements, while the avoidance of emotional pain is considered negative reinforcements. Those who experience few rewards in life, whether from self or others, are referred to as "detached" types. A "dependent" individual gauges his/her satisfaction and emotional pain by how others react to or feel about him or her. Those individuals who measure their satisfaction in life according to their own values and desires are described as "independent"; finally, those who experience conflict over whether to rely on others versus their own needs are considered "ambivalent."

The second dimension of this matrix describes the coping mechanisms employed to deal with the various types of reinforcement (active versus passive). Those individuals

who are attentive and alert, and who intervene with and manipulate the circumstances of their environment are considered "active." "Passive" individuals initiate very little and evidence a resigned attitude while environmental events take their course.

Combining the five sources of primary reinforcements together with the two coping patterns results in 10 basic personality styles: active and passive detached, active and passive discordant, active and passive dependent, active and passive independent, and active and passive ambivalent.

Millon sees personality styles as deeply etched and pervasive characteristics of one's functioning level. While these characteristics may impact every day behavior, they are out of the individual's awareness. Under conditions of persistent adversity, a maladaptive style of functioning may decompensate acquiring features deserving of the designation moderate or marked severity. Millon views these advanced stages of personality pathology in terms of a slow deterioration of the personality structure. Despite noted alterations in psychic cohesion, social competence and emotional control, the individual continues to display the major personality characteristic that have become entrenched in the personality structure.

Millon describes these 13 personality patterns along two dimensions, functional processes and structural attributes. Functional processes include behavioral, interpersonal, cognitive and defense mechanistic dimensions.

Structural attributes address the individual's mood, self-image, internalizations and intrapsychic organization. For example, the histrionic personality is seen in Millon's system as behaviorally affected, interpersonally flirtatious, cognitively flighty and employing dissociative-type defensive mechanisms. He or she is likely to evidence a fickle mood, a sociable self-image, shallow internalizations and disjoined intrapsychic organization. The antisocial personality, on the other hand, would present as behaviorally impulsive, interpersonally irresponsible, cognitively deviant and using acting-out as a primary defense mechanism. Structurally speaking, the antisocial personality would be described in terms of callous mood and autonomous self-image. He or she would harbor rebellious internalizations and have an unbounded intrapsychic organization.

In contrast to the personality disorders, Millon sees the clinical syndrome disorders comprising Axis I as extensions or distortions of the individual's basis personality traits. These syndromes are seen as transient states that caricature or accentuate the basis personality style. Millon cautions that regardless of how distinctive these Axis I syndromes appear to be, they take on meaning and significance only in the context of the patient's personality. Most of the clinical syndromes Millon addresses are of the reactive kind and of substantially briefer duration than the personality disorders. They

usually designate states in which an active pathological process is clearly manifested. Millon underscores the existence of several possible covariations between Axis I syndromes and Axis II personality styles. Indeed, these interrelationships are held to be crucial to his theory of personality. Six scales are put forth as representing disorders of moderate severity:

1. Scale A: Anxiety

2. Scale H: Somatoform

3. Scale N: Bipolar - Manic

4. Scale D: Dysthymia

5. Scale B: Alcohol Dependence

6. Scale T: Drug Dependence

The final three scales reflect Axis I disorders of marked severity:

7. Scale SS: Thought Disorder

8. Scale CC: Major Depression

9. Scale PP: Delusional Disorder

An important aspect of Millon's theory is its attempt to coordinate directly with the American Psychiatric Association's official diagnostic system and its syndromal categories. Millon stresses that his theory has been developed to be consonant with the nosological format and conceptual terminology of DSM-III and DSM-III-R. Millon's theory of personality has been operationalized in his personality assessment instruments, the MCMI and the MCMI-II. Millon (1987) sees the development of the MCMI-II

as an attempt to refine and strengthen both the theoretical
logic and the research data underlying the instrument, thus
resulting in not only a sounder psychometric tool, but a
more useful clinical assessment inventory. Moreover, Millon
notes that these revisions fortify even further the
coordination between the MCMI-II and the syndromes of
DSM-III-R, especially those of Axis II. Additional data
regarding the MCMI-II will be reviewed in Chapter Three.

Research Employing the MCMI and the MCMI-II

As previously noted, Millon's theory of personality has
been operationalized in his inventories the MCMI and the
MCMI-II. It was Millon's position that, consistent with the
DSM-III multiaxial approach to clinical evaluation, these
instruments assess and differentiate between basic
maladaptive personality characteristics and various clinical
symptom syndromes. Because of its relatively recent
commercial availability, little has been published regarding
the MCMI-II's validity as an instrument which can adequately
perform this distinction among patients with somatization
disorder. Indeed, a search of the literature revealed no
studies which employed either the MCMI or the MCMI-II in
research addressing patients who somatize. Of theoretical
interest, in particular, is the notion of the co-existence
of personality disorders and somatization disorder. In the
absence of empirical tests of this question, this section

highlights studies undertaken by independent investigators with the purpose of examining the validity of MCMI-I.

Craig, Verinis, and Wexler (1985) discovered that the Axis II personality configuration that typified 106 alcoholics in an inpatient VA unit was notably different from that of 100 opiate abusers seen at a similar VA unit. Alcoholics exhibited significantly higher scores on the Dependent, Avoidant, Schizotypal, and Borderline scales, whereas opiate addicts scored appreciably higher on Narcissistic, Histrionic, and Antisocial scales.

McMahon, Flynn, and Davidson (1985) examined the stability of the basic and pathologic personality and symptom scales of the MCMI-I in three distinct clinical samples. Consistent with Millon's theoretical perspective, higher stability estimates were found among basic personality scales in comparison with symptom scales. The Histrionic scale had consistently high stability coefficients ($\underline{r}$=.80). High moderate range stability coefficients (between $\underline{r}$=.70 and $\underline{r}$=.80) were found for the Avoidant and Compulsive scales. The Schizoid, Narcissistic, Antisocial, Schizotypal, and Hypomanic scales has stability coefficients in the low moderate range ($\underline{r}$=.60 to $\underline{r}$=.70). The subjects in these samples were (a) 96 inpatient alcoholics who completed the MCMI-I at intake and 30 to 45 days into treatment, and (b) 33 drug abusers being treated in either an inpatient or (c) an outpatient program who

completed the MCMI-I upon intake and one month and three months after admission to treatment.

In addition to alcohol and substance abuse studies, researchers have used the MCMI-I as a foundation for identifying and clarifying the clinical characteristics of posttraumatic stress disorder (PTSD). Male veterans subjected to war experiences were contrasted with controls having other psychiatric disabilities. Robert, Ryan, McEntyre, McFarland, and Lips (1985) found that the PTSD patients emerged with an 8,2 (passive-aggressive/avoidant) type in contrast to controls. High scores on Scale C (Borderline) were also noted in the PTSD group. Axis I scale scores for Anxiety and Dysthymia also were notably high, as were the Alcohol and Drug Abuse scales.

A recent study (Bryer, Miller, Nelson, and Kroll, unpublished study) used the MCMI-I to identify and to differentiate psychiatric symptoms among adult survivors of childhood abuse. Mean base rate (BR) scores were obtained for 66 persons receiving treatment in a short-term inpatient psychiatric hospital. Of the 66 patients, 27 had experienced no abuse, 14 had been subjected to sexual abuse alone, 10 suffered physical abuse only, and 15 suffered both sexual and physical abuse. In line with the previously noted PTSD male veterans, those abused evidenced scales reaching pathological levels (BR>75). In particular, statistical and near statistical significance was seen on the 2,8 and C profile (Avoidant, Passive-aggressive, and

Borderline). Millon (1987) notes the similarity between the two groups and suggests that the long-term psychological effects of profound abuse are much the same for both men and women, despite differences in the nature of the abuse.

A comprehensive analysis of sex offender subtypes using the MCMI-I was reported by Bard and Knight (1987). Subjects (N=101) judged to be "sexually dangerous persons" and given indeterminate sentences as a function of their repetitive, violent, and/or compulsive sexual offenses were assessed. Focusing on the basic personality scales alone, the overall mean profile for the group was 6,5,4 (Antisocial [aggressive], Narcissistic, and Histrionic). Using a cluster analysis, four distinctive groups emerged. One subgroup, distinguished by its 2,1,3 profile (Avoidant, Schizoid, and Dependent) was composed of rapists and child molesters with low IQ's. The second subgroup, composed of mainly rapists presented with a 5,6,4 configuration (Narcissistic, Antisocial, and Histrionic). The third grouping achieved a 6,8 code (Antisocial and Passive-aggressive). They were identified as aggressing towards others, as well as being alcohol and drug abusers. The final subset evidenced no MCMI=I elevations. The authors report that this group had a less troubled family history, appeared to be compensating for feelings of masculine inadequacy, and acted out with premeditation, not impulsivity.

The final study to be reviewed focuses on the assessment and treatment of eating disorders using the MCMI-I. Tracy, Norman, and Weisberg (1987) examined similarities and differences between bulimics and anorectics. Their findings suggest that both disorders are characterized by high levels of anxiety, dysthymia and somatization, but arising in different personality types. Anorectics evidence significantly higher Schizoid, Avoidant, and Schizotypal scales, suggested by their marked tendency toward social withdrawal. Bulimics, in contrast, exhibit appreciably elevated scores on the Histrionic and Narcissistic scales. These researchers summarize their findings in terms of Millon's theory of personality:

> This would seem to indicate an important difference between these two groups of eating disorder patients; anorectics seeming to renounce need-satisfaction and interpersonal attachment, bulimic patients in contrast continuing to actively strive for need-satisfaction, wavering between doing so via an actively dependent style and one of more narcissistic self-absorption. This is intuitively consistent with the clinical paradigm of these two patterns; anorectics tending toward constriction and self-deprivation, bulimics displaying phases of externalized need-satisfaction through dyscontrolled binging followed by the reassertion of control through purging (p. 196).

The following section of Chapter Two will trace the history and evolution of the Structured Clinical Interview for DSM-III-R (SCID) (Spitzer, Williams, Gibbon, and First, 1990).

Structured Clinical Interview for DSM-III-R

History and Evolution

The advent of DSM-III in 1980 (American Psychiatric Association) heralded a major advance in making psychiatric diagnoses. Both this publication and its successor, DSM-III-R (American Psychiatric Association, 1987) included specific diagnostic criteria for virtually all recognized mental disorders. Before 1980, multiple sets of diagnostic criteria existed along with structured interviews designed to render diagnoses specific to each particular system. Noteworthy among these numerous systems were the Feighner Criteria (Feighner, Robins, and Guze, 1972) and the Research Diagnostic Criteria (Spitzer, Endicott, and Robins, 1978).

While these various nosological systems attempted to standarize the criteria underlying specific psychiatric diagnoses, the "process" of diagnostic assessment remained unstandarized. In response to this need for more consistency in making psychiatric diagnoses, Spitzer and his associates began developing the Structured Clinical Interview for DSM-III (SCID) (Spitzer et al., 1990). In 1983, the National Institute of Mental Health (NIMH) also recognized the need for a clinical instrument capable of making DSM-III diagnoses. The NIMH Epidemiologic Catchment Area Program was launched; a study examining the epidemiology of psychiatric disorders (Regier, Myers, and Kramer, 1984). In this project, the Diagnostic Interview Schedule (DIS) was the underlying assessment tool (Robins,

Helzer, Croughan, and Ratcliff, 1981). During this same time period, the NIMH awarded a contract to the Biometrics Research Department at the New York Psychiatric Institute to field test the SCID (Spitzer et al., 1990), resulting in further refining of this instrument.

The SCID represents an evolution in diagnostic instruments in that it incorporates several features not present in previous instruments. For example, when comparing the SCID with the DIS, one notes that the DIS was capable of identifying only antisocial personality disorders, whereas the SCID can identify all the DSM-III-R personality disorders. The uses of the SCID are more diverse than previously designed assessment instruments. The SCID can be used by clinicians to confirm and document a suspected DSM-III-R disorder or to screen for all Axis I and II disorders. In addition, the SCID lends itself to research with features such as an overview section that allows the patient to describe the development of his or her current episode of illness, and a modular design that enables researchers to eliminate examination of major diagnostic classes that are irrelevant to their study (Spitzer et al., 1990). Further details regarding the SCID are presented in Chapter Three. As previously noted with the MCMI-II, the SCID's relatively recent commercial availability has resulted in the absence of pertinent available research.

Summary

This chapter has reviewed pertinent research and theory in the area of both personality disorders and somatization disorder. Studies addressing the association between somatization disorder and personality disorders suggested a strong relationship between the two syndromes. Histrionic and antisocial were the most frequently noted personality disorders in these associations and were thought to play a key role in the expression of somatization disorder. A review of the literature on personality disorders traced their ontological evolution and underscored the absence of research-generated operational criteria in terms of their definition and prevalence. Studies examining the prevalence of personality disorders in the community were reviewed. An overall prevalence rate of between 10 and 20% (Zimmerman and Coryell, 1989) was noted. Millon's (1981) theory of personality was specifically addressed, as this theory has been operationalized in his inventory the MCMI-II (1987). This instrument was designed to assess and differentiate between basic and maladaptive personality characteristics and various clinical syndromes, in a fashion consistent with the DSM-III-R multiaxial approach to clinical evaluation (American Psychiatric Association, 1987). Finally, the Structured Clinical Interview for DSM-III-R (SCID) (Spitzer et al., 1990) was reviewed. Like the MCMI-II, this instrument was designed to assess Axis I and Axis II clinical syndromes consistent with DSM-III-R diagnostic

criteria. As such, both tools appeared to be promising instruments in assessing the relationship between somatization disorder and concomitant psychiatric syndromes.

CHAPTER III

METHODOLOGY

The purpose of this chapter is to delineate the plan of
operation used for the study. The following sections will
be included:

1.   Sampling Procedures

2.   Procedures for Collecting Data

3.   Instruments

     a) Millon Multiaxial Clinical Inventory - Second

        Edition (MCMI-II)

     b) Structured Clinical Interview for DSM-III-R (SCID)

4.   Statistical Hypotheses

5.   Design

6.   Data Analysis

Sampling Procedures

The sample for this study was drawn from a population
of health care patients seen in local clinics and hospitals.
Health care providers in these facilities were provided the
DSM-III-R criteria for somatization disorder (see Appendix
A), the abbreviated diagnostic checklist appearing on Page
6, and a summary of the research project (see Appendix B).
They were then asked to refer patients to participate in the
research project who met the salient criteria.
Specifically, subjects referred to the study were required
to be between the ages of 18 and 55, and have no history of

58

formal thought disorder. Over a period of nine months,
health care providers referred 31 patients. Of these 31
patients, 25 completed both the SCID and the MCMI-II.
Demographic and other identifying features of the sample
appear in Appendix C.

Procedures for Data Collection

Patients referred by health care providers were
contacted by phone and invited to participate in the study.
Patients were provided with a general statement of the
purpose of the project (see Appendix D). Subjects were
reassured as to the confidentiality of their responses. An
informed consent form was obtained from each subject (see
Appendix E) in accordance with the Ethical Principles in the
Conduct of Research with Human Participants (American
Psychiatric Association, 1982) and the human research
committee standards of Michigan State University. Subjects
were also informed that the interview segment of the study
would be audio-taped, and the appropriate consent forms were
obtained (see Appendix F).

After informed consent was obtained, patients were
administered the Structured Clinical Interview for DSM-III-R
(SCID) by one of two psychiatrists collaborating on the
study. Based on this interview the psychiatrists assigned a
multiaxial DSM-III-R diagnosis to each subject. In
addition, either prior to or following the structured
interview, patients completed the Millon Clinical Multiaxial

Inventory - Second Edition (MCMI-II). This personality
inventory yielded DSM-III-R Axis I and Axis II diagnoses.
Both the SCID and the MCMI-II will be described in the
instruments section of this chapter.

Upon completion of data analyses, the referring health
care provider was provided a written summary of the
individual subject's diagnostic profile. Subjects who
desired additional feedback regarding their assessment were
requested to contact their referring health care provider.

Measures

The following section will provide a description of the
two measures used in this study: the Millon Clinical
Multiaxial Inventory - II (MCMI-II) and the Structured
Clinical Interview for DSM-III-R (SCID).

Millon Clinical Multiaxial Inventory - II

The Millon Clinical Multiaxial Inventory (MCMI-II) is a
175-item, true-false inventory, developed by Theodore Millon
(1987). The MCMI-II replaces the original MCMI. Designed
specifically to coordinate with DSM-III-R categories of
personality disorders and clinical syndromes, the MCMI-II
provides a measure of 22 personality disorders and clinical
syndromes in individuals 17 years of age and older who are
undergoing psychological or psychiatric assessment or
treatment. These 22 clinical scales are divided into four
main sections: basic clinical personality pattern scales

(1-8B), severe or pathological personality disorder scales (S, C, P), moderate clinical syndromes (A, H, N, D, B, T), and severe clinical syndromes scales (SS, CC, PP). In addition, three correction scales have been added (X, Y, Z). The 22 clinical scales and three modifier indices are listed in Table 3.11.

The MCMI-II, as noted in Chapter Two, was developed on Millon's theory of personality and psychopathology (Millon, 1981). Millon, a contributor to DSM-III-R, based the MCMI-II on the DSM-III-R differentiation between enduring personality patterns (Axis II) and more acute symptomatology (Axis I). This study attempted to clarify the diagnosis of somatization disorder by examining the relationship between personality disorders and the syndrome in question.

Millon's (1981) conceptualization of personality and clinical syndromes was highlighted in Chapter Two. In addition to personality and clinical syndrome scales, the MCMI-II also offers three correction scales. Scale X (Disclosure) is designed to assess whether an individual is frank and self-revealing or reticent and secretive. The Desirability Gauge (Scale Y) seeks to identify the degree to which test results reflect an individual's tendency to appear socially attractive, morally virtuous and/or emotionally well-composed. The Debasement Measure (Scale Z) reflects tendencies opposite those of Scale Y, although both

Table 3.11

Scales of the Millon Clinical Multiaxial Inventory - II,
Millon (1987).

Modifier Indices

Scale	Name
X	Disclosure
Y	Desirability
Z	Debasement

Personality Pattern		Severe Personality Pathology	
Scale	Name	Scale	Name
1	Schizoid	S	Schizotypal
2	Avoidant	C	Borderline
3	Dependent	P	Paranoid
4	Histrionic		
5	Narcissistic		
6A	Antisocial		
6B	Aggressive/Sadistic		
7	Compulsive		
8A	Passive-Aggressive		
8B	Self-Defeating		

Clinical Syndrome		Severe Syndrome	
Scale	Name	Scale	Name
A	Anxiety Disorder	SS	Thought Disorder
H	Somatoform Disorder	CC	Major Depression
N	Bipolar: Manic Disorder	PP	Delusional Disorder
D	Dysthymic Disorder		
P	Alcohol Dependence		
T	Drug Dependence		

indices may be high when an individual is unusually self-disclosing (Scale X).

In the MCMI-II, raw scores are transformed into base rate (BR) scores, a determination based on known personality and syndrome data. Base rate scores of 74 were fixed for all scales as the cutting line above which scale percentages would correspond to the clinically judged "presence" of the personality or clinical syndrome (Millon, 1987). Scores above 84 represent severe manifestations of personality or clinical disorders, while scores greater than 74 are considered to be in the pathologic range.

MCMI-II Revision Rationale

Millon (1987) notes several factors underlying the decision to undertake a revision of MCMI-I. First, he calls attention to significant changes that took place in the theoretical base that served as both the impetus and the foundation of the instrument. Specifically, he noted the theoretically based derivation of two "new" personality disorders (aggressive/sadistic and self-defeating) and the need to represent them by formulating corresponding MCMI scales. Second, Millon calls attention to changes in the theoretical characterization of several established personality disorders and clinical syndromes (borderline, antisocial, major depression) which required parallel modifications and refinements in items making up their corresponding MCMI-I scales. Third, Millon sought to

strengthen parallels between his inventory and the new DSM-III-R. Finally, he sought to enhance scale validities and reduce spurious scale overlapping.

The MCMI and the MCMI-II differ in the following ways:

1. The MCMI-II contains 45 new or revised test items that replace items in the MCMI.

2. The MCMI-II employs a new item-weighting scoring method.

3. The MCMI-II contains five new scales; three correction scales and two personality pattern scales.

4. The MCMI-II Profile report sets forth a more comprehensive clinical syndrome (Axis I) analysis and a more detailed prognostic and treatment implications section.

Norms

The normative population (N=1,292) consisted of two combined "representative" normative populations. The first was obtained by a random selection of clinicians who routinely use the MCMI. These clinicians (N=519) were asked to administer both the MCMI-I and the MCMI-II to one or two of their patients, as well as to complete an Axis I and Axis II diagnosis employing DSM-III-R criteria. Eight hundred twenty-five cases were generated from this process.

The second patient sample was derived in similar fashion, except that the clinicians involved were known to have had considerable experience with the MCMI-I, as well as

having attended at least one of the Millon's graduate courses or workshops on personality disorders. In this manner, 467 cases were generated by 93 different clinicians. Demographic and other features of the normative population are detailed in Table 3.12.

Reliability

In an attempt to gauge the test-retest stability of the MCMI-II, non-clinical subjects, psychiatric outpatients, and psychiatric inpatients were administered the MCMI-II twice, at times separated by three to five week intervals. Table 3.13 reports the correlation coefficients for these groups. The data are separated according to clinical status and setting, and when in the patient's treatment process the two administrations took place. The nonclinical segment achieved fairly consistent and high coefficients among all scales. Millon (1987) notes that their high coefficients, as compared to the clinical group, are likely to be a function of the ease with which "normals" are able to respond consistently to items reflecting extremes in social behaviors and emotionality. In addition, he points out the nonclinical group were not exposed to interventions designed to modify their psychological state.

The second most "reliable" group were outpatients who were tested at two phases during ongoing treatment. The lowest reliability coefficients were evidenced by the two inpatient groups. They were evaluated first at intake, and

Table 3.12

Demographic and Other Features of the Normative Population,
Millon (1987, p. 106)*.

(N=1,292)

Sex Distribution		Settings/Status	
Male	49.8%	Outpatient	81.9%
Female	50.2%	Inpatient	9.9%
		Correctional	2.4%
Age Range		College Center	2.1%
18-25	15.5%	Other	3.8%
26-35	25.8%		
36-45	35.7%	Patient's Stated "Major Problems"	
46-55	16.9%	Marital/Family	30.8%
56 and higher	6.1%	Job/School/Work	17.1%
		Self-Confidence	16.8%
Marital Status		Moodiness	10.9%
Never married	30.1%	Ill/Tired	6.0%
First marriage	31.2%	Loneliness	5.4%
Remarried	13.5%	Sexual problem	4.3%
Separated	6.6%	Alcohol	3.8%
Divorced	15.1%	Antisocial behavior	2.7%
Widowed	1.1%	Drugs	2.2%
Cohabiting	1.6%		
Other	.8%	Duration of Recent Episode	
		<1 week	20.4%
Religion		1-4 weeks	21.7%
Protestant	43.7%	1-3 months	12.7%
Catholic	28.0%	3-12 months	11.8%
Jewish	5.9%	Periodic 1-3 years	5.1%
Other	22.4%	Continuous 1-3 years	6.2%
		Periodic 3-7 years	2.6%
Ethnic/Race		Continuous 3-7 years	2.3%
White	87.7%	>7 years	5.5%
Black	6.9%	Cannot classify	11.7%
Hispanic	4.3%		
Other	1.1%		

Table 3.13

MCMI-II Scale Stability Coefficients for Outpatient and Inpatient Populations at Different Phases in the Course of Their Disorders, Millon (1987, p. 126)*.

MCMI-II Scale	Nonclinical Population (M=91)	Heterogeneous Psychiatric Outpatients		Heterogeneous Psychiatric Inpatients		
		Intake to Midphase (N=37)	Midphase to Midphase (N=35)	Intake to Midphase (N=23)	Intake to Discharge (N=47)	Midphase to Midphase (N=26)
1 Schizoid	.84	.76	.79	.72	.74	.78
2 Avoidant	.86	.77	.83	.76	.71	.74
3 Dependent	.85	.71	.85	.67	.73	.70
4 Histrionic	.80	.81	.83	.74	.75	.80
5 Narcissistic	.83	.79	.78	.73	.70	.77
6A Antisocial	.88	.73	.83	.69	.64	.69
6B Aggressive/Sadistic	.81	.75	.80	.70	.73	.78
7 Compulsive	.89	.78	.85	.73	.70	.73
8A Passive-Aggressive	.85	.69	.77	.62	.59	.68
8B Self-Defeating	.86	.80	.82	.76	.72	.75
S Schizotypal	.89	.73	.84	.67	.64	.69
C Borderline	.79	.63	.78	.51	.49	.60
P Paranoid	.87	.59	.83	.64	.59	.62
A Anxiety	.80	.60	.77	.58	.47	.59
H Somatoform	.85	.59	.72	.55	.43	.46
N Bipolar: Manic	.79	.71	.64	.64	.61	.64
D Dysthymia	.78	.62	.75	.57	.43	.51
B Alcohol Dependent	.88	.73	.83	.70	.59	.66
T Drug Dependent	.85	.72	.80	.73	.66	.71
SS Thought Disorder	.80	.65	.72	.44	.49	.53
CC Major Depression	.78	.59	.71	.59	.57	.58
PP Delusional Disorder	.91	.65	.79	.62	.60	.62

then either at a midphase of treatment or prior to discharge. Notable in these groups, as well as in the intake-midphase outpatient and midphase inpatient groups, is the clear difference in reliabilities between the basic personality disorder scales (1-8B) and those of the clinical syndrome scales (A-PP). This finding is consistent with reliability studies of MCMI-I (McMahon, Flynn, and Davidson, 1985; Piersma, 1986), as well as with Millon's (1981) theoretical expectancy that personality traits and disorder gauges are more stable than those of clinical states and syndromes.

Internal Validity

Millon (1987) points out that each MCMI-II scale was formulated not to be "factorially pure," but to combine the numerous diverse and overlapping symptoms which comprise "true" personality and clinical disorders. He sought to achieve an optimal level of internal consistency within scales while still preserving high levels of trait representativeness and discriminant power. Each primary item on the MCMI-II was selected as a function of its high point biserial correlation with its substantive scale, thus these scales should evidence internal consistency on homogeneity measures. Table 3.14 summarizes data addressing this issue with Kuder-Richardson Formula 20. The median KR coefficients for all clinical scales is .90, with a range of .81 to .95. Millon notes that despite the potential

Table 3.14

Internal Consistency Estimates of MCMI-II Scales, Millon (1987, p. 129)*.

	Scale	KR-20 (N=825)
1	Schizoid	.86
2	Avoidant	.93
3	Dependent	.88
4	Histrionic	.90
5	Narcissistic	.87
6A	Antisocial	.88
6B	Aggressive/Sadistic	.86
7	Compulsive	.91
8A	Passive-Aggressive	.93
8B	Self-Defeating	.90
S	Schizotypal	.93
C	Borderline	.92
P	Paranoid	.90
A	Anxiety	.94
H	Somatoform	.92
N	Bipolar: Manic	.84
D	Dysthymia	.95
B	Alcohol Dependent	.84
T	Drug Dependent	.87
SS	Thought Disorder	.86
CC	Major Depression	.90
PP	Delusional Disorder	.81

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complications of enhanced levels of scale heterogeneity,
these internal consistency figures are more than adequate.

External Validity

Studies undertaken by independent investigators to
examine the validity of the MCMI-I were highlighted in
Chapter Two. In order to assess the classification
efficiency of the MCMI-II, diagnostic judgements were
obtained on 703 patients. Clinicians using DSM-III-R
criteria assigned these patients diagnoses on Axis I and
Axis II. Table 3.15 outlines the efficiency data for the
MCMI-II's personality disorder scales, using the highest two
(primary and secondary) Axis II diagnoses made by these
clinicians as the criteria. For example, the antisocial
personality diagnosis was first or second in 9% of all cases
(prevalence); MCMI-I scores on this scale ranked first or
second highest among the personality disorder scales, 71%
of the time (sensitivity); of those who were not diagnosed
by clinicians as antisocial, 98% obtained their two highest
MCMI-II scores on personality scales other than the
antisocial (specificity); the MCMI-II antisocial scale's
prevalence percent correctly identified 80% of those
diagnosed antisocial by clinicians using DSM-III-R criteria
(positive predictive power); conversely, this prevalence
percent correctly identified 97% of those who were not
diagnosed as antisocial (negative predictive power); in
total, this prevalence percent paralleled clinician's

Table 3.15

MCMI-II Classification Efficiency of MCMI-II Two Highest DSM-III-R Diagnosed Axis II Disorders (N=703; Male and Female Combined), Millon (1987, p. 173)*.

Scale	Prevalence (%)	Sensitivity (%)	Specificity (%)	Positive Predictive Power (%)	Negative Predictive Power (%)	Overall Diagnostic Power (%)
Schizoid	08	62	98	71	97	95
Avoidant	21	76	95	79	94	91
Dependent	25	79	91	76	93	88
Histrionic	17	68	93	76	93	88
Narcissistic	15	74	94	65	94	89
Antisocial	09	71	94	69	94	91
Aggressive/Sadistic	13	78	98	80	97	96
Compulsive	15	73	95	71	97	93
Passive-Aggressive	18	72	93	67	95	90
Self-Defeating	11	66	94	64	94	88
Schizotypal	06	57	91	58	96	88
Borderline	15	72	98	69	96	91
Paranoid	04	50	99	65	98	97

* __Note:__ Reproduced by permission of National Computers Systems, Inc.

judgements regarding antisocial diagnoses in 96% of all cases (overall diagnostic power).

Millon (1987) also compared the MCMI-I and MCMI-II on two of the aforenoted efficiency statistics, that of sensitivity and positive predictive power. He offers that using the ratio of positive predictive power to prevalence is useful for evaluating both the specific disorders in which the MCMI-II shows diagnostic improvement relative to MCMI-I, and in gauging the overall and relative extent to which its cutting lines prove superior to that of chance alone. To illustrate, Table 3.16 demonstrates that the MCMI-II is superior to MCMI-I in 10 of 11 Axis II disorders judged by clinicians to be the primary and secondary diagnosis. The MCMI-II proves superior to MCMI-I, when considering personality disorders given the principal diagnosis in nine of 11 comparable Axis II categories. In addition, by examining Table 3.16 one can calculate the average diagnostic efficiency in "predicting" among the top two Axis II disorders for the MCMI-I to be that of 3.63 to 1. However, this level of efficiency improves to 5.04 to 1 for the MCMI-II. Combining all diagnoses (Axis I and II), Millon states that the MCMI-I's diagnostic accuracy is 4.97 times greater than chance; for the MCMI-II, it is 6.44 times greater than chance.

Table 3.16

Comparison of MCMI-I and MCMI-II Two Highest (Axis II) or BR>74 (Axis I) Sensitivity and PPP Measures of DSM-III Disorders, Millon (1987, p. 176)*.

Scale	Prevalence		Sensitivity		Positive Predictive Power		PPP/Prevalence Ratio	
	MCMI-I	MCMI-II	MCMI-I	MCMI-II	MCMI-I	MCMI-II	MCMI-I	MCMI-II
Schizoid	11	8	88	62	68	71	6.18	8.88
Avoidant	27	21	88	76	80	79	2.96	3.76
Dependent	37	25	80	79	80	76	2.16	3.04
Histrionic	27	17	79	68	79	65	2.93	3.82
Narcissistic	9	15	74	74	59	69	6.56	4.60
Antisocial	13	9	62	71	61	80	4.69	8.89
Compulsive	26	15	58	73	57	67	2.19	4.47
Passive-Aggressive	24	18	78	72	73	64	3.04	3.56
Schizotypal	17	6	74	57	68	69	4.00	11.50
Borderline	20	15	77	72	71	66	3.55	4.40
Paranoid	15	4	71	50	68	65	4.53	16.25
Anxiety	34	39	88	80	79	84	2.32	2.15
Somatoform	18	13	42	57	51	53	2.83	4.08
Bipolar: Manic	8	4	56	42	55	55	6.88	13.75
Dysthymia	41	46	91	81	84	80	2.05	1.74
Alcohol Dependence	17	15	74	87	63	92	3.71	6.13
Drug Dependence	11	13	78	72	71	82	6.45	6.13
Thought Disorder	6	4	39	37	45	50	7.50	12.50
Major Depression	6	14	41	68	46	73	7.67	5.12
Delusional Disorder	5	5	32	34	36	61	7.20	12.20

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Structured Clinical Interview for DSM-III-R

The Structured Clinical Interview for DSM-III-R (SCID) is a semistructured interview for determining Axis I and Axis II disorders using DSM-III-R criteria (Spitzer et al., 1990). It is intended for administration by trained mental health professionals who are familiar with DSM-III-R criteria. The subjects of the SCID may be virtually anyone, including previously identified psychiatric patients. The language and design of the SCID are most appropriately suited for use with adult subjects, although it may also be used for adolescents with minor modifications.

Two standard versions of the SCID are available for determining whether Axis I or II disorders are present. The SCID-P (Patient Version) is designed for use with subjects who are identified as psychiatric patients. It contains the following modules: SCID-P Summary Score Sheet, SCID-P Overview, Mood Syndromes, Psychotic and Associated Symptoms, Psychotic Disorders (Differential Diagnosis), Mood Disorders, Psychoactive Substance Use Disorders, Anxiety Disorders, Somatoform Disorders, Eating Disorders, and Adjustment Disorder. For settings in which psychotic disorders are likely to be rare or for studies in which patients with psychotic disorders are being screened out, an abridged version of the SCID-P (SCID-P with psychotic screen) is available. This version replaces the B and C modules with a combined B/C module that includes only screening questions about psychotic symptoms. The SCID-NP

(nonpatient version) is for use in studies in which the subjects are not identified as psychiatric patients. The diagnostic modules of the SCID-NP are the same as those of the SCID-P (with psychotic screen), with the only difference in the two versions seen in the introductory overview section. The SCID-NP with a psychotic screen was used in this study. The SCID-II is for evaluating the eleven personality disorders that appear in the main body of DSM-III-R; it also tests for the presence of Self-defeating Personality Disorder.

Table 3.17 shows the Axis I and II disorders that are included in the SCID modules.

Generally, the Axis I SCID is administered in a single sitting and takes from 60 to 90 minutes. The SCID-II is usually administered following the Axis I SCID. There is a SCID-II Screen (Personality Questionnaire) that can be administered that will shorten the time that it takes to evaluate the large number of diagnostic criteria. Each item in the personality questionnaire corresponds to a question in the SCID-II and the items in the personality questionnaire set a threshold for a positive response that is considerably lower than that of the corresponding item of the SCID-II. Subsequently, the personality questionnaire acts as a screening device with intentionally high rates of false positives and few false negatives. Items circled "yes" by the subject can be probed by the interviewer if a sufficient number of items are answered affirmatively to

Table 3.17

SCID Modules, Spitzer et al. (1990).

PSYCHOTIC DISORDERS (C)
Schizophrenia
Schizophreniform Disorder
Schizoaffective Disorder
Delusional Disorders
Brief Reactive Psychosis
Psychotic Disorder NOS

MOOD DISORDERS (D)
Bipolar Disorder
Major Depression
Dysthymia (past 2 years)
Other Bipolar Disorder (includes
   Bipolar Disorder NOS and
   Cyclothymia)
Depressive Disorder
Superimposed on Chronic
   Psychotic Disorder (diagnosed
   as Depressive Disorder NOS in
   DSM-III-R)

ADJUSTMENT DISORDER (I)

SUBSTANCE USE DISORDERS (E)
Alcohol
Sedatives, Hypnotics, and
   Anxiolytics
Cannabis
Stimulants
Opiods
Cocaine
Hallucinogens/PCP
Polysubstance
Other Substances

ANXIETY DISORDERS (F)
Panic Disorder
Agoraphobia with Panic
   Disorder
Social Phobia
Simple Phobia
Obsessive Compulsive
   Disorder (past 6
   months)

SOMATOFORM DISORDERS (G)
(current only)
Somatization Disorder
Somatoform Pain Disorder
Undifferentiated Somato-
   form Disorder
Hypochondriasis

EATING DISORDERS (H)
Anorexia Nervosa
Bulimia Nervosa

PERSONALITY DISORDERS
   (SCID-II)
Narcissistic
Avoidant
Dependent
Obsessive Compulsive
Passive Aggressive
Self-defeating
Paranoid
Schizotypal
Schizoid
Histrionic
Borderline
Antisocial
NOS

make a diagnosis of a particular disorder. Items circled "no" are generally not probed unless there is reason to believe that the respondent is not accurate in reporting his or her symptoms or if the number of SCID-II items answered "yes" is within one item of the diagnostic threshold for a particular disorder. The SCID-II screen (Personality Questionnaire) was used as part of the interview procedure.

Reliability

The reliability of the SCID is somewhat difficult to assess. Spitzer and his associates (1990) note that the reliability of this instrument is greatly a function of the particular circumstances in which it is utilized due to the fact that the SCID is not a fully-structured interview and that it requires the clinical judgement of the interviewer. Citing an unpublished study, Spitzer et al. (1990) state that data was obtained on 506 pairs of interviews at six sites, using an earlier version of the Axis I SCID. Subjects were selected on a random basis and the interviewers had no access to chart data or to treatment staff. The resulting kappas varied by diagnosis and by site, but were reported to range between 0.62 and 0.71, rates also reported for the NIMH Diagnostic Interview Schedule (Robins, Helzer, Crougham, and Ratcliff, 1981), and the Schedule for Affective Disorders and Schizophrenia (Endicott and Spitzer, 1978). The Kappas for the SCID-II on 226 subjects were not reported in the latest manual (Spitzer

et al., 1990). The authors state only that they are similar to test-retest Kappas for other personality assessment instruments such as Structured Interview for DSM-III Personality Disorders (SID-P) (Stangl, Pfohl, and Zimmerman, 1985), (Kappa = .70).

Validity

The validity of the SCID is also difficult to determine. Spitzer et al. (1990) note that "procedural validity" is the congruence between the diagnoses made by the assessment and some hypothetical "gold standard." They suggest that such a gold standard is not available for psychiatric diagnoses. Spitzer (1983) suggests the use of a "LEAD" standard that could be utilized to assess the procedural validity of structured diagnostic interviews. The formula includes "longitudinal" assessment (L), performed by "expert" diagnosticians (E), implementing all data (AD) that can be gleaned. The author cautions that despite the appeal of the "LEAD" standard, its implementation is problematic. A review of the literature reveals only one study implementing Spitzer's "LEAD" standard theory. Skodal, Rosnick, Kellman, Oldham, and Hyles (1988) employed this "LEAD" standard to compare the procedural validity of the SCID-II with an early version of the Personality Disorders Examination. The results evidenced comparable but low congruence with the "LEAD" standard.

Hypotheses

This investigation has highlighted the association between psychiatric syndromes and somatization disorder. An especially salient trend has emerged; namely, the important role personality disorders appear to play in the expression of somatization disorder. Pertinent research underscores the high prevalence of these personality disorders among patients who are diagnosed with somatization disorder, as compared with expected prevalence rates in the overall population. For the purpose of this investigation, this overall prevalence rate of personality disorders will be estimated at 15%, consistent with estimates set forth in germane research (Zimmerman and Coryell, 1989). In addition to this particular prevalence rate of personality disorders, pertinent studies suggest a significant relationship between antisocial and/or histrionic personality disorders, and somatization disorder. In order to empirically examine these findings, subjects suspected of suffering from somatization disorder were referred by health care providers. Psychiatric profiles were obtained by administering the Structured Clinical Interview for DSM-III-R (SCID) and the Millon Clinical Multiaxial Inventory (MCMI-II). The following hypotheses were tested:

Hypothesis I

Patients diagnosed with somatization disorder, as measured by the SCID, will evidence a higher rate of

personality disorders as measured by the SCID and/or the MCMI-II, than would be expected in the overall population (15%).

Hypothesis II

Among those subjects diagnosed with somatization disorder as measured by the SCID, the most frequently occurring personality disorder diagnoses, as measured by the SCID and/or the MCMI-II will be antisocial and histrionic.

Hypothesis III

Those subjects receiving a diagnosis of somatization disorder,as measured by the SCID, will evidence at least one other Axis I diagnosis as measured by the SCID and/or the MCMI-II.

In addition to these formal hypotheses, additional research questions were addressed. The number of patients referred meeting DSM-III-R criteria for somatization disorder was assessed as part of Hypothesis I. The incidence and distribution of personality disorders associated with somatization disorder was presented as part of the analysis associated with Hypothesis II. Finally, the incidence and distribution of Axis I diagnoses associated with somatization disorder was offered as part of the analysis undertaken with Hypothesis III.

Design

The general design of this study was somewhat descriptive. The purpose was to explore what personality disorders, as measured by the MCMI-II and/or the SCID, were associated with somatization disorder. In addition, a further purpose was to investigate what other DSM-III-R, Axis I diagnoses were concomitant with somatization disorder. It was hoped that this research would generate new information that would have useful implications for both the diagnosis and treatment of somatization disorder.

Data Analysis

Descriptive statistics (means, standard deviations, frequencies, etc.) were run on all the variables studied. The variables that were statistically analyzed in the study included:

1. Personality disorders: categorical variables. The exact criteria for group membership was defined as those who fulfilled DSM-III-R criteria for personality disorders as measured by the MCMI-II (BR $\geq$ 74) and/or the SCID (categorical diagnosis).

2. Axis I diagnoses: categorical variables. The exact criteria for group membership was defined as those who fulfilled DSM-III-R criteria for Axis I diagnoses as measured by the MCMI-II and/or the SCID; the somatization disorder diagnosis was

measured by the SCID alone because the MCMI-II does not assign the diagnosis.

3. MCMI-II clinical scale scores: continuous variables base rate scores of 74 or above corresponded to the presence of a clinical syndrome.

4. SCID diagnoses: categorical variables were measured in DSM-III-R diagnostic categories.

Specifically, Hypothesis I was examined by using the Test for Significance of a Proportion (Bruning and Kintz, 1977) and frequency distributions. Hypotheses II and III were investigated using frequency distributions. Unplanned post hoc analyses were also undertaken and involved the use of T-tests, frequency distributions, the Test for Significance of a Proportion, and the Kappa statistic (Cohen, 1960).

CHAPTER IV

ANALYSIS

In chapter IV, the results of the data regarding the
major hypotheses and the post hoc tests will be presented.
The following sections are included:

1.   Major hypotheses.

2.   Post hoc comparisons.

3.   Summary.

MAJOR HYPOTHESES

A preliminary pool of 25 patients were identified as
possible subjects. All completed both a SCID and a MCMI-II.
Identical diagnoses obtained on both the SCID and the
MCMI-II were counted only one time. Only those subjects who
met diagnostic criteria for somatization disorder were
included in the analysis of the major hypotheses.

A surprising finding in this study was the occurrence
of only three cases of somatization disorder. It was
expected that the majority of patients referred to the study
would meet diagnostic criteria for the somatization disorder
diagnosis. Instead, only three patients were diagnosed with
this disorder. The major hypotheses under investigation
were designed to examine research questions pertinent to the
somatization disorder population. The low frequency of

somatization disorder diagnoses obtained precluded
meaningful statistical analysis of the major hypotheses.
The major hypotheses were presented in order to maintain
consistency. However, the salient investigations in this
study were undertaken as post hoc analyses.

Hypothesis I

> Subjects diagnosed with somatization
> disorder as measured by the SCID
> will evidence a higher rate of
> personality disorders as measured by
> the SCID and/or the MCMI-II than
> would be expected in the overall
> population (15%).

The first hypothesis stating that those receiving a
somatization disorder diagnosis would evidence a higher than
expected rate of personality disorders (15% estimated in
overall population) was confirmed. Three subjects received
a somatization disorder diagnosis. Of the three, all (100%)
received at least one personality disorder diagnosis. Thus,
a statistically significant difference emerges between the
somatization disorder group and the overall population in
terms of rate of personality disorder diagnoses. Using the
Test for Significance of a Proportion, a Z score of 11.97
was obtained (p = .0003). Nineteen personality disorder
diagnoses were obtained by these three subjects. The mean

score for the personality disorder diagnosis was 6.33 (see
Table 4.11).

Hypothesis II

> Among those subjects with
> somatization disorder as measured by
> the SCID, the most frequently
> occurring personality disorder
> diagnoses, as measured by the SCID
> and/or the MCMI-II, will be
> antisocial and histrionic.

This hypothesis was not supported. The most frequently
occurring personality disorders among the three subjects
diagnosed with somatization disorder were dependent (3),
borderline (3) and passive aggressive (3). The distribution
of all Axis II diagnoses for the subjects diagnosed with
somatization disorder is found in Table 4.11.

Hypothesis III

> Those subjects receiving a diagnosis
> of somatization disorder, as
> measured by the SCID, will evidence
> at least one other Axis I diagnosis
> as measured by the SCID and/or the
> MCMI-II.

Table 4.11

Distribution of Axis II diagnoses (personality disorders) for subjects diagnosed with somatization disorder as measured by the SCID and the MCMI-II.

Diagnosis	Frequency	%	Cum. %
Schizotypal	1	5.2	5.2
Obsessive Compulsive	1	5.2	10.4
Histrionic	2	10.6	21.0
Dependent	3	15.8	36.8
Antisocial	1	5.2	42.0
Narcissistic	1	5.2	47.2
Avoidant	2	10.6	57.8
Borderline	3	15.8	73.6
Passive Aggressive	3	15.8	89.4
Not Otherwise Specified	2	10.6	100.0
- Self-Defeating (2)			
- Aggressive Sadistic (0)			
	19	100.0	

N = 3

$\bar{x}$ = 6.33

sd. = 1.52

Hypothesis III was supported. All three subjects received at least one other Axis I diagnosis. Twenty Axis I diagnoses were assigned to these three subjects. The mean score for the Axis I diagnoses was 6.66 (see Table 4.12). The small number of subjects receiving a somatization disorder diagnosis (n = 3) obscures any possible interpretation of findings reached under the main hypotheses.

POST HOC ANALYSES

The low frequency of somatization disorder diagnoses (n = 3) required analysis of the data from additional perspectives. Four pertinent areas were examined:

1. Analysis of the entire sample.
2. Analysis of those subjects diagnosed with somatization disorder.
3. Analysis of those subjects diagnosed with somatoform disorder in general.
4. Comparison of the SCID and the MCMI-II.

The first set of analyses concerned the entire sample (N = 25). Table 4.13 depicts the distribution of Axis I diagnoses for this group. The most frequently occurring diagnosis was major depression (15) which accounted for 13.3% of the distribution of Axis I disorders. The mean

Table 4.12

Distribution of Axis I diagnoses for subjects receiving a somatization disorder diagnosis as measured by the SCID and the MCMI-II.

Diagnosis	Frequency	%	Cum. %
Major Depression	3	15.0	15.0
Bipolar Manic Disorder	1	5.0	20.0
Generalized Anxiety Disorder	3	15.0	35.0
Social Phobia	1	5.0	40.0
Simple Phobia	2	10.0	50.0
Dysthymia	3	15.0	65.0
Somatization Disorder	3	15.0	80.0
Alcohol Dependence	1	5.0	85.0
Cocaine Dependence	1	5.0	90.0
Polysubstance Dependence	1	5.0	95.0
Somatoform Pain Disorder	1	5.0	100.0
	20	100.0	

N = 3

$\bar{x}$ = 6.66

sd. = 3.05

Table 4.13

Distribution of Axis I diagnoses for the entire sample as measured by the SCID and the MCMI-II.

Diagnosis	Frequency	%	Cum. %
Organic Mood Syndrome	3	2.7	2.7
Major Depression	15	13.3	16.0
Bipolar Manic Disorder	3	2.7	18.7
Generalized Anxiety Disorder	12	10.6	29.3
Panic Disorder	8	7.0	36.3
Social Phobia	8	7.0	43.3
Simple Phobia	6	5.3	48.6
Obsessive Compulsive Disorder	1	.9	49.5
Dysthymia	14	12.4	61.9
Undifferentiated Somatoform Disorder	11	9.7	71.6
Somatization Disorder	3	2.7	74.3
Alcohol Dependence	9	8.0	82.3
Opiod Dependence	1	.9	83.2
Cocaine Dependence	1	.9	84.1
Cannabis Dependence	1	.9	85.0
Polysubstance Dependence	7	6.1	91.1
Sedative, Hypnotic Abuse	1	.9	92.0
Anorexia Nervosa	1	.9	92.9
Bulimia Nervosa	2	1.8	94.7
Somatoform Pain Disorder	5	4.4	99.1
Thought Disorder	1	.9	100.0
	113	100.0	

N = 25

$\bar{x}$ = 4.52

sd. = 2.56

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number of diagnoses per subject for the entire sample was
4.52. Table 4.14 provides a frequency distribution for the
113 diagnoses on Axis I assigned to the entire sample. From
this Table we can see that all the subjects in the entire
sample received at least one Axis I diagnosis. In addition
it is seen that 24 out of 25 subjects received two or more
Axis I diagnoses.

The distribution of Axis II diagnoses (personality
disorders) for the entire sample (N = 25) is presented in
Table 4.15. The most frequently occurring diagnosis was
passive-aggressive (12), which accounted for almost 13% of
the distribution of Axis II diagnoses. Table 4.16 provides
the frequency distribution of these 95 Axis II diagnoses.
Two subjects, according to Table 4.16, failed to receive a
personality disorder diagnosis. Twenty-three (92%) received
at least one personality disorder diagnosis. A
statistically significant difference emerges between the
sample rate of personality disorders (92%) and the estimated
rate in the overall population (15%). Using the Test for
Significance of a Proportion, a Z score of 10.8 was noted
(p = .0003).

The second set of post hoc analyses was aimed at
examining the relationship between somatization disorder and
the entire sample. The first analysis consisted of
comparing the number of Axis I diagnoses for the

Table 4.14

Frequency distribution of Axis I diagnoses for the entire sample as measured by the SCID and the MCMI-II.

# of Diagnoses	Frequency	%	Cum. %
1.00	1	4.0	4.0
2.00	5	20.0	24.0
3.00	5	20.0	44.0
4.00	4	16.0	60.0
5.00	2	8.0	68.0
6.00	2	8.0	76.0
7.00	2	8.0	84.0
8.00	2	8.0	92.0
9.00	0		
10.00	2	8.0	100.0
	25	100.0	

N   = 113 diagnoses

$\bar{x}$ = 4.56

sd. = 2.56

Table 4.15

Distribution of Axis II diagnoses (personality disorders) for the entire sample as measured by the SCID and the MCMI-II.

Diagnosis	Frequency	%	Cum. %
Paranoid	3	3.2	3.2
Schizoid	3	3.2	6.4
Schizotypal	2	2.1	8.5
Obsessive Compulsive	8	8.4	16.9
Histrionic	11	11.6	28.5
Dependent	11	11.6	40.1
Antisocial	6	6.3	46.4
Narcissistic	7	7.4	53.8
Avoidant	11	11.6	65.4
Borderline	8	8.4	73.8
Passive Aggressive	12	12.6	86.4
Not Otherwise Specified	13	13.6	100.0
- Self-defeating (7)			
- Aggressive Sadistic (6)			
	95	100.0	

N = 25

$\bar{x}$ = 3.80

sd. = 2.44

Table 4.16

Frequency distribution of Axis II diagnoses for the entire sample as measured by the SCID and the MCMI-II.

# of Diagnoses	Frequency	%	Cum. %
.00	2	8.0	8.0
1.00	4	16.0	24.0
2.00	3	12.0	36.0
3.00	2	8.0	44.0
4.00	3	12.0	56.0
5.00	5	20.0	76.0
6.00	2	8.0	84.0
7.00	2	8.0	92.0
8.00	2	8.0	100.0
	25	100.0	

N = 95 diagnoses

$\bar{x}$ = 3.80

sd. = 2.44

somatization disorder group (n = 3) with the number of Axis
I diagnoses obtained by the rest of the sample (n = 22).
Comparison of the two groups indicated that there was no
significant difference (t = 1.56, p = .06, Table 4.17).
Thus, those diagnosed with somatization disorder did not
obtain significantly more Axis I diagnoses than the rest of
the sample. Next, the number of Axis II diagnoses for the
somatization disorder group (n = 3) were compared with the
number of Axis II diagnoses received by the rest of the
sample (n = 23). A statistically significant difference was
noted (t = 2.03, p = .02, Table 4.17), suggesting that those
diagnosed with somatization disorder obtained significantly
more diagnoses on Axis II than the rest of the sample.

The third set of post hoc analyses examined the broad
category of somatoform disorder. Although only three out of
25 subjects received a diagnosis of somatization disorder,
15 out of 25 received a diagnosis in the broader
classification of the disorder. The distribution of these
somatoform diagnoses is presented along with the remaining
Axis I diagnoses for this group in Table 4.18. Out of the
15 patients who received a diagnosis in the general
somatoform family, eight received the diagnosis of
undifferentiated somatoform disorder, three received both
the diagnosis of undifferentiated somatoform disorder and
somatoform pain disorder, three received the diagnosis of
somatization disorder alone, one received a diagnosis of

Table 4.17

T-tests comparing the number of Axis I and Axis II diagnoses as measured by the SCID and the MCMI-II, for those diagnosed **with** and **without** somatization disorder.

Axis	Number of Cases	Mean	sd.	t-value	Degrees of Freedom	1-Tail Prob.
I	3	6.66	3.05	1.56	23	.06
	22	4.27	2.43			
II	3	6.33	1.52	2.03	23	.02
	22	3.45	2.36			

n = 3 (somatization disorder)

n = 22 (remaining subjects)

Table 4.18

Distribution of Axis I diagnoses for subjects receiving a general somatoform diagnosis as measured by the SCID and the MCMI-II.

Diagnosis	Frequency	%	Cum. %
Organic Mood Syndrome	1	1.7	1.7
Major Depression	7	11.8	13.5
Bipolar Manic Disorder	3	5.1	18.6
Generalized Anxiety Disorder	6	10.1	28.7
Panic Disorder	3	5.1	33.8
Social Phobia	2	3.4	37.2
Simple Phobia	2	3.4	40.6
Dysthymia	8	13.5	54.1
Undifferentiated Somatoform Disorder	11	18.7	72.8
Somatization Disorder	3	5.1	77.9
Alcohol Dependence	3	5.1	83.0
Cocaine Dependence	1	1.7	84.7
Polysubstance Dependence	2	3.4	88.1
Sedative, Hypnotic Abuse	1	1.7	89.8
Anorexia Nervosa	1	1.7	91.5
Somatoform Pain Disorder	5	8.5	100.0
	59	100.0	

N = 15

$\bar{x}$ = 3.93

sd. = 2.25

both somatization disorder <u>and</u> somatoform pain disorder, and one received the diagnosis of somatoform pain disorder alone. For the purpose of analysis, this group of 15 subjects was categorized as "general somatoform disorder." Upon examination of Table 4.18, one notes that dysthymia (8) was the most frequently occurring Axis I diagnosis.

The distribution of Axis II diagnoses for those receiving a general somatoform diagnosis is presented in Table 4.19. Fourteen out of 15 received a personality disorder diagnosis (93%). The most frequently occurring diagnosis for the 15 subjects given a general somatoform diagnosis was dependent (9), which accounted for 17% of the distribution of Axis II diagnoses.

T-tests comparing the number of Axis I and Axis II diagnoses for this general somatoform disorder group (n = 15) and the remainder of the sample (n = 10) are depicted in Table 4.20. Comparison of the two groups indicated that there was no significant difference between the general somatoform disorder group and the remainder of the sample when considering number of Axis I diagnoses (t = -1.54, p = .07). Similar results were noted when comparing the two groups on the number of Axis II diagnoses (t = -.83, p = .20). Thus, number of diagnoses does not appear to distinguish the general somatoform group from the rest of the sample.

Table 4.19

Distribution of Axis II diagnoses (personality disorders)
for subjects receiving a general somatoform diagnosis as
measured by the SCID and the MCMI-II.

Diagnosis	Frequency	%	Cum. %
Paranoid	1	1.9	1.9
Schizoid	2	3.9	5.8
Schizotypal	1	1.9	7.7
Obsessive Compulsive	5	9.6	17.3
Histrionic	7	13.5	30.8
Dependent	9	17.3	48.1
Antisocial	2	3.9	52.0
Narcissistic	4	7.7	59.7
Avoidant	5	9.6	69.3
Borderline	5	9.6	78.9
Passive Aggressive	5	9.6	88.5
Not Otherwise Specified	6	11.5	100.0
- Self-defeating (3)			
- Aggressive Sadistic (3)			
	52	100.0	

N = 15 subjects

$\bar{x}$ = 3.46

sd. = 2.38

Table 4.20

T-tests comparing the number of Axis I and Axis II diagnoses
for those diagnosed with and without general somatoform
disorder as measured by the SCID and the MCMI-II.

Axis	Number of Cases	Mean	sd.	t-value	Degrees of Freedom	1-tail prob.
I	15	3.93	2.25			
	10	5.50	2.83	-1.54	23	.07
II	15	3.46	2.38			
	10	4.30	2.58	-.83	23	.20

n = 15 (general somatoform disorder)

n = 10 (remaining subjects)

The final set of post hoc analyses examined the relationship between the SCID and the MCMI-II. As previously noted, the sample for this analysis consisted of the 25 subjects who completed both a SCID and a MCMI-II. One would not expect a strong correlation between the SCID and the MCMI-II on Axis I. As noted in Chapter 1, the SCID assesses all possible Axis I syndromes. The MCMI-II measures only nine. However, since both instruments measure all 12 personality disorders as defined by DSM-III-R (1987), a strong degree of correlation should exist between these two instruments on Axis II diagnoses.

The distribution of Axis II diagnoses as measured by the SCID is presented in Table 4.21. The SCID assigned 29 personality disorder diagnoses. The most frequently occurring category was borderline. The mean number of diagnoses assigned per person was 1.16. In contrast, the MCMI-II assigned 85 personality disorder diagnoses (Table 4.22). The most frequently evidenced categories were passive aggressive and avoidant. The mean number of diagnoses for each individual on the MCMI-II was 3.4.

In order to facilitate further comparison of the SCID and the MCMI-II in terms of assignment of Axis II diagnoses, the Kappa statistic was employed (Table 4.23). The Kappa is a statistic for measuring agreement on nominal categories such as diagnosis. It provides an index of interrater

Table 4.21

Distribution of Axis II diagnoses (personality disorders) as measured by the SCID.

Diagnosis	Frequency	%	Cum. %
Paranoid	1	3.5	3.5
Schizoid	2	6.8	10.3
Schizotypal	1	3.5	13.8
Obsessive Compulsive	1	3.5	17.3
Histrionic	3	10.4	27.7
Dependent	2	6.8	34.5
Antisocial	2	6.8	41.3
Narcissistic	3	10.4	51.7
Avoidant	4	13.9	65.6
Borderline	5	17.2	82.8
Passive Aggressive	3	10.4	93.2
Not Otherwise Specified	2	6.8	100.0
- Self-defeating (2)			
- Aggressive Sadistic (0)			
	29	100.0	

N = 25

$\bar{x}$ = 1.16

sd. = 1.24

Table 4.22

Distribution of Axis II diagnoses (personality disorders) as measured by the MCMI-II.

Diagnosis	Frequency	%	Cum. %
Paranoid	2	2.4	2.4
Schizoid	3	3.6	6.0
Schizotypal	2	2.4	8.4
Obsessive Compulsive	7	8.3	16.7
Histrionic	9	10.6	27.3
Dependent	10	11.2	38.5
Antisocial	6	7.1	45.6
Narcissistic	5	5.9	51.5
Avoidant	11	13.0	64.5
Borderline	6	7.1	71.6
Passive Aggressive	11	13.0	84.6
Not Otherwise Specified	13	15.4	100.0
- Self-defeating (7)			
- Aggressive Sadistic (6)			
	85	100.0	

N = 25

$\bar{x}$ = 3.4

sd. = 3.72

Table 4.23

Distribution of Axis II diagnoses (personality disorders) on
the SCID compared with the MCMI-II with corresponding
indices of agreement (Kappas).

Diagnosis	SCID Frequency	MCMI-II Frequency	Kappa
Paranoid	1	2	K = 0
Schizoid	2	3	K = .58
Schizotypal	1	2	K = .66
Obsessive Compulsive	1	7	K = .05
Histrionic	3	9	K = 0
Dependent	2	10	K = .04
Antisocial	2	6	K = .44
Narcissistic	3	5	K = .14
Avoidant	4	11	K = .39
Borderline	5	6	K = .43
Passive Aggressive	3	11	K = .13
Not Otherwise Specified	2	13	K = .18
- Self-defeating	(2)	(7)	K = .20
- Aggressive Sadistic	(0)	(6)	K = 0
	29	85	*K = .23

N = 25

* overall Kappa

reliability that contrasts rate of agreement with rate expected by chance (Cohen, 1960). Kappa values vary from negative values for less than chance agreement, through "0" for chance agreement to "+1.0" for perfect agreement. Examination of Table 4.23 reveals that the highest level of agreement between the SCID and the MCMI-II was on the assignment of the schizotypal personality disorder diagnosis (K = .66). Kappas on all 12 individual personality disorders were provided. The overall index of interrater reliability for the SCID compared with the MCMI-II was K = .23, indicating a level of agreement only slightly better than chance.

SUMMARY

The major hypotheses presented in this chapter were designed to assess the relationship between somatization disorder and other Axis I and Axis II diagnoses. Of primary interest was the prediction that those diagnosed with somatization disorder would evidence a higher rate of personality disorders than would be expected in the overall population. Based on the salient literature, the most frequently occurring of these personality disorders were predicted to be antisocial and histrionic. In addition to personality disorders, those diagnosed with somatization disorder were also expected to receive at least one additional Axis I diagnosis. Two out of the three major

hypotheses were supported. All of the individuals (n = 3) receiving a somatization disorder diagnosis received at least one personality disorder diagnosis ($\bar{x}$ = 6.33, Table 4.11). These individuals also were assigned at least one additional Axis I diagnosis ($\bar{x}$ = 6.66, Table 4.12). However, the expectation that within the somatization disorder group the most frequently occurring personality disorders would be antisocial and histrionic was not supported. The most frequently assigned personality disorders were instead dependent (3), borderline (3), and passive aggressive (3) (Table 4.11). The findings under the major hypotheses are inconclusive due to the low frequency (n = 3) of individuals receiving a somatization disorder diagnosis.

The aforenoted low frequency of somatization disorder diagnoses necessitated additional examination of the data. The first set of post hoc analyses investigated the distribution of diagnoses (Axis I and Axis II) for the entire sample (N = 25). The entire sample averaged 4.52 Axis I diagnoses (Table 4.13) and 3.80 Axis II diagnoses (Table 4.15). The most frequently occurring Axis I diagnosis was major depression (15). The Axis II diagnosis most often noted was passive aggressive (12).

The second set of post hoc analyses investigated the relationship between the somatization disorder group and the

remainder of the sample. There were no significant differences noted in terms of number of Axis I diagnoses (t = 1.56, p = .06, Table 4.17). However, when considering number of Axis II diagnoses, a statistically significant difference was noted (t = 2.03, p = .02, Table 4.17). This suggested that those diagnosed with somatization disorder obtained significantly more Axis II diagnoses than the rest of the sample. The strength of this relationship is questionable in view of the low frequency (n = 3) of somatization disorder diagnoses.

The third set of post hoc analyses examined the broad category of somatoform disorders (n = 15). The most frequently occurring Axis I diagnosis was dysthymia (8) (Table 4.18). Fourteen out of 15 of the general somatoform disorder group (93%) received at least one personality disorder diagnosis. The most frequently occurring of these Axis II diagnoses was dependent (9) (Table 4.19). There were no significant differences noted in terms of number of Axis I diagnoses (t = -1.54, p = .07, Table 4.20) or number of Axis II diagnoses (t = -.83, p = .20, Table 4.20) between this group and the overall sample.

The final set of post hoc analyses investigated the relationship between the SCID and the MCMI-II. Particular emphasis was placed on the level of agreement noted between these two instruments in terms of assignment of Axis II

diagnoses. The MCMI-II was found to assign more personality disorders (85) as compared with the SCID (29). Use of the Kappa statistic provided an index of interrater reliability between the two instruments both in terms of individual Axis II diagnoses and overall level of agreement. When considering individual Axis II diagnoses, the highest Kappa obtained was on the assignment of the schizotypal personality disorder (K = .66, Table 4.23). The overall rate of agreement between the SCID and the MCMI-II was only slightly better than chance (K = .23, Table 4.23).

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of Chapter V is to present a more in-depth understanding of the results and limitations of the study, and to look at clinical applications and future research directions. The chapter is organized as follows:

1. Review of the study.

2. Conclusions regarding major hypotheses.

3. Conclusions regarding post hoc analyses.

4. Limitations.

    a. Sampling limitations.

    b. Measurement limitations.

5. Clinical implications.

6. Future research directions.

Review of the Study

This study represents a preliminary attempt to investigate the relationship between somatization disorder and other Axis I and Axis II diagnoses. Pertinent literature highlights the heterogeneous nature of somatization disorder and suggests that individuals diagnosed with this syndrome will frequently meet inclusion criteria for other psychiatric diagnoses. As discussed in

Chapter 1 (pages 15-17), investigating the relationship between somatization disorder and concurrently occurring psychiatric disorders is essential in understanding how these disorders may interact to affect the course, prognosis and treatment of somatization disorder. Of particular interest in this study is the association between somatization disorder and personality disorders. The review of the literature in Chapter 2 (pages 22-29) suggests a strong relationship between antisocial and/or histrionic personality disorders and somatization disorder. It was hoped that the investigation of patients referred with a diagnosis of somatization disorder would result in further support for these preliminary findings as well as further clarification of the diagnosis of somatization disorder per se.

Conclusions Regarding Major Hypotheses

Hypothesis I

The first hypothesis predicting that those receiving a somatization disorder diagnosis would evidence a higher rate of personality disorders than expected in the overall population (15%) was supported. All three subjects receiving a somatization disorder diagnosis also received at least one personality disorder diagnosis (Table 4.11). The significance of this finding is questionable in view of the low frequency of somatization disorder cases (n = 3).

However, it is interesting to note that these three subjects received a total of 19 personality disorder diagnoses ($\bar{x}$ = 6.33, Table 4.11). This high rate of personality disorder diagnoses is also evidenced by all subjects in the sample (92%). As will be discussed later in this chapter, this finding is consistent with the literature suggesting that those who somatize evidence higher than expected rates of personality disorders.

<u>Hypothesis II</u>

The second hypothesis which predicted that antisocial and histrionic personality disorders would be the most frequently occurring personality disorders among the somatization disorder group was not supported. Dependent, borderline, and passive aggressive were the most frequently assigned personality disorders. As was the case with Hypothesis I, the low frequency (n = 3) of subjects diagnosed with somatization disorder limits the significance of this finding. However, as will be discussed, this finding appears somewhat consistent across the entire sample of patients referred to the study.

<u>Hypothesis III</u>

The third hypothesis predicting that those diagnosed with somatization disorder would evidence at least one other

Axis I diagnosis was supported. These three subjects were assigned a total of 20 Axis I diagnoses ($\bar{x}$ = 6.66, Table 4.12). This high rate of Axis I disorders was also noted for the entire sample. This finding will be more fully discussed in the post hoc analysis section of this chapter.

An obvious question emerging from the analyses of the major hypotheses is, "Why were only three cases of somatization disorder found?" One possible reason for obtaining only three cases of somatization disorder may relate to inappropriate referrals. Table 5.11 examines the referral sources and the associated somatoform diagnoses. Three categories of health care providers are represented. Outpatient primary physicians referred 14 patients, 12 of which received a diagnosis in the somatoform category. Outpatient psychologists provided four subjects, three of which received a somatoform diagnosis. Finally, inpatient substance abuse physicians referred 7 patients, of whom four were given a somatoform diagnosis. Further examination reveals that 86% of the patients referred by primary care physicians received a diagnosis in the somatoform family, but only one patient out of the 14 referred met diagnostic criteria for somatization disorder. Outpatient psychologists evidenced a 75% rate of accuracy in the general somatoform category, but none of their referrals received a somatization disorder diagnosis. Inpatient substance abuse physicians evidenced a 57% rate of

Table 5.11

Distribution of somatoform diagnoses by referral source.

	Outpatient Primary Physician	Outpatient Psychologist	Inpatient Substance Abuse Physician
Somatization Disorder (n = 3)	1	-	2
Undifferentiated Somatoform Disorder (n = 12)	7	3	1
Somatoform Pain Disorder (n = 5)	4	-	1
	12 (14)*	3 (4)*	4 (7) *

N = 15

* = number of total referrals

diagnosing general somatoform disorders. In addition, 29%
of their referrals (n = 2) were assigned a somatization
disorder diagnosis.

The reasons underlying this inconsistency in obtaining
the desired referrals are unclear. Lack of exposure to the
diagnosis of somatization disorder is one possibility. As
noted in Chapter One (pages 7-8), somatization disorder is
not a prevalent condition in the population at large.
Researchers place the overall rate at approximately 2%
(Woodruff et al., 1971; Robins et al., 1984). However,
reviews suggest that somatization disorder occurs with
enough frequency in family practice settings for the
physician to make the diagnosis on an almost daily basis
(Kaplan et al., 1988; Like et al., 1988). The prevalence
rate of this disorder in inpatient and outpatient mental
health settings is not readily available in the literature.

Another possible factor underlying the low referral
rate of patients with somatization disorder may lie in the
diagnostic process. Brown and Smith (1988) note that
despite the reported prevalence of somatization disorder in
primary care settings, medical practitioners often fail to
recognize this diagnostic entity. Oxman et al. (1983)
attribute this failure to reluctance to use DSM-III
terminology. Katon et al. (1984) suggest that the primary
care physician lacks sufficient training in diagnosing

emotional illness in patients who present somatically. It is interesting to note that the lack of somatization disorder diagnoses occurred across referral sources. Outpatient psychologists, for example, would be expected to be familiar with DSM-III terminology, and have extensive training in diagnosing emotional disorders.

The aforenoted problems in the referral process may relate to qualities in the patient that led to, or hindered, being considered as a possible referral. The patients referred to participate in this study were noteworthy in terms of their high levels of depression and anxiety. It is conceivable that these patients may have been easier to approach than those with a true somatization disorder diagnosis. The review of the literature in Chapter Two revealed a significant association between somatization disorder and antisocial personality disorders (pages 31-38), yet antisocial personality disorders were not found to be highly represented in the sample (6.3%, Table 4.15). Perhaps those patients with antisocial personality disorders may have been seen by their physician as being less cooperative and less amenable to possible referral. Qualities of the patient, therefore, may relate to the difficulty encountered in securing referrals of somatization disorder patients.

Problems with the screening index for somatization disorder (Chapter One, page 7), may have contributed to the low referral rate of patients diagnosed with somatization disorder. This study did not designate a process whereby information leading to a particular referral could be documented. In order to obtain more information about what led to a particular referral, a random sample (N = 6) of patients receiving a general somatoform diagnosis was selected, and their referring parties were contacted and asked to provide information regarding what led to a referral. This particular sample included two patients referred by primary care physicians, three patients referred by psychologists, and one patient referred by an inpatient physician.

Two primary care physicians were contacted. These individuals both referred patients they perceived as "difficult." Both stated that symptoms off the screening index led to the referrals (vomiting, pain in the extremities; vomiting, menstrual pain), as well as overall anxiety and depression. Both physicians feel that they had exhausted all organic possibilities for their patients' difficulties. It is noteworthy that neither of these physicians had considered obtaining a psychiatric consult as part of their overall treatment approach.

Two psychologists who had referred patients to the study were also contacted. One stated that his patient was referred because of excessive somatization. Vomiting and shortness of breath were two symptoms noted off the screening index. This patient was not described as "difficult," but rather "lonely and depressed." The remaining psychologist referred two patients whom he characterized as "less than enjoyable." Multiple, unexplained physical symptoms were noted, but this referring party did not remember if he had used the screening index or not as part of the referral process.

Finally, one inpatient substance abuse physician was contacted. He had referred a patient whom he thought had every one of the seven symptoms noted on the screening index. This individual had a long history of multiple hospitalizations for surgical procedures.

A total of six patients were reviewed. Only one in the aforenoted survey received a somatization disorder diagnosis (referred by inpatient substance abuse physician; thought to have all seven symptoms off the screening index). All of the remaining five received a diagnosis in the broad category of somatoform disorders. Four out of these five, however, did appear to have at least two symptoms off the screening index which, according to the index, suggests a high likelihood of somatization disorder (American

Psychiatric Association, 1987). This survey suggests that the screening index may not be sensitive enough to accurately detect this diagnosis, especially when only two items are considered to indicate somatization disorder, and thus may have contributed to some of the difficulty encountered in obtaining somatization disorder referrals. As previously noted, documentation from each referring party, regarding the use of the screening index, would have provided a more meaningful basis for judging its overall sensitivity to the diagnosis in question.

At this point, several factors which may have related to the overall referral difficulties have been reviewed. Lack of exposure to the diagnosis of somatization disorder, diagnostic difficulty due to training and orientation limitations, qualities of the patient, and problems with the screening index were possible factors considered in examining this low referral rate. One additional factor related to the difficulty noted in securing somatization disorder referrals may lie in the diagnosis of somatization disorder itself. Does the diagnosis exist? Is there really an homogenous group of individuals with the particular syndrome, or, rather, are excessive somatizers, a heterogenous group with frequently overlapping symptomatology? The following post hoc analyses provides more detailed information on both the entire sample and the subsets receiving somatoform diagnoses. Examination of such

a sample is essential because all subjects were referred on
the basis of a supposed somatization disorder diagnosis.

Post Hoc Analyses

The first set of post hoc analyses examined the entire
sample. These subjects were noteworthy as a group in terms
of their overall incidence of psychopathology. On Axis I,
all 25 subjects received at least 1 diagnosis (Table 4.14).
In addition, 23 out of 25 received at least one personality
disorder diagnosis (Table 4.16). Consistent with the
salient literature in the field, depression was the most
frequently occurring Axis I diagnosis. Passive-aggressive
personality disorder was the most frequently noted Axis II
diagnosis in the sample. These findings suggest that the
patients referred to this study evidence high levels of
psychopathology. In an attempt to determine how much of
this pathology is accounted for by "somatization" those with
somatoform disorders were compared with the remainder of the
sample.

The second set of post hoc analyses compared the
somatization disorder group with the rest of sample. There
were no significant differences observed in terms of Axis I
diagnoses (t = 1.56, p = .06, Table 4.17). However, the
somatization disorder group obtained significantly more Axis
II diagnoses than the rest of the sample (t = 2.03, p = .02,

Table 4.17). The meaningfulness of this finding was obscured by the low frequency (n = 3) of somatization disorder diagnoses.

In an attempt to further clarify the relationship between somatization and other Axis I and Axis II diagnoses, the three types of somatoform diagnoses assigned in this study were collapsed into one general somatoform category (n = 15). Dysthymia and dependent personality disorder were the most frequently occurring Axis I and Axis II disorders. While the same general pattern of high numbers of Axis I and Axis II diagnoses was noted, there were no significant differences seen in terms of number of Axis I diagnoses (t = -1.57, p = .07, Table 4.20), or number of Axis II diagnoses (t = -.83, p = .20, Table 4.20) between this group and the overall sample.

These findings suggest that in terms of Axis I and Axis II disorders, the patient with a somatoform diagnosis is indistinguishable from the patient "suspected" of having a somatoform diagnosis. Consistent with literature in this field, these individuals are noteworthy for their overall excessive psychopathology. Depression, anxiety and characterological problems are most frequently noted, whether or not a somatization disorder or somatoform disorder diagnosis is assigned. Two issues emerge from these observations. First, did the presence of additional

Axis I and Axis II disorders contribute more to a referral
than somatization problems per se? As was previously
discussed, these patients may have "stood out" because of
such symptoms as depression, anxiety, etc. Second, does the
current DSM-III-R adequately distinguish between various
groups of somatoform disorders? Findings from this study
suggest that the somatization disorder diagnosis itself is
problematic. In addition, those identified as excessive
somatizers do not appear to fall into homogenous categories,
but rather appear to be a heterogenous group with
overlapping symptomatology.

The final set of post hoc analyses examined the
relationship between the SCID and the MCMI-II. A strong
degree of correlation was expected between these two
instruments on the assignment of Axis II diagnoses. Both
tools were specifically designed to assess for the presence of
all 12 personality disorders and both instruments were
formulated to be consistent with DSM-III-R (1987) diagnostic
criteria. Comparison of the SCID and the MCMI-II showed a
disappointingly low level of correlation. The SCID
diagnosed a total of 29 personality disorders ($\bar{x}$ = 1.16,
Table 4.21), whereas the MCMI-II assigned 85 personality
disorders ($\bar{x}$ = 3.4, Table 4.22). The Kappa statistic was
used to obtain an overall measure of diagnostic agreement
between the SCID and the MCMI-II, as well as to provide
individual indices for separate diagnoses (Table 4.23). The

overall level of diagnostic concordance between these two
instruments was found to be only slightly higher than chance
(K = .23). Examination of this data suggested that perhaps
the MCMI-II was over inclusive in its assignment of Axis II
(personality disorder) diagnoses. Millon (1987) made a
distinction between the "presence" of a personality disorder
(BR, or cutoff point, $\overline{>}$74), and the most "prominent"
syndrome (BR or cutoff, point $\overline{>}$85). As noted in Chapter
three, the cutoff point used for this study was BR $\overline{>}$ 74
which, according to Millon's (1987) theory, indicates the
presence of a personality disorder. For the purpose of
further analysis, Axis II frequencies were computed for the
MCMI-II using instead the BR $\overline{>}$ 84 cutoff point. Table 5.12
contrasts these frequencies with the original MCMI-II
frequencies, and the frequency of personality disorders
assigned by the SCID. Examination of this table reveals
that even after employing a higher cutoff score, the MCMI-II
still diagnosed significantly more personality disorders
(t = 5.42, p = .001) than the SCID. The reasons for this
inconsistency are unclear. One possible factor may be
related to how the instruments are given. The MCMI-II is a
self-administered questionnaire, whereas the SCID is a
semi-structured interview administered in this study by a
psychiatrist. It is conceivable that individuals may be
more comfortable admitting to difficulties when they are not
directly being interviewed.

The inclusion of two instruments both designed to measure DSM-III-R personality disorders was a strategy designed to increase diagnostic accuracy. The wide disparity noted between the SCID and the MCMI-II was not expected. The effect of this measurement discordance on the findings obtained in this study is to obscure the strength of the relationship between somatization disorders and personality disorders. However, even when using the most conservative personality disorder estimate (SCID = 29), 12 out of 25 patients (48%) still are shown to evidence at least one personality disorder. This percentage rate is significantly higher than the estimated occurrence of personality disorders in the overall population (15%) (Z = 4.17, p = .0001). When considering the amount of personality disorders evidenced by those subjects who received a diagnosis in the broad category of somatoform disorders (n = 15), as measured by the SCID, a statistically significant difference still emerges. Six out of 15 (40%) of those with a general somatoform disorder diagnosis were assigned personality disorders which is a statistically significant difference when compared with the estimate in the overall population (15%) (Z = 2.14, p = .01).

In conclusion, this particular sample evidences significantly higher rates of personality disorders than estimated in the overall population regardless of which instrument is used. However, the strength of this

Table 5.12

Axis II (personality disorder) frequencies for the MCMI-II based on two different cutting points, compared with the SCID*.

Subject	MCMI-II ($\bar{>}$ 75)	MCMI-II ($\bar{>}$ 85)	SCID
1.*	3	1	0
2.	3	3	1
3.	7	4	1
4.	5	3	0
5.*	2	1	0
6.*	2	0	5
7.	6	3	1
8.*	6	5	0
9.	5	5	0
10.*	6	5	3
11.*	2	0	1
12.*	7	4	5
13.*	1	0	0
14.	2	0	0
15.*	2	1	0
16.*	0	0	1
17.*	4	3	1
18.*	0	0	0
19.	1	1	1
20.*	5	3	0
21.*	1	0	0
22.	0	0	0
23.	7	5	6
24.	4	3	3
25.*	4	3	0
	85	53	29

* Subjects who are starred received a diagnosis in the broad category of somatoform disorder.

association is difficult to assess in view of the lack of concordance between the SCID and the MCMI-II.

Sampling Limitations

The subjects in this study were all referred by health care providers in the greater Lansing, Michigan area. Due to the infrequency of the somatization disorder diagnosis, there was no attempt made to randomly select individuals with the diagnosis of somatization disorder from a larger group of individuals with the same diagnosis. All of the available somatization disorder patients who agreed to participate in the study and met selection criteria were included. As previously noted, these individuals were obtained from a variety of settings and referred by physicians, and psychologists. No attempt was made to measure or control for demographic variation, other than the pre-determined selection criteria.

The sampling limitations of this study have external validity implications (Campbell and Stanley, 1963). The degree to which the results can be generalized is restricted to subjects with like somatization issues and receiving treatment in similar health care settings. Specifically, the findings in this study are generalizable to individuals fitting the demographic profile as described in Appendix C. As indicated previously, the fact that only three subjects

were classified as having somatization disorder further
limits generalizing the findings, even to the individuals
fitting the criteria used in this study.

Measurement Limitations

A possible measurement error lies in the use of two
psychiatrists to administer the SCID. However, measurement
error due to inconsistencies in SCID administration appears
minimal in view of the fact that the SCID can be
administered by a lay person, and the two examiners in the
study were fourth year psychiatry residents.

Another possible source of measurement error regards
the use of both the SCID and the MCMI-II to diagnose some
Axis I variables and all Axis II variables. Earlier in this
chapter it was noted that the two instruments did not
evidence a strong relationship in terms of assigning
diagnoses. The MCMI-II diagnosed personality disorders at a
much higher rate than the SCID. In addition, the two
instruments were found to evidence an extremely low level of
overall agreement on the assignment of Axis II disorders.
The effect of this inconsistency was to obscure the strength
of the relationship observed between somatization disorders
and personality disorders. A high level of concordance was
not expected between the SCID and the MCMI-II in terms of
assigning Axis I diagnoses. Thus, investigations comparing

the two inventories on this dimension were not implemented.

All of the design issues discussed in this section may have affected accurate measurement of the variables of interest. These limitations, along with the sampling limitations noted in the previous section, limit both the degree to which the results can be deemed significant and the degree to which they can be generalized to the larger population of individuals with somatoform diagnoses. Specifically, the low number of somatization disorder referrals (n = 3), as well as the small overall sample (n = 25), limits the overall significance of the findings. It does appear that those evidencing excessive patterns of somatization and/or somatoform diagnoses also demonstrate significant levels of overall psychopathology. The strength of these associations was obscured by the sampling and measurement limitations previously discussed.

Clinical Implications

The results of this study have clinical implications for the physician and the mental health clinician. First, the high level of psychopathology found in the individuals referred to this study underscores the importance of psychiatric consultation in the diagnosis and treatment of somatoform disorders. As previously noted, those assigned a somatoform diagnosis were for the most part

indistinguishable from the rest of the sample in terms of Axis I and Axis II disorders. Psychiatric consultation in the primary care setting would assist the physician in making an accurate diagnosis. In addition, a psychiatric consult would contribute to the overall treatment and management of the patient with excessive somatization patterns.

A related clinical implication which emerges from this investigation is the need to use caution when using the DSM-III-R to diagnose and distinguish between various somatoform disorders. Results of this and similar studies suggest that patients who display patterns of somatization cannot be neatly assigned to pre-existing diagnostic categories. Somatization disorder, and related somatoform disorders, appear to be heterogenous entities which frequently overlap both among themselves and with other Axis I and Axis II disorders. For example, the current DSM-III-R diagnostic criteria for somatization disorder make no mention of psychological symptoms despite research indicating the presence of such additional syndromes.

Findings in this investigation suggest that clinicians exercise caution in the use of the SCID and the MCMI-II, both in clinical and research settings. The low level of agreement observed between these two instruments in the assessment of personality disorders is disturbing,

especially considering that both tools were designed to assess DSM-III-R clinical syndromes. Results obtained from this investigation suggest that the MCMI-II over-diagnoses personality disorders. Findings regarding the SCID are unclear, but it intuitively appears to provide more realistic assessments. However, the updated manual for the SCID (Spitzer et al., 1990) provides no specific reliability statistics other than reference to Kappas obtained by similar instruments. In conclusion, both instruments appear to need further refinement in order to be used with confidence in either clinical or research settings. The aforenoted clinical implications are directly related to this investigation. Additional implications, important to both the clinician and the researcher, are detailed in the following section.

Future Research Directions

Within the present design, certain modifications could possibly lead to a clearer understanding of the relationship between somatization disorder and associated psychiatric syndromes. First of all, the use of a pre-test to screen for the presence of the somatization disorder diagnosis appears to be necessary in order to insure obtaining the desired sample. In addition, the use of a control group would enable the researcher to more directly examine the diagnosis in question, as well as provide a more reliable

means of determining which psychiatric syndromes are significantly associated with somatization disorder. Finally, a method for determining the diagnostic criteria which resulted in a patient referral would help shed light on the accuracy of the seven symptom checklist in screening for the presence of somatization disorder.

Additional directions for future research emerge from this investigation. One key issue previously referred to involves the clinical usefulness of the somatization disorder diagnosis, as well as the remaining somatoform diagnoses. Research assessing the reliability and validity of these diagnostic categories is needed. Lloyd (1986) cautions that to have any clinical usefulness, a diagnosis must convey information regarding the course of the condition and preferably its response to treatment. The somatoform diagnoses do not appear to be fundamentally distinct categories, nor do these diagnoses carry implication as to the type of treatment the patient is likely to receive.

In a similar vein, future research is needed in order to determine whether the somatoform diagnoses and their associated psychiatric syndromes are simply manifestations of a single disorder. Research cited in Chapter Two (Lilienfield et al., 1986), for example, suggests that somatization disorder in a woman with underlying histrionic

personality disorder is equivalent to malingering in a male
with antisocial personality disorder. This possibility also
raises the question of whether or not there may be a gender
bias in the present conceptualization of somatization and
other somatoform disorders. Future studies are needed in
order to ascertain whether somatization disorder is a
syndrome most often seen in women, and infrequently seen in
men, as suggested by the majority of researchers in the
field. Of the 25 subjects referred to this study, only six
(24%) were male.

Results of this study, and other investigations of
somatization disorder and associated psychiatric syndromes,
underscore the relationship between somatization and
depressive syndromes. Additional research is needed in
order to better understand this association. Is
somatization disorder and other somatoform syndromes really
depression in disguise? Are somatic manifestations core
symptoms of depression? Or is it possible that depressive
syndromes are more clearly specified and thus easier to
diagnose than other psychiatric syndromes? Future studies
are necessary in order to more clearly understand the role
depression plays in the manifestation of somatoform
syndromes and visa versa.

Future research regarding treatment alternatives for
somatization disorder and other somatoform syndromes is

needed. As noted in Chapter One (pages 16-17), only two treatment studies have been cited to date in the pertinent literature on somatization disorder. In order to provide more viable avenues of treatment, more attention must be given to those factors which may underlie the development of somatoform disorders. For example, cultural factors may play an important role in the presentation of somatization disorder and other somatoform syndromes. These disorders appear to be most often documented in the primary care setting. In this investigation, 15 out of 25 patients (56%) were referred by primary care physicians. This referral rate may reflect the stigma of psychiatric illness present in our culture. Lloyd (1985) notes that excessive somatizers evidence an impaired ability to verbalize emotional distress, and thus may express their feelings through bodily sensations. Along these lines, Escobar (1987) offers that in order to clarify the role psychiatric syndromes play in the development of somatization syndromes, studies are needed distinguishing between four dimensions of somatization:

1. Somatization as a primary disorder, as in the case of the DSM-III-R (1987) classification.

2. Somatization as an associated disorder, as when full criteria are met for other diagnoses, such as major depression.

3. Somatization as a masked disorder, as in masked depression or depressive equivalents.

4.   Somatization as a trait.

In this study, many of the findings were consistent with Escobar's (1987) model, however the distinctions between the four dimensions described are not clear. Further research is needed in order to distinguish between somatization as a primary disorder, somatization as an associated or masked syndrome, or somatization as possibly a trait or predisposition, similar in expression to a personality disorder.

Certain trends have emerged, however, as a result of this investigation. First, individuals who manifest excessive patterns of somatization, also evidence additional psychiatric syndromes. Second, existing DSM-III-R (1987) categories of somatoform disorders do not appear to reliably distinguish between somatization disorder and other somatoform syndromes, and the corresponding diagnostic criteria do not take into account the presence of additional psychiatric disorders. Third, the SCID and the MCMI-II evidence a surprisingly low level of agreement in the assignment of DSM-III-R Axis I and Axis II disorders. Finally, additional research is necessary in order to further understand the relationship between excessive somatization patterns, somatoform disorders and concomitant psychiatric syndromes, in order to provide more accurate diagnosis and viable avenues of treatment.

APPENDICES

APPENDIX A

DSM-III-R DIAGNOSTIC CRITERIA FOR SOMATIZATION DISORDER

A. A history of many physical complaints or a belief that
    one is sickly, beginning before the age of 30 and
    persisting for several years.

B. At least 13 symptoms from the list below. To count a
    symptom as significant, the following criteria must be
    met:

    1. No organic pathology or pathophysiologic mechanism
        (for example, a physical disorder or the effects
        of injury, medication, drugs, or alcohol) to
        account for the symptom or, when there is related
        organic pathology, the complaint or resulting
        social or occupational impairment is grossly in
        excess if what would be expected from the physical
        findings.

    2. Has not occurred only during a panic attack.

    3. Has caused the person to take medicine (other than
        over-the-counter pain medication), see a doctor,
        or alter lifestyle.

Symptom list:

Gastrointestinal symptoms

    1. vomiting (other than during pregnancy)*

    2. abdominal pain (other than when menstruating)

3. nausea (other than motion sickness)

4. bloating (glassy)

5. diarrhea

6. intolerance of (gets sick from) several different foods

Pain symptoms

7. pain in extremities (*)

8. back pain

9. joint pain

10. pain during urination

11. other pain (excluding headaches)

Cardiopulmonary symptoms

12. shortness of breath when not exerting oneself*

13. palpitations

14. chest pain

15. dizziness

Conversion of pseudoneurological symptoms

16. amnesia*

17. difficulty swallowing*

18. loss of voice

19. deafness

20. double vision

21. blurred vision

22. blindness

23. fainting or loss of consciousness

24. seizure or convulsion

25. trouble walking

26. paralysis or muscle weakness

27. urinary retention or difficulty urinating

Sexual symptoms for the major part of the person's life

after opportunities for sexual activity

28. burning sensation in sexual organs or rectum

(other than during intercourse)*

29. sexual indifference

30. pain during intercourse

31. impotence

Female reproductive symptoms judged by the person to occur

more frequently or severely than in most women

32. painful menstruation

33. irregular menstrual periods

34. excessive menstrual bleeding

35. vomiting throughout pregnancy

---

*Note: The seven items following by asterisks may be used

to screen for the disorder; the presence of two or more of

these seven items suggests a high likelihood of the

disorder.

APPENDIX B

Dear Health Care Provider:

Dr. Jonathon Henry and I are conducting a study sponsored by the university looking at the diagnosis of somatization disorder.

The purpose of this study is to examine the relationship between somatization disorder and co-existing psychiatric syndromes. The study will specifically examine the association between somatization disorder and personality disorders, although concomitant Axis I diagnoses will also be assessed.

The structured clinical interview for DSM-III-R (SCID) will be used to determine the presence of somatization disorder, as well as other Axis I diagnoses and Axis II personality disorder diagnoses. In addition, the Millon Multiaxial Clinical Inventory, second edition (MCMI-II), will be used to further assess general Axis I psychiatric syndromes, and personality disorders on Axis II.

Subject participation will involve 1) participating in a structured clinical interview (SCID), administered by one of two university-affiliated psychiatrists, and 2) completing an MCMI-II inventory under the supervision of

this examiner, for approximately 30 minutes. The referring physician will receive a written summary of their individual referral's diagnostic profile. The potential benefit to the subject lies in the added dimension, such an evaluation will provide, to the overall approach to treatment of their particular disorder. In addition, the referring health care provider will have pertinent data about the patient which will not only help clarify the diagnostic picture, but may assist in the treatment and management of the patient.

For your convenience, a seven symptom screening index is included. The presence of two or more of these seven items strongly suggest a high likelihood of the presence of somatization disorder, and is sufficient to make a referral to our study.

Subjects referred must be between the ages of 18 and 55, and have no history of formal thought disorder. A referral of even one or two patients will be immensely appreciated and have a significant impact on the research being conducted.

Thank you for your cooperation. If you have any further questions, please do not hesitate to contact us.

Sincerely,

Patrice Gerard, M.A.

Doctoral Candidate, Counseling Psychology

6424 West Lake Drive

Haslett, MI 48840

Phone: 646-6622, ext. 6111 (Work)

      339-0829 (Home)

Jonathon Henry, M.D.

Resident In Psychiatry (Fourth Year)

5510 Timberlane, Apt. D-3

East Lansing, MI 48823

Phone: 353-3070 (Work)

      332-8755 (Home)

Angela Miller, M.D.

APPENDIX C

Demographic and other identifying features of the sample (N=25).

Sex Distribution			Setting/Status		
Male	6	(24%)	Outpatient Primary Care	14	(56%)
Female	19	(76%)	Outpatient Mental Health	4	(16%)
			Inpatient Substance Abuse	7	(28%)
Age Range					
18-25	5	(20%)	Referral Source		
26-35	6	(24%)	Primary Care Physician	14	(56%)
36-45	9	(36%)	Outpatient Psychologist	4	(16%)
46-55	5	(20%)	Inpatient Physician	7	(28%)
Marital Status			Patient's Stated "Major Problems"*		
Never married	7	(28%)	Marital/family	5	(20%)
First marriage	7	(28%)	Job/school/work	3	(12%)
Remarried	4	(16%)	Self-confidence	8	(32%)
Separated	1	(4%)	Moodiness	3	(12%)
Divorced	4	(16%)	Ill/Tired	6	(24%)
Widowed	2	(8%)	Loneliness	4	(16%)
			Sexual Problems	1	(4%)
Religion			Alcohol Problems	3	(12%)
Protestant	11	(44%)	Drug Problems	3	(12%)
Catholic	4	(16%)	Antisocial	1	(4%)
Jewish	1	(4%)	Other	6	(24%)
Other	9	(36%)			
Ethnic/Race					
White	25	(100%)			

* Subjects were allowed to endorse as many major problems as applicable.

APPENDIX D

INFORMING AND PARTICIPATION REQUEST

My name is Patrice Gerard and I am a doctoral student in
Counseling Psychology at Michigan State University. I am
currently conducting a research project that is being
sponsored by the university.

In the field of psychology, we are beginning to realize that
the human organism must be viewed as a totality or, in other
words, as both a biological and social being. In order to
understand the total person, therefore, we must look at both
the physical and psychological dimensions. The purpose of
this study is to examine the role an individual's
personality style plays in the expression of physical
illness.

People who agree to participate in this study will be asked
to engage in a structured interview conducted by a
physician, and to fill out a personality inventory
administered by a psychologist. The interview will last 45
minutes to one hour, and the personality questionnaire will
take about 30 minutes to fill out.

Your responses to both procedures will be kept strictly
confidential. Your name will not appear on either measure.

Your health care provider will reeceive a summary of your interview and questionnaire results.

Receiving information about yourself and your personality style may be uncomfortable for you. If you experience these feelings, it would be helpful if you would discuss them with your health care provider. While this evaluation is designed to help you and your health care provider better understand how your personality style impacts your experience with physical illness, it will not answer all your questions about either your personality style or your physical concerns.

This research is not part of the usual treatment provided by your health care provider. If, at any time, you choose to withdraw from this study, you are free to do so.

I sincerely thank you for your cooperation and appreciate your participation. If you have any further questions regarding the study, please feel free to contact me.

Patrice Gerard, M.A.

St. Lawrence Dimondale Center

4000 N. Michigan Rd.

Dimondale, MI 48821

(517) 646-6622 ext. 6111

APPENDIX E

MICHIGAN STATE UNIVERSITY

Department of Psychology

DEPARTMENTAL RESEARCH CONSENT FORM

1. I have freely consented to take part in a scientific

   study being conducted by: <u>Patrice Gerard, M.A.</u>

   under the supervision of: <u>John Powell, Ph.D.</u>

   Academic Title: <u>Professor of Counseling Psychology</u>

2. The study has been explained to me and I understand the explanation that has been given and what my participation will involve.

3. I am aware that responding to the instruments in this research might lead to negative and unpleasant emotions.

4. I understand that I am free not to participate at all or to discontinue my participation in this study at any time without penalty or effect on the services to which I am entitled.

5. I understand that the results of the study will be treated in strict confidence and that I will remain anonymous to all but the principal investigator.

6. I understand that my participation in the study does not guarantee any beneficial results to me.

7. I understand that involvement in this study is not a part of the usual services I am receiving from my health care provider.

8. I understand that results of my evaluation will be made available to me at my request through my referring health care provider.

9. I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

Signed: _____

Date: _____

APPENDIX F
TAPING, INFORMING AND PARTICIPATION REQUEST

1. I understand that the interview segment of the study I have agreed to participate in will be audio-taped.

2. I understand that these tapes will not include my name, but will be identified by a code number.

3. I understand that the only persons who will have access to the taped interviews will be the psychiatrist conducting the interview, the psychiatrist supervising him, and the psychologist undertaking the study.

4. I understand that these tapes will be erased upon completion of the study.

Signed: _____

Date: _____

References

American Psychiatric Association (1952). Diagnostic and statistical manual of mental disorders. Washington, D.C.: author.

American Psychiatric Association (1968). Diagnostic and statistical manual of mental disorders (2nd ed.). Washington, D.C.: author.

American Psychiatric Association (1980). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, D.C.: author.

American Psychiatric Association (1982). Ethical principles in the conduct of research with human participants. Washington, D.C.: author.

American Psychiatric Association (1987). Diagnostic and statistical manual of mental disorders (3rd ed. rev.). Washington, D.C.: author.

Arkonac, O., and Guze, S.B. (1963). A family study of hysteria. New England Journal of Medicine, 268, 239-424.

Armitage, K.L., Schneiderman, F., and Bass, R.A. (1979). Response of physicians to medical complaints in men and women. Journal of the American Medical Association, 241, 2186-2187.

Bard, L.A., and Knight, R.A. (1987). Sex offender subtying and the MCMI. In C. Green (Ed.), Conference on the Millon Clinical Inventories (pp. 133-137). Minneapolis, Minn.: National Computer Systems.

Blashfield, R.K., and McElroy, R.A. (1989). Ontology of personality disorder categories. Psychiatric Annals, 19 (3), 126-131.

Bridges, K.W., and Goldberg, D. (1985). Somatic presentation of DSM-III psychiatric disorders in primary care. Journal of Psychosomatics, 29, 563-569.

Brown, F.W., and Smith, G.R. (1988). Somatization disorder in general medical settings. Psychiatric Annals, 18 (6), 353-356.

Bruning, J.L. and Kintz, B.L. (1977). Compututational handbook of statistics. Glenview, Illinois: Scott, Foresman and Company.

Bryer, J.B., Miller, J., Nelson, B., and Krol, P. (1987). Adult psychiatric symptoms, diagnosis, and medications as indicators of childhood abuse. Unpublished manuscript, Charles Rives Hospital, Willesley, M.A.

Campbell, D.T. and Stanley, J.D. (1963). Experimental and quasi-experimental designs for research. Chicago: Rand McNally and Company.

Cantwell, D.P. (1972). Psychiatric illness in the families of hyperactive children. Archives of General Psychiatry, 27, 414-418.

Chodoff, P. and Lyons, H. (1958). Hysteria, the hysterical personality, and "hysterical conversion." American Journal of Psychiatry, 37, 1401-1405.

Cloninger, C.R. (1986). A unified biosocial theory of personality and its role in the development of anxiety states. Psychiatric Developments, 3, 167-226.

Cloninger, C.R., and Guze, S.B. (1970). Psychiatric illness and female criminality: the role of sociopathy and hysteria in the antisocial woman. American Journal of Psychiatry, 127 (3), 303-310.

Cloninger, C.R., Martin, R.L., Guze, S.B., and Clayton, P.J. (1986). A prospective follow-up and family study of somatization in men and women. American Journal of Psychiatry, 143, 873-878.

Cohen, J.A. (1960). A coefficient of agreement for nominal scales. Educational and Psychological Measurement, 20, 37-46.

Collyer, J. (1979). Psychosomatic illness in a solo practice. Psychosomatics, 20, 762-767.

Coryell, W., Norton, S.G. (1981). Briquet's syndrome (somatization disorder) and primary depression: Comparison of background and outcome. Comprehensive Psychiatry, 22, 249-256.

Craig, R.J. Verinis, J.S., and Wexler, S. (1985). Personality characteristics of drug addicts and alcoholics on the Millon Clinical Multiaxial Inventory. Journal of Personality Assessment, 49, 156-60.

Cummings, N.A., and Vanden Bos, G.R. (1981). The twenty-year Kaiser-Permanente experience with psychotherapy and medical utilization: Implications for national health policy and national health insurance. Health Policy Quarterly, 1, 159-175.

deGruy, F., Columbia, L., and Dickinson, P. (1987).
Somatization disorder in family practice. Journal of
Family Practice, 25, 45-51.

DeSouza, C., and Othmer, E. (1984). Somatization disorder
and Briquet's syndrome. Archives of General
Psychiatry, 41, 334-336.

Endicott, J. and Spitzer, R.L. (1978). A diagnostic
interview: the schedule for affective disorders and
schizophrenia. Archives of General Psychiatry, 35,
773-782.

Escobar, J.I. (1987). Cross-cultural aspects of the
somatization trait. Hospital and Community Psychiatry,
38, 174-180.

Feighner, J.P., Robins, E., and Guze, S.B. (1972).
Diagnostic criteria for use in psychiatric research.
Archives of General Psychiatry, 26, 56-63.

Fishbain, D.A., Goldberg, M., Meagher, R., Steele, R., and
Rosomoff, H. (1986). Male and female chronic pain
patients categorized by DSM-III psychiatric diagnostic
criteria. Pain, 26, 181-197.

Ford, C.V. (1983). The somatizing disorders: Illness as a
way of life. New York: Elsevier Biomedical.

Ford, C.V. (1987). Handbook of psychiatric differential
diagnosis. Littleton, Mass: PSG Publishers.

Frances, A., and Widiger, T. (1986). The classification of
personality disorders: An overview of problems and
solutions. In A. Frances and R. Hales (Eds.),
Psychiatric Update (pp. 240-257). Washington, D.C.:
American Psychiatric Press.

Goldsmith, S.J., Jacobsberg, L.B., and Bell, R. (1989).
Personality disorder assessment. Psychiatric Annals,
19 (3), 139-142.

Guze, S.B. (1966). Criminality and psychiatric disorder.
New York: Oxford University Press.

Guze, S.B. (1970). The role of follow-up studies: Their
contribution to diagnostic classification as applied to
hysteria. Seminars in Psychiatry, 2, 392-402.

Guze, S.B. (1975). The validity and the significance of the
clinical diagnosis of hysteria (Briquet's syndrome).
American Journal of Psychiatry, 32, 138-41.

Guze, S.B., Cloninger, C.R., Martin, R.L., and Clayton, P.J. (1986). A follow-up and family study of Briquet's syndrome. British Journal of Psychiatry, 149, 17-23.

Guze, S.B., Goodwin, D.W., and Crane, J.B. (1970). A psychiatric study of the wives of convicted felons: An example of assorted mating. American Journal of Psychiatry, 126, 1773-1776.

Guze, S.B., Wolfgram, E.D., and McKinney, J.K. (1967). Psychiatric illness in the families of convicted criminals: A study of 519 first-degree relatives. Diseases of the Nervous System, 28, 651-659.

Guze, S.B., Woodruff, R.A., and Clayton, P.J. (1971). Hysteria and antisocial personality: Further evidence of an association. American Journal of Psychiatry, 127, 957-960.

Hankin, J., and Oktay, J.S. (1979). Mental disorder and primary medical care: An analytic review of the literature. (DHEW Publication N. ADM 78-661, Series D). Rockville, MD: National Institute of Mental Health.

Hyler, S.E., and Sussman, N. (1984). Somatoform disorders: Before and after DSM-III. Hospital and Community Psychiatry, 35 (5), 469-477.

Kahana, R.J., and Bibring, G.L. (1964). Personality types in medical management. In N.E. Zinberg (Ed.), Psychiatry and medical practice in a general hospital (pp. 108-123). New York: International University Press.

Kaminsky, M.J., and Slavney, P.R. (1976). Methodology and personality in Briquet's syndrome: A reappraisal. American Journal of Psychiatry, 133 (1), 85-88.

Kaminsky, M.J., and Slavney, P.R. (1983). Hysterical and obsessional features in patients with Briquet's syndrome (somatization disorder). Psychological Medicine, 13, 111-120.

Kaplan, C., Lipkin, M.J., and Gordon, G.H. (1988). Somatization in primary care. Patients with unexplained and vexing medical complaints. Journal of General Internal Medicine, 3, 177-190.

Katon, W. (1985). Somatization in primary care. The Journal of Family Practice, 21 (4), 257-258.

Katon, W., Ries, R.K., and Kleinman, A. (1984). The prevalence of somatization in primary care. Comprehensive Psychiatry, 25 (2), 208-215.

Kenyon, F.E. (1976). Hypochondriacal states. British Journal of Psychiatry, 129, 1-14.

Kimble, R., Williams, J.G., and Agsas, S. (1975). A comparison of two methods of diagnosing hysteria. American Journal of Psychiatry, 132, 1197-1199.

Koenigsberg, H.W., Kaplan, R.D., Gilmore, M.M., and Cooper, A.M. (1985). The relationship between syndrome and personality disorder in DSM-III: Experience with 2,462 patients. American Journal of Psychiatry, 142 (2), 207-212.

Large, R.G. (1986). DSM-III diagnoses in chronic pain. The Journal of Nervous and Mental Disease, 174 (5), 295-303.

Leon, J. de, Saiz-Ruiz, J., Chinchilla, A., and Morales, P. (1987). Why do some psychiatric patients somatize? Acta Psychiatrica Scandinavica, 76, 203-209.

Lichstein, P.R. (1986). Caring for the patients with multiple somatic complaints. Southern Medical Journal, 79 (3), 310-314.

Like, R.C., Rogers, J., and McGoldrick, M. (1988). Reading and interpreting genograms: A systematic approach. Journal of Family Practice, 26, 407-412.

Lilienfield, S.O., Van Valkenburg, C., Larntz, K., and Akiskal, H.S. (1986). The relationship of histrionic personality disorder to antisocial personality and somatization disorder. American Journal of Psychiatry, 143 (6), 718-721.

Lipowski, Z.J. (1988). Somatization: The concept and its clinical applications. The American Journal of Psychiatry, 145 (11), 1358-1368.

Liskow, B., Clayton, P., and Woodruff, R. (1977). Briquet's syndrome, hysterical personality and the MMPI. American Journal of Psychiatry, 34, 1137-1139.

Liskow, B., Othmer, E., Penick, E.C., DeSouza, C., and Gabrielle, W. (1986b). Inpatients with Briquet's syndrome: Presence of additional psychiatric syndromes and MMPI results. Comprehensive Psychiatry, 27 (5), 461-470.

Liskow, B., Penick, E.C., Powell, B.J., Haefle, W.F., and Campbell, J.L. (1986a). Is Briquet's syndrome a heterogeneous disorder? American Journal of Psychiatry, 143 (5), 626-629.

Lloyd, G.C. (1986). Psychiatric syndromes with a somatic presentation. Journal of Psychosomatic Research, 30 (2), 113-120.

Loranger, A.W., Susman, V.L., and Oldham, J.H. (1987). The personality disorder examination: a preliminary report. Journal of Personality Disorders, 1, 1-13.

Martin, R.L. (1988). Problems in the diagnosis of somatization disorder: Effects on research and clinical practice. Psychiatric Annals, 18 (6), 357-362.

Mai, F.M., and Merskey, H. (1980). Briquet's treatise on hysteria: A synopsis and commentary. Archives of General Psychiatry, 37, 1401-1405.

McMahon, R.C., Flynn, P.M., and Davidson, R.S. (1985). Stability of the personality and symptom scales of the Millon Clinical Multiaxial Inventory. Journal of Personality Assessment, 49 (3), 231-234.

Mendelson, W., Johnson, N., and Stewart, M.A. (1971). Hyperactive children as teenagers: A follow-up study. Journal of Nervous and Mental Disease, 153, 273-279.

Millon, T. (1981). Disorders of personality: DSM-III, Axis II. New York: Wiley.

Millon, T. (1987). Millon Clinical Multiaxial Inventory-II (2nd Ed.). Minnesota: National Computer Systems.

Monson, R.A., and Smith, G.R., Jr. (1983). Somatization disorder in primary care. New England Journal of Medicine, 308, 1464-1465.

Morrison, J.R., and Stewart, M.A. (1971). A family study of the hyperactive child syndrome. Biological Psychiatry, 3, 189-195.

Oxman, T.E., Harrigan, J., and Kues, J. (1983). Diagnostic patterns of family physicians for somatoform, depressive and anxiety disorders. The Journal of Family Practice, 17 (3), 439-446.

Perley, M.J., and Guze, S.B. (1962). Hysteria - the stability and usefulness of clinical criteria. New England Journal of Medicine, 226, 421-426.

Piersma, H.L. (1986). The stability of the Millon Clinical
    Multiaxial Inventory for psychiatry inpatients.
    Journal of Personality Assessment, 50, 193-197.

Pilowsky, I. (1970). Primary and secondary hypochrondriasm.
    Acta Psychiatrica Scandinavica, 46, 273-285.

Purtell, J., Robins, E., and Cohen, M. (1951). Observations
    on clinical aspects of hysteria: A quantitative study
    of 50 hysteria patients and 156 control subjects.
    Journal of the American Medical Association, 146,
    902-909.

Rasmussen, N.H., and Avant, R.F. (1989). Somatization
    disorder in family practice. American Family
    Physician: Practical Therapeutics, 40 (2), 206-214.

Regier, D.A., Goldberg, I.D., and Taublo, C.H. (1978). The
    de facto US mental health services system. Archives of
    General Psychiatry, 685-693.

Regier, D.A., Myers, J.K., and Kramer, M. (1984). The NIMH
    epidemiologic catchment area program. Archives of
    General Psychiatry, 41, 934-940.

Robert, J.A., Ryan, J.J., McEntyre, W.L., McFarland, R.S.,
    and Lips, O.J. (1985). MCMI characteristics of
    DSM-III: Posttraumatic stress disorder in Vietnam
    veterans. Journal of Personality Assessment, 49,
    226-230.

Robins, E., Purtell, J.J., and Cohen, M.E. (1952).
    "Hysteria" in men. New England Journal of Medicine,
    246, 667-685.

Robins, L.N. (1966). Deviant children grow up: A
    sociological and psychiatric study of sociopathic
    personality. Baltimore: Williams and Wilkins.

Robins, L.N., Helzer, J.E., Croughan, J. and Ratcliff, K.S.
    (1981). National Institute of Mental Health diagnostic
    interview schedule. Its history, characteristics, and
    validity. Archives of General Psychiatry, 38, 381-389.

Robins, L.N., Helzer, J.E., and Weissman, M.M. (1984).
    Lifetime prevalence of specific psychiatric disorders
    in three sites. Archives of General Psychiatry, 41,
    948-958.

Scallet, A., Cloninger, C.R., and Othmer, E. (1976). The
    management of chronic hysteria: A review and double-
    blind trial of electrosleep and other relaxation
    methods. Diseases of the Nervous System, 37, 347-353.

Skodol, A.E., Rosnick, L., Kellman, D., Oldham, J.M., and Hyler, S.E. (1988). Validating structured DSM-III-R personality disorder assessments with longitudinal data. American Journal of Psychiatry, 145, 1297-1299.

Slavney, P.R., and Teitelbaum, M.L. (1985). Patients with medically unexplained symptoms: DSM-III diagnoses and demographic characteristics. General Hospital Psychiatry, 7, 21-25.

Smith, G.R., Monson, R.A., and Livingston, R.L. (1985). Somatization disorder in men. General Hospital Psychiatry, 7, 4-8.

Smith, G.R., Monson, R.A., and Ray, D.C. (1986). Psychiatric consultation in somatization disorder. New England Journal of Medicine, 314, 1407-1413.

Smith, R.C. (1985). A clinical approach to the somatizing patient. The Journal of Family Practice, 21 (4), 294-301.

Snyder, S., and Pitts, W.M. (1986). Characterizing somatization, hypochondriasis and hysteria in the borderline personality disorder. Acta Psychiatrica Scandinavica, 73, 307-314.

Spitzer, R.L. (1983). Psychiatric diagnosis: are clinicians still necessary? Comprehensive Psychiatry, 24, 399-411.

Spitzer, R.L., Endicott, J., and Robin, E. (1978). Research diagnostic criteria: Rationale and reliability. Archives of General Psychiatry, 35, 773-782.

Spitzer, R.L. and Fleiss, J.L. (1974). A re-analysis of the reliability of psychiatric diagnosis. British Journal of Psychiatry, 125, 341-347.

Spitzer, R.L., Williams, J.B.W., Gibbon, M., and First, M. (1990). User's guide for the structured clinical interview for DSM-III-R. Washington, D.C.: American Psychiatric Press.

Stangl, D., Pfohl, B., and Zimmerman, M. (1985). A structured interview for the DSM-III personality disorders: a preliminary report. Archives of General Psychiatry, 42, 591-596.

Tracey, H.M., Norman, D.K., and Weisberg, L.J. (1987). Anorexia and bulimia: A comparison of MCMI results. In C. Green (Ed.), Conference on the Millon Clinical Inventories (pp. 195-197). Minneapolis, Minn.: National Computer Systems.

Veith, I. (1965). Hysteria: The history of a disease. Chicago: The University of Chicago Press.

Widiger, T.A., and Rogers, J.H. (1989). Prevalence and comorbidity of personality disorders. Psychiatric Annals, 19 (3), 132-135.

Woerner, P.I., and Guze, S.B. (1968). A family and marital study of hysteria. British Journal of Psychiatry, 114, 161-168.

Woodruff, R.A., Clayton, P.J., and Guze, S.B. (1971). Hysteria: Studies of diagnosis, outcome and prevalence. Journal of the American Medical Association, 215, 425-428.

Woodruff, R.A., Goodwin, D.W., and Guze, S.B. (1974). Psychiatric diagnoses. New York: Oxford University Press.

Zimmerman, M., and Coryell, W. (1989). DSM-III personality disorder diagnoses in a nonpatient sample. Psychiatric Annals, 19 (3), 682-689.

Zoccolillo, M., and Cloninger, C.R. (1986). Somatization disorder: Psychologic symptoms, social desirability and diagnosis. Comprehensive Psychiatry, 27 (1), 65-73.