CROSS-CULTURAL DIFFERENCES IN THE PRESENTATION OF DEPRESSION: CHINESE SOMATIZATION AND WESTERN PSYCHOLOGIZATION

by

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Abstract

The expectation that Chinese individuals tend to present distress in a somatic way, through physical symptoms, has been a major prediction of cultural psychopathology. Numerous theoretical papers have been written in an attempt to explain this phenomenon, but empirical research on this subject remains scarce. The present paper begins by reviewing literature indicating low depression rates in China along with high rates of a syndrome, most often translated using the archaic term Neurasthenia, which shares many physical symptoms with depression. Then, research is discussed pertaining to underlying processes of symptom presentation, most often referred to as somatization and psychologization. This review accounts for the influence of sociocultural and historical forces, arguing that sufficient work on these factors has now been done to allow for carefully constructed empirical research using the methods of clinical and cultural psychology. To this end, two studies are presented, the first a questionnaire study of Chinese, Chinese-Canadian, and Euro-Canadian students and the second a multimethod study using Chinese and Euro-Canadian psychiatric outpatients. Results suggest that Chinese somatization, and Western psychologization, only emerge when sufficient psychosocial distress is present and, when this is the case, can be detected regardless of the assessment method used. At the same time, neither mode of symptom presentation is culturally unique. A number of possible explanations are explored, suggesting a role for cultural differences in the emphasis on emotional life. The paper concludes by integrating these findings into the existing literature and by noting the ways in which cultural psychopathology can be informed by clinical and cultural psychology.
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Introduction

The interdisciplinary field of cultural psychopathology has made considerable advances over the past quarter century (López & Guarnaccia, 2000), bringing together work from many disciplines, including psychiatry, anthropology, cultural studies, and public health. Although each of these disciplines provides its own perspective, the shared goal is to study the extent to which psychopathology is influenced by, shaped by, and even constituted by the cultural context in which it is experienced. Contributions to this project have also come from psychology, although seemingly not to the same extent (Smith, Lonner, & Van de Vijver, 2001). Cultural psychology and clinical psychology have the potential to inform one another, but they tend to be practiced in isolation; cultural psychologists can end up with a limited view of psychopathology when they choose to study it, and clinical psychologists often have the same problem with culture (Ritsher, Ryder, Karasz, & Castille, 2002). The collaboration of these sub-disciplines has the potential to make important contributions to cultural psychopathology as a whole.

To the extent that human psychology is challenging to study scientifically, human culture is even more so. Indeed, it is not only difficult to study, it is notoriously difficult to define. Kroeber and Kluckhohn (1952), in their classic paper on culture and its definitions, identified 164 separate descriptions in the social science literature before attempting a synthesis:

Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiment in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other as conditioning elements of further action. (p. 357)

Many other definitions of culture have been attempted since that time. Clifford Geertz, in particular, has proposed a formulation of culture that has been influential both to anthropologists
and to cultural psychologists. The interest shown by the latter group may well relate to Geertz’s consideration of both external and internal attributes of culture; not only do people create tangible evidence of culture (i.e. artifacts, folktales, rituals), they also see the world in fundamentally different ways as a result of culture. In short, culture is both ‘out there’ and also ‘in the head.’

Scientific psychology usually focuses on individuals. Although most research in the field is based on data collected from groups of subjects, it is the aggregate properties of individuals that are usually focused upon, rather than the emergent properties of interacting groups. While there may be broad agreement that human behaviour is determined by factors spanning a range of organizational levels – from the neurochemical to the sociocultural – there is a pull to so-called ‘lower’ levels of organization because variables at these levels are relatively easier to control. This bias has an impact on the study of psychopathology and, as Marsella (1985) notes, has an impact on clinical practice as well:

When a clinician is dealing with a patient the biological and psychological variables often appear more suspect than the more indirect cultural variables in which they are embedded, fostered, and nurtured. It is easier to speak of anxiety as mediated by biochemical processes or psychological stressors than to talk of the cultural foundations of the problem. (p. 284)

Difficulties working with culture affect both lab and clinic. If clinicians fail to attend to cultural issues in their patients, they are unlikely to formulate cultural hypotheses for research. At the same time, there is less research in the literature that might encourage them to look closer at cultural issues. If scientists and their colleagues, clinicians and their patients, the general public, all see the world through the same cultural lens, idiosyncrasies of a shared culture may start to take on a universal tint. The effect has been to narrow the focus of the research and arguably to reduce the quality of care available to individuals from ethnic minority groups (Sue, 1992).
No modern culture exists in a vacuum, of course, and social scientists have always sought for ways to explain why people from other cultural groups appear to act in different ways. Much early work in this area proposed that the important variable was progress – cultures differed from the West to the extent that they were more primitive (for a critique of this view, see Shweder & Bourne, 1984). Such conclusions, egregious at best, become even more dangerous when combined with the study of psychopathology. Interest in the relation between culture and psychopathology is today on the rise, and with a change in emphasis, focusing more on efforts in North America and Western Europe to provide mental health services for increasing numbers of immigrants from non-Western cultures (López & Guarnaccia, 2000). A second, and related, goal has been to assist developing countries with the implementation of such services (Ballenger et al., 2001). These practical concerns have led some researchers to pursue theoretical issues in psychopathology with an explicit attention to culture.

At the very least, attention to cultural variables can help to lessen the extent to which we develop a science of human behaviour based primarily on people in Western Europe and North America. At its best, a cultural approach can provide a powerful critique of simple reductionism, can orient researchers to complexity while providing ways to begin to deal with it, and can contribute to a more nuanced understanding of the human phenomena being studied. In the field of psychopathology, a concern is the extent to which clinical syndromes and specific symptoms can be ‘translated’ to other contexts. Increasing evidence suggests that cultures differ rather substantially in the ways in which emotions are experienced, both as mental events and as somatic processes (e.g. Markus & Kitayama, 1994). Indeed, a major concern is the extent to which the Western view of emotion, as separate from thought and from sensation, holds true in
other cultures. This concern has implications for many forms of psychopathology including, but not limited to, mood disorders such as depression.

Depression has been the focus of much work in cultural psychopathology, and within this general topic a particular question has generated sustained interest and become, in many ways, emblematic of the field as a whole (Ryder, Yang, & Heine, 2002). Individuals from China have often been described as presenting depression in a ‘somatized’ way; in other words, they emphasize somatic symptoms and deemphasize psychological symptoms even in the context of acute psychosocial stress. This phenomenon has been observed both in Chinese immigrants to Western countries and by Western-trained clinicians conducting research in China, Hong Kong, and Taiwan. A potentially related finding, low rates of Western-defined depression in these countries, has also been identified. There have been many theoretical papers written attempting to explain Chinese somatization, despite arguments that insufficient research has been conducted to firmly establish that it takes place, let alone to explain why (Cheung, 1995). The main objectives of this paper will be to review the literature on Chinese somatization – and on Western ‘psychologization’ – and then to present empirical research designed to extend this literature.

Chapter One introduces two diagnostic concepts, beginning with the familiar one of depression and moving to the much less familiar category of neurasthenia. An epidemiological puzzle will be introduced, namely, the surprisingly low rates of depression found in China. This finding is mirrored by high reported rates in China of neurasthenia, a diagnosis that has all but vanished from the West. The extent to which these syndromes appear to be common or rare in a given context will be shown to relate directly to cultural factors, demonstrated both as historical changes within each culture and also as differences across the two cultures. Both depression and neurasthenia share overlapping symptoms but with a different emphasis: on psychological
symptoms in the former case; on somatic symptoms in the latter. Chapter Two moves from diagnosis to process, proposing that this epidemiological variability is a consequence of cultural differences in the processes by which symptoms are expressed. Although both somatization and psychologization are shown to not be limited to particular cultures, they are differently emphasized in different contexts. This second chapter concludes with a review of research pertaining to three outstanding issues: (a) whether somatization is indeed more common in China; (b) the assessment circumstances under which somatization vs. psychologization occurs; and (c) explanations for why such cultural differences should be observed.

Two studies designed to address these issues are described in the chapters that follow. A questionnaire study of Chinese, Chinese-Canadian, and Euro-Canadian students is presented in Chapter Three, and a multimethod study of Chinese and Euro-Canadian psychiatric outpatients is presented in Chapter Four. Chapter Five concludes this paper by integrating findings from these studies with the literature detailed in earlier chapters, presenting several conclusions, and discussing the ways in which this topic should be investigated in the future. Given that the topic of Chinese somatization has been chosen in part because it has been so central to the general literature on cultural psychopathology, this paper will conclude with reflections on the applicability and usefulness of this work for other topics in the field.
Chapter I – Culture, Depression, and Neurasthenia

Psychopathology researchers grow so accustomed to using the terminology of their era that it can be difficult to imagine abnormal behaviour being organized in a different way. As this chapter will demonstrate, the notion of depression has been much more prominent in the West as compared with China and, moreover, attention to depression has waxed and waned across different historical periods. Far from being a simple and linear story of progress towards better and more precise categories, interest in depression has changed along with particular cultural factors, operating both within professional subcultures as well as in the culture as a whole. In China for much of the twentieth century, and in the West around the beginning of the last century, clinicians and patients were much more concerned with neurasthenia than with depression. These differences in focus have been matched, at least cross-culturally, by epidemiological differences, with high rates of depression and low rates of neurasthenia in the West, and the reverse in China. As these two syndromes share many features, but have different emphases, they may represent culturally-specific ways of expressing distress.

Depression in the West

An ‘Official’ Definition of Depression

The first challenge in reaching an acceptable definition of depression is determining the level at which depression is best discussed. Depression can be thought of as a mood state, as a constellation of symptoms, or as a disease category with inclusion and exclusion criteria (Kendall, Hollon, Beck, Hammen, & Ingram, 1987). The experience of depressed mood, which would seem to be central to any definition of depression, is only one of many symptoms involved in a Major Depressive Episode (MDE) and is not even necessary for a diagnosis to be made. Measures of depression such as the Hamilton Rating Scale for Depression (HRSD;
Hamilton, 1967) contain a range of psychological and physical symptoms, only a few of which relate directly to depressed mood (Bagby, Ryder, Schuller, & Marshall, 2004). An MDE, meanwhile, can be observed in individuals undergoing a non-pathological bereavement process, as part of a general medical condition such as thyroid dysfunction, as part of a broader psychopathological condition such as Bipolar Disorder, or as a stand-alone category, Major Depressive Disorder (MDD).

The most widely accepted definition of an MDE is that provided by DSM-IV (APA, 1994), which requires five of the following nine symptoms, including at least one of the first two, for two weeks or more: (a) depressed mood; (b) anhedonia; (c) change in weight/appetite; (d) sleep problems; (e) psychomotor change; (f) fatigue or loss of energy; (g) worthlessness or guilt; (h) poor concentration or indecisiveness; (i) suicidality. MDD, in turn, requires a history of one or more MDEs; in addition, the patient must never have had a Manic Episode and the symptoms must not be better explained by bereavement, a substance problem, or a general medical condition. Although the above nine symptoms have been identified as the best indicators for diagnostic purposes, the text of DSM-IV goes on to list many other symptoms that are frequently observed in MDD. Examples include anxiety, loss of libido, hopelessness, and so on.

Prevalence estimates for depression vary considerably depending on the definition of depression used and the way in which depression is assessed. Flaherty, Gavira, and Val (1982), for example, found that point prevalence rates for depressive states range from 5% to 44% of the general population. Focusing on the official definition of MDD in large American samples, the Epidemiological Catchment Area (ECA) study found a lifetime prevalence rate of 4.9% (Robins & Regier, 1991) whereas the National Comorbidity Study (NCS) found a lifetime prevalence rate of 17.1% (Kessler et al., 1994). In both cases, MDD was one of the most common disorders.
Joyce (1994), meanwhile, determined that 3% to 5.3% of the American population had MDD during a 6-month period. A considerable body of research has been conducted in North America and Western Europe suggesting that depression is generally recurrent, is two-to-three more times common in women than in men, and is more common in younger as opposed to older people (Ingram, Scott, & Siegle, 1999).

A Brief History of Depression as a Diagnosis

Although the psychiatric term depression has only been in use since the 19th century, descriptions of various dejected states can be found in the literature of the Western world since its written origins (Jackson, 1985). Within this literature, two broad and interrelated themes can be identified with origins in the two main sources of Western thought, classical Greek and Christian. The concept of melancholia can be traced back at least to the writings of Hippocrates, who described symptoms that include despondency, loss of appetite, insomnia, irritability, and restlessness. Within Hippocrates's humoral system, melancholia was thought to be particularly common among those with a melancholic temperament, which in turn was thought to result from an excess of black bile.

From Galen in the second century C.E. to the dawn of the Age of Reason in the 1600s, melancholia was generally described as a chronic and non-psychotic form of 'madness.' Melancholic patients were identified by having several of the symptoms described by Hippocrates plus fearfulness, sadness, misanthropy, and feeling tired of life, often accompanied by a monothematic delusion and/or gastrointestinal distress. Although the underlying etiological theory was biological, with several writers linking melancholia with various other somatic symptoms and with hypochondriacal preoccupation, the focus of the construct was predominantly psychological (Jackson, 1969).
While melancholia described a psychological state with biological cause, acedia described a superficially similar state with a vastly different etiology. By the late 4th century C.E., the Christian church had come to use the term acedia to describe a collection of feelings and behaviours that were considered unusual, undesirable, and in need of attention and correction (Jackson, 1985). The term was originally used to describe the sense of isolation and potential spiritual despair experienced by some ascetic monks. Although “symptoms” included sad mood, low spirits, anguish, loss of energy, fatigue, carelessness, sloth, and negligence, it would be misleading to describe these effects as symptoms in the medical sense. Rather, they would be seen as the result of succumbing to the demon of acedia – known as the “noonday demon” – sent to test the devoted monk (Wenzel, 1960).

As various schemes of seven or eight deadly sins were described and preached across Europe, acedia left the monastic cell and became associated with these universal dangers, sometimes associated with a sin such as dejection or sloth, and sometimes as a sin in its own right (Jackson, 1985). Once the term had become part of the common moral language of Christianity, the scholastics of the 1200s subjected it to increased attention in the theological literature. It continued to be seen as a sin but was at the same time integrated into the literature on the passions and became increasingly described as a disorder of emotional life, sometimes even in medical terms (Wenzel, 1960). Some authors began to link acedia with the humoral theory; notably, works that considered such a natural cause also tended to describe acedia less as a vice, reducing its stigma. Away from the scholastic centers, meanwhile, acedia became increasingly associated with idleness, sloth, and neglect of spiritual duties, very much retaining its status as a stigmatized vice (Jackson, 1985). The split between seeing depression as sadness
resulting from illness, or as laziness resulting from weak moral fibre, continues in popular discourse today with consequences for stigma (Kramer, 1993).

By the 1500s, the concept of acedia had been folded into humoral thinking, losing its distinct etiological theory but retaining some of its moral force (Kleinman, 1986). The term melancholia, meanwhile, became an increasingly broad term covering a wide range of psychopathology. In Burton’s (1621/2001) Anatomy of Melancholia, sadness and sorrows are but two symptoms in a vast list which includes obsessions, delusions, suicidal behaviour, and hypochondriasis as primary features. It is important to remember as well that, since the Greeks, the definition of ‘madness’ focused primarily on irrationality and overt behavioural disturbance. Although the Christian view had allowed for thinking about how circumstance – especially sinful circumstance – might lead to emotional responses and ultimately disordered mental states, the Greek biological view did not. It was only in the age of Freud that emotional and other psychological factors were again causally implicated with the onset and maintenance of depression (Berrios, 1996).

Up until the early 1800s, melancholia was therefore a diffuse term which included the classical and medieval symptoms that we would think of as depression – but also included just about any mental illness that involved few delusions as opposed to many (Berrios, 1996). It was during the nineteenth century, with the emergence of “Faculty Psychology” as a philosophical approach, that emotions again became an object of study. This approach attempted to break down psychological functioning into irreducible categories, or ‘faculties’, and included affectivity as a primary faculty. A condition much more focused than the broadly-defined melancholia was defined, and described as an affective disorder. Borrowing from a popular word in cardiovascular medicine to refer to reduced function, this new disorder was named
‘depression’ (Berrios, 1988). Defining this condition more narrowly reduced confusion, but new confusion was soon generated by disagreement as to how depression is best defined. As noted earlier, depression can be conceived in a variety of ways, as a state, a syndrome, or a disease category. Kraepelin attempted to solve this problem in the famous eighth edition of his textbook by creating a single Manic-Depressive Illness, a disease category which included both depression and the various manic states. Much of the later history of the affective disorders has involved efforts to re-fragment this omnibus diagnosis (Bagby & Ryder, 2000; Berrios, 1996). The most enduring of these splits has been the separation of unipolar illness (depression) from bipolar illness (mania and depression). Unipolar depression as a diagnosis has developed along the same general lines as the overall DSM system, moving from a psychoanalytic to an increasingly biomedical understanding, and incorporating increasingly specific operationalized criteria (Wilson, 1993).

Culture and Depression

*International Studies*

Recent efforts to create an international research database on depression have demonstrated that DSM-defined MDD can be identified throughout the world. A large international study conducted by the World Health Organization (WHO) showed that 11.7% of those sampled had a current depressive disorder (Lecrubier, 1998). The Cross-National Study, conducted by the Cross-National Collaborative Group (Weissman et al., 1996), studied ten nations in the late 1980s and early 1990s, and found a fairly narrow 1-year prevalence for MDD of 2% to 6% but a much wider range in lifetime prevalence estimates, from 1.5% to 19%. Depression was associated with suicide attempts, substance use problems, and poorer outcomes for accompanying physical diseases (Lépine, 2001). Research is also increasingly being done to
assess the disability caused by depression worldwide. Lépine, Gastpar, Mendlewicz, & Tylee (1997) conducted a European study showing that depression, even subsyndromal depression, is associated with working days lost to illness. Finally, worldwide projections undertaken by the WHO to determine the major contributors to the global burden of disease in the year 2020 anticipate that MDD will be the second greatest burden after ischemic heart disease, and the leading cause of burden in the developing world (Murray & Lopez, 1996). Despite being defined predominantly in the West, and particularly in the United States, these results demonstrate that depression is of worldwide concern.

International studies of depression may have shown that cases conforming to DSM-based definitions of MDD can be found worldwide, but they have not necessarily shown that MDD is the best way of characterizing depression in every culture. The studies have certainly not established that the experience of depression is more or less the same in every culture, although this conclusion is often drawn (Kleinman, 1988). Indeed, there is even a tendency to minimize observed epidemiological differences; Ingram and colleagues (1999) report “slight differences” that include a rate in Nigeria that is more than four times greater than the ECA rate that they report for the United States. There is also a tendency to assume that these disorders manifest themselves in the same way in every culture, so that it is legitimate to arrive at a case definition for depression based on decades of Western research and then test for the presence of this construct in other cultures. Kleinman (1988) has termed this practice the ‘category fallacy,’ defined as, “the reification of a nosological category developed for a particular cultural group that is then applied to members of another culture for whom it lacks coherence and whose validity has not been established.” (Kleinman, 1987, p. 452) He argues that considerable work
must be done within different cultures before they can properly be compared. The following epidemiological findings should be considered with this caveat in mind.

*An Epidemiological Puzzle*

One of the first systematically reported cross-cultural differences in psychiatric epidemiology was the apparent rarity of depression in Chinese cultures (Kleinman, 1982). Although the individual studies have their strengths and weaknesses, they paint an overall picture of a society relatively free of depression as it is defined in the West. A survey of psychopathology cases was undertaken in 12 regions of China in 1982, and replicated in seven of these regions in 1993 (Zhang, Shen, & Li, 1998, cited in Parker et al., 2001). Of the 19,223 people surveyed in 1993, only 16 fulfilled the ICD-9 criteria for lifetime affective disorder, with lifetime- and point-prevalence estimates of 0.08% and 0.05%, respectively. Amazingly, these rates were significantly higher than those obtained from the original sample, and the results of this study suggest that the community rate of depression in China is several hundred times lower than in North America. The World Health Organization’s Global Burden of Disease project, meanwhile, reported that unipolar major depression was the second largest contributor to disease burden in China (Murray & López, 1996). Nevertheless, one-year incidence rates were reported at 2.3% for unipolar depression, in contrast to the 10.3% rate found in the National Comorbidity Survey conducted in the United States (Kessler et al., 1994).

In Taiwan, national community surveys have generally identified low depression rates when compared with other countries. Hwu, Yeh, and Chang (1989) used the same methods as the ECA study to investigate major depression across city, town, and rural settings. Lifetime prevalence rates were 0.88%, 1.68%, and 0.97%, respectively, as compared with 5.2% in the ECA study; lifetime prevalence rates for dysthymia were 0.92%, 1.51%, and 0.94%,
respectively, as compared with 3.0% in the ECA study. The cross-national study of Weissman and colleagues (1996), described earlier, similarly found a lifetime prevalence rate for major depression of 1.5% in Taiwan, compared to rates ranging from 2.9% to 19.0% reported for the 10 other countries in the study. These authors interpreted the Taiwanese rates as being unrealistically low, and suggested that the social stigma associated with psychopathology might be involved.

Complicating the efforts to collect epidemiological data comparable to that obtained in other countries is the notion that Chinese depression might be present but take forms that are different from what Western-designed instruments and Western-trained clinicians are made to find. Chan and Lai (1992) conducted a hospital study of psychiatric patients in Hong Kong. Although approximately one third of these patients presented with anxious and/or depressed symptoms, only about 10% had the classic retarded depressive manifestation. If affective disorder symptoms are differently organized in Chinese patient or community populations, the syndrome-based approach taken by most epidemiological researchers may fail to detect cases with significant symptomology. In other words, respondents could have a number of symptoms, but not enough within a single Western diagnostic category to warrant a positive diagnosis.

*Status of Depression in China*

A review of the history of depressive emotional states or illness constructs in China indicates that such concepts played a relatively small role in Chinese medicine or philosophy. The earliest extant medical text from China contained a discussion of primary emotions and included both sadness and grief. Nevertheless, no clear construct resembling depression can be identified in the historical literature until the Ming dynasty (1368-1644), and such constructs never became as important as they were in the West (Tseng, 1974). A review of the Chinese
medical classics in the 1960s made no mention of depression, although a ‘Prolonged Crying Syndrome’ was mentioned in the seventh century (Kleinman, 1986). The first technical definition was not attempted until Qing Yue’s medical text of 1710, which defined three subtypes: (a) *nuyu* involved depression from excessive anger; (b) *siyu* involved depression from excessive thinking; and (c) *youyu* involved depression from excessive worry. The term *yu*, in general, appears to be the closest analogue to depression in Chinese, although the term has its own specific connotations and implications.

**Cultural Variations in Depression**

While cross-cultural emotion research has isolated some coarsely defined general emotions with recognizable accompanying facial expressions (Ekman & Friesen, 1986), anthropologists have been quick to point out that these emotions have little meaning when isolated from their context (e.g. Geertz, 1973; Lutz, 1988). In this view, emotions are, “...partly physical responses that are at the same time aspects of moral or ideological attitudes; emotions are both feelings and cognitive constructions, linking person, action, and sociological milieu.” (Levy, 1983, p. 128) Identification of the cultural aspects of emotion has led to a number of ethnographic studies of emotional experience in different cultures (Jenkins, 1994). These studies have shown how even emotional states that share certain similarities can have vastly different meanings in different cultures. The same basic physical emotion might have, across cultures: features with differing salience; different contexts in which it is expected, allowed, or stigmatized; different metaphors of description; different associated behaviours; different levels of intensity; and so on (Jenkins, Kleinman, & Good, 1991). To focus only on the universal characteristics of emotion, in the anthropological view, is to elevate the crude and the obvious at
the expense of nuances that may be critical to the emotional experience of individuals within a given culture.

General agreement between anthropologists and cultural psychologists regarding these differences strongly suggests that cultural variation should also be found for emotional psychopathology (Jenkins, 1994). Cross-national epidemiologic research may have confirmed that major depression, and even MDD, can be identified worldwide, work in cultural psychopathology nonetheless demonstrates that the symptomatic expression, interpretation, and social response to depression varies widely (Kirmayer, 2001; Marsella, Kinzie, & Gordon, 1973; Singer, 1975; Tanaka-Matsumi & Draguns, 1997). Although evolutionary psychiatry indicates that depression is related to a loss of relationships, status, or reward incentives (Nesse, 2000), the emotions attached to these basic predicaments are elaborated in distinctive ways in each cultural context (Shweder & Haidt, 2000). As with emotions in general, the expression of dysphoric affect is governed by cultural expectations as to the salience of particular features, the use of particular descriptive metaphors, and the appropriateness of particular displays in particular situations. The cultural context also provides lay theories of etiology and treatment, with implications for labeling, help-seeking, and the extent of stigma (Kirmayer, 2001).

Some examples may help to illustrate these general ideas. Obeyesekere (1985) has argued that Buddhists have a general view of grief and dysphoria as being a part of life that can ultimately be transcended. We might expect that this particular perspective might lead to different attributions about the meaning and consequences of the depressive experience. Similarly, Good, Good, and Moradi (1985) have shown that Sh’ites in Iran see depression as the expected consequence of living a good life in an evil world, thus granting it a more prosocial moral dimension than is found in many other cultures. Geertz (1983) conducted considerable
ethnographic work with the Balinese, and contended that they had a strong preference for emotional 'smoothness', with a minimum of highs and lows. Remaining calm regardless of external circumstance was considered to be the best and most appropriate way of behaving, and was reinforced by the community. In contrast, Schieffelin (1979) demonstrated that the Kaluli of New Guinea have an equally strong tendency to prefer and reinforce emotional displays that are intense and dramatic. The extremes of emotion found in psychopathology, particularly their behavioural manifestations, would be expected to present very differently in these two contexts.

Much cross-cultural work on culture and emotion has focused on the extent to which the psychological or the physical aspects of an emotional response are more salient. Emotions are often described as 'total-system' responses that involve a wide range of features, some of which are emphasized and others of which recede into the background. Many, if not most, cultures use somatic metaphors to describe emotional experience, and the West is no exception: the English language includes heartache, burning anger, blind panic, butterflies in the stomach, and so on. Emotional disorders such as depression definitely include somatic features as part of their definition in the West.

Nevertheless, there remains a tendency in Western studies of psychopathology to focus primarily on the psychological features of these disorders – depression might include insomnia but it's about depressed mood and loss of interest. Western training may lead clinicians and researchers to underestimate the importance of physical symptoms, and physical metaphors, to the experience of emotional distress in other cultures. Although there have long been concepts of depression in the West, the relative neglect of the somatic may be a relatively recent phenomenon. Although depression was, as we have seen, discussed in the nineteenth century at least as much attention was paid to conditions that emphasized somatic elements. In particular,
the common diagnosis of neurasthenia was used to describe individuals who primarily had the somatic symptoms that we have come to associate with depressed and anxious mood. The shift in emphasis from that time to present accompanies a period of widespread cultural change in the West, allowing us to perform a brief within-culture historical analysis before turning to cross-cultural differences.

Neurasthenia in North America

*Origins and Clinical Usage*

Neurasthenia was first described in the United States by the neurologist George Miller Beard as a nervous syndrome of more than 50 symptoms (1869a). The disorder was conceptualized as being due to functional exhaustion of the nervous system, thus the use of the Latin term for 'weakness of nerves.' Beard’s monograph described neurasthenia as, “an exhaustion of the nervous system,” with, “general malaise, debility of all the functions, poor appetite, abiding weakness in the back and spine, fugitive neurologic pains, hysteria, insomnia, hypochondriasis, disinclination for consecutive mental labor, severe and weakening attacks of sick headache, and other analogous symptoms...” (p. 12) During this era, outpatient treatment of such problems was the domain of neurologists rather than psychiatrists, and this diagnosis fit well with neurological cures popular at the time. For example, the American neurologist Silas Weir Mitchell (1884) had great success with his prescription of ‘Doctor Diet and Doctor Quiet’, which consisted of a healthy diet, rest, isolation from family, and massage (White, 1990).

Over the ensuing decades, the diagnosis became increasingly popular among physicians in North America, had spread to the medical establishments of other Western countries, and was widely discussed by the lay public as well (Shixie, 1989). American physicians noted that the disorder was most commonly observed among educated people in the middle and upper social
classes, and was often described as being the result of the widespread social change taking place with modernization (Lin, 1989; Schuster, 2003; White, 1990). At that time, the United States was the most rapidly industrializing nation in the world, and it was anticipated that so-called ‘mental workers,’ as opposed to physical labourers, would have to deal with the stressful consequences (Shixie, 1989).

Much of the nineteenth century research following Beard’s monograph involved outlining various subtypes of neurasthenia and attempting to find separate etiological pathways for each of them. Out of this confusion, two aspects of neurasthenia remained well accepted in Western medical practice by the turn of the last century: neurasthenia was considered to be a functional illness of the nervous system; and many different factors could be implicated in its etiology (Shixie, 1989). Early psychoanalysts classified neurasthenia as an ‘actual neurosis,’ a problem of the nervous system in contrast to the pseudo-neurological symptoms characteristic of psychoneuroses. Such symptoms were therefore seen as being of limited significance for the mind. As psychoanalytic theory changed over time, however, some theorists argued that neurasthenia was in fact caused by emotional conflict (White, 1990). The turn towards psychological explanations signaled a change in fortunes for this diagnosis.

**Decline**

Despite the presence of neurasthenia in the highly popular psychoanalytic theories of the early twentieth centuries, some writers had already begun to predict its decline. In 1906, Lane challenged a central etiological assumption, that neurasthenia was the result of overwork, attributing it instead to the prolonged effects of negative emotion (White, 1990). Although neurasthenia was widely diagnosed during World War I, it showed a rapid decline in post-war years and by the 1930s was used infrequently (Chatel & Peele, 1970; Schuster, 2003). By the
1940s, psychoanalysis, which had initially embraced the construct, continually expanded its purview to include increasing numbers of symptom presentations into an overarching model of psychoneurosis (Lin, 1989). One implication of this change was that the ‘surface’ symptoms – exhaustion, headaches, insomnia, etc. – were seen as less important than the ‘actual’ psychopathology. Psychoanalysis had generated interest in neurasthenia through a search for underlying psychological causes, a search encouraged by the lack of clear physiological features. However, the effect of this search was to render the diagnosis superfluous. By the 1950s, the neurasthenia construct had itself been exhausted.

Status of Neurasthenia as Formal Diagnosis

The decline of neurasthenia can also be identified across the various editions of the official North American nosological system, although the path has been far from linear. Included in the early system proposed in the Journal of the American Medical Association in 1942 (Young, 1989), it was abandoned entirely in *DSM-I* ten years later (APA, 1952), surviving as a footnote to the diagnosis of *Psychophysiological Nervous System Reaction*. The footnote included a warning to clinicians, insisting that psychological explanations, such as conversion or anxiety, be thoroughly explored. Oddly, neurasthenia made a reappearance in *DSM-II* as a formal diagnostic entity in the chapter on Neuroses:

This condition is characterized by complaints of chronic weakness, easy fatigability, and sometimes exhaustion. Unlike hysterical neurosis, the patient's complaints are genuinely distressing to him and there is no evidence of secondary gain. It differs from anxiety neurosis and from the psychophysiological disorder in the nature of the predominant complaint. It differs from depressive neurosis in the moderateness of the depression and the chronicity of its course. (APA, 1968)

Despite this inclusion there is no evidence of increased clinical or research interest; Young (1989) reports that the term does not appear once in the American Journal of Psychiatry during the *DSM-II* era. The diagnosis was dropped for good in *DSM-III* (APA, 1980).
Neurasthenia today is all but absent from North American psychiatry, having been outside of the DSM system for almost a quarter century and far from the minds of clinicians for many additional decades. The diagnosis does, however, continue to be used in Europe – albeit only when mood and anxiety disorders have been excluded – and has been included in the 10th edition of the International Classification of Diseases (ICD-10). Diagnostic criteria for ICD-10 neurasthenia are shown in Table 1.1. Neurasthenia has been retained in the international system in large part to retain compatibility with countries that still use this diagnosis on a regular basis. The criteria in ICD-10 nonetheless are designed to ensure that depression, anxiety, and organic causes have been ruled out before neurasthenia may be considered.

Chronic Fatigue Syndrome

Before we leave neurasthenia to its fate, a brief digression is in order. Ironically, now that North American psychiatry has all but abandoned this archaic term, other branches of medicine are confronting seemingly new disorders characterized by prolonged fatigue. As the search for biological substrates for these illnesses run into difficulty, moreover, attention is increasingly paid to psychological explanations. The most prominent of these illnesses is Chronic Fatigue
Syndrome (CFS), a constellation of clinical symptoms most prominent of which is incapacitating exhaustion associated with a marked reduction in activity level. Severe fatigue, in this condition, can be produced by low levels of physical exertion or mental effort. Other symptoms include muscle pain, headaches, an often subjective feverishness, general muscle weakness, dizziness, and, notably, complaints of irritability, depression, anxiety, and cognitive problems (Holmes et al., 1988; Straus, 1988). Patients with CFS become less able to work, are more likely to receive disability payments, often report a decline in interpersonal functioning, and reduce their participation in formerly pleasurable activities (Abbey & Garfinkel, 1991; Walker, Katon, & Jemelka, 1993). This potentially debilitating condition appears to have become increasingly common over the past two decades, and has certainly become an increasingly common topic for clinical investigation.

Several writers have noted the descriptive similarities between CFS and neurasthenia (e.g. Abbey & Garfinkel, 1991; Hickie, Hadzi-Pavlovic, & Ricci, 1997; Ware & Kleinman, 1991). Abbey and Garfinkel (1991) used the case definition of CFS proposed by Holmes and colleagues (1988) and compared the nine criteria with Beard’s (1869a, 1869b) descriptions. Correspondence was found for eight of the nine symptoms, namely, fatigue, mild fever and chills, sore throat, muscle aches and pains, headaches, joint pain, neuropsychological complaints, and sleep disturbance; the only exception was painful lymph nodes. In 1994, the Centers for Disease Control proposed slightly different criteria, removing mild fever and chills, and adding postexertional malaise, another symptom described by Beard. Other commonly described features of CFS include a lowered tolerance for caffeine, alcohol, tobacco, and drugs, and increased allergies, symptoms that were described by Beard as well (Abbey & Garfinkel, 1991).
Notably, these latter symptoms are also often part of other newly described disorders without a clear etiological basis, such as Multiple Chemical Sensitivity.

Abbey and Garfinkel (1991) go on to argue that both neurasthenia and CFS have in part been shaped by cultural factors at work during particular historical periods. In both cases, investigators attempting to explain a vague syndrome with no organic pathology turned to major themes of medical, scientific, and cultural interest. Neurasthenia was not only a fatigue syndrome, it was seen as being the result of electrical problems in the nervous system, and more common in ‘highly-evolved’ intellectuals living in ‘highly-evolved’ Western societies (Drinka, 1984). Such explanations easily took hold in the era of Edison’s electric lightbulb and Spencer’s Social Darwinism. Similarly, infectious disease and immunology have advanced considerably over the latter half of the twentieth century (Shorter, 1987), and etiological theories of CFS have tended to be framed in these terms despite a lack of research evidence. Attempts to explain CFS have involved some combination of an infectious agent, such as Epstein-Barr virus, and a dysfunction in the immune system. Researchers have even proposed a link with HIV/AIDS, and there is a move towards researching the potential role of environmental toxins (Abbey & Garfinkel, 1991). This speculation has not led to improved treatment for CFS sufferers (Wilson, Hickie, Lloyd, & Wakefield, 1994). At the cultural level, both eras involved concerns with the potential adverse effects of a fast pace-of-life, rapid dissemination of information, and changing business patterns. For example, Beard (1869b) and others noted the potential effect of the telephone and telegraph machine, while current observers comment on the risk of burnout in a high-speed Internet age (e.g. Spiers, 1995; Thomas, 1998).

A final connection between neurasthenia and CFS is the extent to which biological and societal explanations are advanced while psychological explanations are avoided. A review of
neurasthenia case histories from the 19th century (Sicherman, 1977) repeatedly demonstrates that patients and physicians would repeatedly attribute their symptoms to external causes. For example, a neurasthenic patient experiencing fatigue and emotional distress following the death of a family member felt that her symptoms were due to poor weather at the funeral. A similar tendency has been repeatedly observed in CFS (Abbey & Garfinkel, 1991; Wessely, 1990). Such observations are often vehemently rejected by patients and advocacy groups (Sharpe, 1997). This rejection is not surprising, given that there remains a tendency to view psychologically-based complaints as being ‘in the head’ and thus not entirely real illnesses. Although the stigma of mood disorders in the West has decreased over time, problems continue to be greeted with increased sympathy, and reduced moral censure, when attributed to biological causes (Ware & Kleinman, 1991).

Neurasthenia in China

Origins and Clinical Usage

While the neurasthenia diagnosis was all but disappearing in North America and Western Europe it was being introduced, studied, and increasingly adopted in East Asia. The founding of the Chinese Republic in 1912 brought increasing scientific interchange with the West, with physicians and other professionals being sent abroad for advanced training. At the same time, numerous foreign scientists, businessmen, and missionaries traveled to China and helped to establish numerous Western-style institutions, including psychiatric hospitals in the large cities. During the first half of the twentieth century, Chinese physicians accepted and used the American concept of neurasthenia, regarding it as a reaction brought on by anxiety (Shixie, 1989). The two cultures also shared similar views of causation – the first article written about
neurasthenia in China characterized it as a disease caused by advancing civilization, particularly common among intellectuals (Yan, 1989).

A second influence on Chinese psychiatry was the Pavlovian school of psychology popular in the Soviet Union (Lin, 1989; Yan, 1991). Pavlov himself had adopted neurasthenia from Beard’s (1869) monograph and incorporated into his own system of understanding neurosis based on behavioral and neurophysiological processes. Pavlov (1957) proposed that excitation and inhibition were the two primary processes in higher nervous system activity, and that neurosis was caused by straining the excitatory process. Neurasthenia was seen as being one of three classes of neurosis, the other two being psychasthenia and hysteria. Anxiety and depressive neurosis were not included (Shixie, 1989).

The 1949 communist revolution in China brought with it vastly increased contact with Soviet scientists along with a separation from Western intellectual currents:

Some Chinese scientists and physicians were sent to the Soviet Union for study; some Soviet professors and doctors came to China, where they transmitted their medical and scientific knowledge. In the Soviet Union, Pavlovian theory, the theory of the higher nervous system activity in particular, was considered as important as dialectical materialism in both medicine and psychology. Also like Marxist-Leninist theory all doctors and students in medical schools nationwide had to study Pavlovian theory, and many employed it in their practice. A large number of Pavlov’s works, and other Soviet psychological and psychiatric textbooks were translated into Chinese, and many physicians, scholars, and scientists not only accepted Pavlov’s theory, but also adopted the same methods in their research and practice. (Shixie, 1989)

The usual symptoms of neurasthenia as described by Pavlov were fatigue, weakness, pressure in the head, poor attention span, memory loss, insomnia, easily being upset, and irritability (Pavlov, 1957). These symptoms became central to the Chinese understanding as well.

The relationship between China and the Soviet Union deteriorated in the early 1960s (Hobsbawm, 1994) but the contact had been sufficiently influential to ensure a central place for
neurasthenia. Chinese physicians and psychologists slowly abandoned their tendency to borrow theories and methods from the Soviet Union (Shixie, 1989) and began to pay increasing attention to indigenous traditions, particularly Traditional Chinese Medicine (TCM). In doing so, they tapped into a clinical literature at least 2,000 years old, a literature which – although it did not have a specific neurasthenia category – did have several similar, popular, and non-stigmatizing diagnoses (Cheung, 1989; Lee, 1999). As compared with Western medicine, TCM has a holistic view of the mind-body relationship, and symptom descriptions often mix physical and psychological symptoms with organ dysfunctions, physical signs, and moral and metaphysical constructs. Subtly different symptom presentations could potentially represent vastly different underlying etiologies. For example, neurasthenia might be caused by a pattern of deficient yin and overly strong yang, leading to headache, dizziness, insomnia, irritability, redness of the tongue, etc. It might also be caused by a loss of communication between heart and kidney, resulting in dysphoria, insomnia, emotionality, short attention span, many dreams, etc. (Lee, 1998). The popularity of the Neurasthenia diagnosis remains particularly high among practitioners of TCM (Rin & Huang, 1989).

A Reconceptualization

In the late 1970s, China began to reverse the course of the Cultural Revolution and slowly reestablished connections with Western science and medicine. The result was that, by the early 1980s, descriptions of neurasthenia were an amalgamation of many different traditions with, for example, formal diagnostic criteria as in DSM-III being followed by descriptions based on TCM (Shixie, 1989). This theoretical heterogeneity did not adversely affect, and may have promoted, the widespread use of this diagnosis by medical practitioners and its acceptance as a common illness by the general public. The Chinese words for neurasthenia, shenjing shuairuo,
Table 1.2

Summary of CCMD-2-R Diagnostic Criteria for Neurasthenia

(a) Weakness symptoms – mental fatigability, lack of energy, slowness of thinking, difficulty in concentration, poor memory, decreased efficiency, physical fatigability.

(b) Dysphoric symptoms – vexatiousness, being worrisome, inability to relax, easily irritable (mild anxiety and depression may occur, but only during a very small part of the illness).

(c) Excitement symptoms – mentally easily excitable, as manifested in the uncontrollable increase of recollections and thought associations; the excitement is accompanied by unpleasant feelings but not an increase in psychomotor activity.

(d) Nervous muscular pain – tension headache or myalgia.

(e) Sleep disturbances – difficulty falling asleep, distressed by too many dreams, unrefreshed on waking, loss of a sense of having slept, chaotic sleep-wake schedules (not sleeping at night, listless and sleeping in the day time).

came to hold a definition similar to the original English word, namely, a weakness of nerves (Zhang, 1989). In TCM this weakness specifically involves a weakness of the channels carrying vital qi energy through the body (Lee, 1998). Side-by-side with this description was the commonly accepted, and strikingly Western, general etiological theory that neurasthenia is caused by an interaction between inherited tendency and environmental stress (Kleinman, 1982).

This combination of Western diagnostic thinking and Chinese diagnostic constructs can be seen in the indigenous psychiatric nosological system known as the *Chinese Classification of Mental Diseases (CCMD-2-R; Chinese Medical Association and Nanjing Medical University, 1995)*. This system includes several disorders thought to be specific to the Chinese culture but presents them as sets of operationalized diagnostic criteria, as in *DSM*. *CCMD-2-R* criteria for neurasthenia are presented in Table 1.2. The second symptom listed here deserves some additional discussion, as it is often identified as the truly Chinese culture-bound symptom of the neurasthenia syndrome. The excitement can be caused by a wide range of otherwise normal
activities, including work, study, conversation, movies, or television, and is experienced as unpleasant, particularly if it happens over a long time or cannot be controlled. Part of the excitement includes racing thoughts accompanied by frequent memories and associations, again experienced as unpleasant (Shixie, 1989).

By the 1960s, as many as 80% of psychiatric outpatients in China were diagnosed as primarily neurasthenic (Lin, 1989; Yan, 1989), a figure that persisted at least until the early 1980s (Kleinman, 1982; Parker et al., 2001). Up to 50% of such outpatients had diagnosed themselves with neurasthenia and sought treatment for their condition (Cheung & Lau, 1982; Lin, 1989; Rin & Huang, 1989). The diagnosis of depression was rarely used (Lee, 1996). The same National Twelve Region Survey which found a 0.3% rate for depression reported a prevalence of 1.3% for neurasthenia (Cooper & Sartorious, 1996). A review of epidemiological studies conducted in the 1980s demonstrated that neurasthenia was by far the most frequently identified neurotic disorder in China (Cheung, 1991).

It was at this time that Arthur Kleinman (1982) conducted his landmark study of neurasthenia in 1980 at a psychiatric hospital in Hunan province, China. Kleinman used the Schedule of Affective Disorders and Schizophrenia (SADS) and the DSM-III diagnostic criteria to assess 100 patients previously diagnosed with neurasthenia, and concluded that 87% of them could be described as suffering from some form of clinical depression. He concluded that neurasthenia is a Chinese-specific way of expressing depression, and is the result of a cultural emphasis on physical over psychological symptoms. Indeed, the great majority of the patients in this study presented predominantly with physical concerns; of the chief complaints, headaches were present in 90%, insomnia in 78%, dizziness in 73%, and various pains in 49% of the patients. In contrast, depressed mood was given as a chief complaint in only 9% of cases.
Lin (1989) characterized the response of Chinese psychiatry to this study as falling into three types. Some older physicians, described by Lin as “diehard conservatives,” were outraged that an American researcher had imposed an American system on Chinese patients, and thereby implied that Chinese psychiatrists did not know how to properly diagnose depression. A second response was to attempt to solidify the theoretical foundation and clinical case literature on neurasthenia, while at the same time critically examining the approach taken by DSM to conditions such as anxiety and depression. A third response involved an increased focus on the possible reasons for diagnostic discrepancies between North America and China. Lee (1999) notes that this issue has directly tapped the “to-contest-or-to-copy” nationalist complex of modern China.

Another approach to these results is to ask why psychological symptoms, such as depressed mood, are given primacy by Western clinicians. Lin (1989), among others, has raised the question of what would happen if trained Chinese assessors were to rediagnose depressed American patients according to the Chinese diagnostic system. Consideration of Kleinman’s (1982) findings regarding chief complaints raises the question of how easily we should assume the presence of depression when depressed mood is so rarely reported. Even if endorsement of this symptom is obtained after direct and repeated questioning, it remains to be seen whether it dominates the clinical picture and should thus be the focus of clinical attention, as is the case in Western practice. Kleinman himself has not drawn the simple conclusion that neurasthenia should be abandoned in favour of depression, and considers somatization to be an important phenomenon, not a diagnostic annoyance. Indeed, he consulted with the WHO on the implementation of neurasthenia in ICD-10 (WHO, 1992).
Depression and Neurasthenia in China: Recent Developments

Neurasthenia in China is often considered to be a prime example of a culture-bound syndrome, common in one culture and all but unknown in another. The widely used *Oxford Textbook of Psychiatry* (Gelder et al., 1996), for example, devotes some space to neurasthenia, pointing out that the term is frequently employed in China despite its decline in the West; a similar note appears in *Synopsis of Psychiatry* (Kaplan & Sadock, 1998). Lee (1999), however, reports that as neurasthenia gains notice as an intriguing culture-bound syndrome in mainstream Western psychiatry, it may in fact be fading in China. Whether this change reflects clinical reality or terminological preference remains unclear.

*Empirical Challenges*

Several studies followed up on Kleinman’s (1982) original work and reported that depressive disorders are common in patients diagnosed with neurasthenia (Lee, 1999). Moreover, the majority of patients who did not meet criteria for depression appeared to show good response to antidepressants (Zhang, 1989). Perhaps in response to this research and its implications, both community and clinical studies conducted through the 1990s have shown a dramatic reduction in the use of this diagnosis. For example, Liu and colleagues (1992; cited in Lee, 1999) showed that, in community studies, depressive disorders had a base rate of 14% compared with 2% for neurasthenia, using CCMD-2 definitions. The same study showed rates of 21% and 6%, respectively, in psychiatric clinics. Xu, Gao, and Xu (1993; cited in Lee, 1999) studied 2,275 inpatients discharged in Shanghai in 1990 and found 256 cases of affective disorders, 21 cases of Depressive Neurosis (i.e. a mild, characterological depression similar to Dysthymic Disorder), 21 cases of Generalized Anxiety Disorder, and only 6 cases of neurasthenia, again using CCMD-2. Finally, Lee and Wong (1995) studied lay conceptions of neurasthenia in Hong Kong and
found that the most common symptoms associated with the disorder included depression and anxiety, and that both somatic and psychological etiologies are acknowledged.

Changes in Diagnostic Practice

One potential explanation of this recent shift is increased exposure to Western diagnostic practices. As Chinese psychiatry was opening itself to Western influences, American psychiatry was itself undergoing major change. The diagnostic philosophy, and with it the diagnostic system, was being radically altered, moving from descriptive paragraphs with an ultimate basis in psychodynamic thinking to a supposedly atheoretical approach in which syndromes are prototypes defined by a specific threshold of symptoms (Wilson, 1993). DSM-III was enormously influential in the United States and throughout the world, and arrived at a time when it also could be influential in China. Academic psychiatrists in China noted that this state-of-the-art system did not include neurasthenia, and many of them concluded that the construct was therefore out-of-date, at best, or even completely false (Lee, 1999). The official DSM position was most clearly expressed in the Options Book for DSM-IV, which raised the concern that neurasthenia would be used as a 'wastebasket' diagnosis and would potentially result in clinicians overlooking other mental disorders (APA, 1991).

Under the influence of DSM-III, Chinese psychiatry developed its own diagnostic system based on syndromes defined by operationalized symptom criteria. Advocates of increasing Westernization pushed for a system largely based on DSM and ICD criteria, while traditionalists fought for the survival of particular diagnoses thought to be Chinese-specific (Lee, 1999). Although the inclusion and operationalization of neurasthenia in CCMD-2-R would appear to represent the official endorsement of the Chinese psychiatric establishment, Lee (1999) has argued that the diagnosis is being increasingly marginalized. He notes that the text of CCMD-2-
R itself, unlike earlier versions of the system, includes a specific warning that the diagnosis is
disputed internationally and was previously overdiagnosed. The text also warns clinicians to
carefully consider other neurotic and psychophysiological disorders before concluding that
neurasthenia is present.

The CCMD-2-R has, to be sure, kept SJSR [i.e. neurasthenia] as a subtype of
neurotic disorder. However, it specifies that “mild anxiety and depression can
occur, but only during a very small part of the illness”. As a result of such
hierarchical criteria, few if any of the 100 patients studied by Kleinman could be
diagnosed as SJSR nowadays. In my view, the retention of SJSR as almost a
museum piece in the CCMD-2-R (and very plausibly the CCMD-3) is
representative of Chinese psychiatrists’ nationalist insistence on a sinicized
nosological system on the one hand and, ironically, their softening resistance
against DSM hegemony on the other (Lee, 1999, p. 356).

Although neurasthenia is known in North America as the quintessential Chinese culture-bound
syndrome and although the ease of researching it has arguably been enhanced by formal
diagnostic criteria, there is professional uncertainty in China about its proper status. It has
therefore been retained to please one camp but substantially weakened to please the other.

Despite these academic changes, the neurasthenia diagnosis continues to be common in
rural health settings, is still assigned very frequently by non-psychiatric medical practitioners,
and is well known to the public (Lee, 1998, 1999; Lin, 1989; Zhang, 1989; Zheng et al., 1997).
Cheung (1989) argues that the looseness of the neurasthenia construct, as syndrome, as disease,
or as causal explanation, allows patients to interpret their illness experience in ways that are
acceptable to them. This same looseness has led Chinese academic psychiatry to increasingly
turn away from this construct, and to largely conclude that neurasthenia is misdiagnosed
depression (Lee, 1999). Where the diagnosis is still used, it is increasingly described as a means
of explaining certain conditions to patients in ways that are less stigmatizing or threatening (Rin
& Huang, 1989).
Changes in Political Culture

Although changes in scientific focus and diagnostic practice tell part of the story, Kleinman (1995) has proposed a cultural explanation for differences in neurasthenia and depression that anticipates the current shift. He argues that the climate of communist China, especially during the Cultural Revolution, rendered particular emotional experiences and particular diagnoses politically dangerous. Cheung (1991) has noted that, “during the Cultural Revolution it was considered ideologically undesirable to be depressed” (p. 489); core symptoms of depression could be criticized as decadent individualism, laziness, malingering, or failure to be sufficiently proletarian in outlook (Lee, 1998). Even love expressed towards family members could be publicly condemned as bourgeois sentimentality so that, as Lee argues, many people could lose the ability to communicate, or even to feel, basic human emotions. Neurasthenia served the function of providing a physical explanation for psychosocial distress, being readily understood at the time as being a product of brain dysfunction (Lee, 1998). A field study conducted in rural China (Cheung, 1981 cited in Cheung, 1989) found that respondents were unwilling to talk about depression, and could only describe a few isolated examples of depressed individuals from before the revolution. However, there were many examples provided of neurasthenia, and respondents were even willing to offer their own life stories as examples. In this conception, neurasthenia is more than just a strategy for avoiding stigma – it is the way that the body expresses distress that cannot be expressed in other ways (Kleinman & Kleinman, 1995).

The other half of this argument involves the political changes that have taken place since the end of the Cultural Revolution, particularly during the presidency of Deng Xiaoping. Kleinman (1986), following up on his initial study, noted the large changes of a mere half-
decade, characterizing the 1980s as a period in which Chinese people were able to release previously silenced emotions. Studies ranging from content analyses of telephone helpline calls to ethnographies in rural China demonstrate that modern concerns revolve around love and money, rather than political conformity and party membership (Lee, 1999). To the extent that the Cultural Revolution delegitimated the very emotional experiences central to depression, current reforms would be expected to allow for greater expression of these experiences.

Conclusions

As cultures change, different symptoms may become more or less salient. In the present case, there has been a shift in the relative emphasis on somatic versus psychological symptoms. Different cultures at different historical periods vary in the meaning assigned to particular clusters of symptoms, and the ramifications that come with experiencing them and presenting them to others. At the same time, professional wisdom changes in response to both scientific evidence and current fashion, in a process that shapes and is shaped by the prevailing cultural climate. In the West, a concern with 'justifiable' physical illness changed to a search for 'underlying' psychological causes, as scientists grew concerned with the lack of physiological signs and increasingly left description of neurasthenia to psychoanalysts. In China, a similar concern with acceptable and unacceptable distress took on immense proportions during the Cultural Revolution, a trend which now appears to be reversing itself. Complicating matters still further, the public and professional concerns of the West have an influence on the rest of the world, especially as travel and communication grow more efficient (Hobsbawm, 1994).

Nevertheless, regardless of the various causes, it appears that there are both cultural and historical differences in the ways in which symptoms of distress are presented in China and the West. In particular, certain cultural-historical contexts have emphasized a somatic presentation
leading to an increased interest in, and diagnosis of, neurasthenia. Other contexts have emphasized a psychological presentation leading to an increased interest in, and diagnosis of, depression. The processes underlying these different presentations, and their cross-cultural variability, are the subject of the next chapter.
Chapter II – Somatization and Psychologization

Psychiatric diagnoses are constructed under the influence of diverse forces, including culture, history, and politics, as well as clinically and empirically observed patterns of signs and symptoms (Wilson, 1993). Although all of these elements are important to any cross-cultural comparison, we ultimately must turn to careful empirical research in order to determine whether psychopathology is actually presenting in different ways. The process by which distress presents in a somatic fashion, a process often invoked to explain cultural differences in depression and neurasthenia, is known as somatization. Similarly, rather than assuming that psychological symptom presentation is the norm, the process of presenting distress in predominantly affective and cognitive ways can be termed psychologization. Evidence of the former is provided by the emphasis of somatic symptoms relative to a comparison group, here termed somatic symptom presentation. Thus in the context of this research, we would conclude that Chinese individuals have a tendency to somatize if we observe that they endorse somatic symptoms to a greater degree than do Western individuals. Similarly, psychological symptom presentation refers to an emphasis on psychological symptoms.

This chapter begins by defining these two terms and then reviews research demonstrating that both forms of symptom presentation can be found in the West and, moreover, that somatization is very common worldwide. Such ubiquity does not mean that there are not important differences in symptom presentation between Chinese and Western patients, and so the second half of the chapter reviews theory and research relating to the three core questions of whether this cultural difference exists, when the difference is observed, and why it is observed.
Defining Somatization and Psychologization

Epidemological research has suggested that depression, as it is known in the West, is uncommon in countries with a predominantly Chinese culture. At the same time, neurasthenia, a diagnosis emphasizing somatic symptoms that are often associated with depression, is an official diagnosis in China and has considerable lay popularity in Hong Kong and Taiwan. Research in China suggests both that depression is particularly uncommon and also that neurasthenia is particularly common. Some writers, including Kleinman (1986) have proposed that these findings are in part attributable to a Chinese tendency to somatize depression. Many of these same writers add, importantly, that one could just as easily speak of Western psychologization (e.g. Kirmayer, 2001). The extent to which Chinese and Western cultures differ in these two modes of symptom presentation is the subject of this chapter.

Theoretical Perspectives

Major depression, even as defined in the West, is commonly accompanied by a wide range of somatic symptoms. These symptoms include changes in sleep, appetite, and psychomotor activity, as well as increased fatigue and loss of energy. Rather than being ways of masking psychological experience, somatic symptoms appear to be an integral part of both the pathophysiology and psychopathology of major depression:

The same neurophysiological dysregulation that gives rise to depressed mood may result in increased muscle tone, alterations in gut motility and other autonomic symptoms either directly or through the effects of sleep disturbance. Depressed individuals’ negative and pessimistic cognitive schemas foster the recall of illness-related memories, promote a negative view of their health and their future prognosis, and result in heightened awareness of unpleasant experiences. Depression directs one’s attention inward, and this increased bodily preoccupation may make trivial and mild discomforts more disturbing. (Sayer, Kirmayer, & Taillefer, 2003, p. 108)
Given that somatic symptoms are almost always an important part of depression, the issue may instead be one of emphasis - why do some depressed patients have predominantly or exclusively somatic presentations while other patients place more emphasis on psychological symptoms? Such questions have an impact on diagnosis, as DSM-IV depression requires depressed mood and/or loss of interest to be present for a diagnosis to be made.

Research on somatization conducted in the West has tended to reach inconsistent conclusions. Slavney (1990) has pointed out that the confusion began with psychodynamic theory, which confounded a mechanism of symptom production (conversion), a clinical presentation of multiple somatic complaints (hystericita), and a dramatic personality style (hysterical personality). These different constructs were split in DSM-III (Hyler & Spitzer, 1978). Some studies have shown that men tend to somatize more, whereas others have shown that somatization is particularly common in women. It is equally unclear whether somatizing individuals should be expected to endorse more or fewer psychological symptoms on self report (Kirmayer & Robbins, 1991). Some somatizing individuals exhibit 'la belle indifférence', seeming to care little about their unusual somatic experiences, whereas other patients exhibit a hypochondrical concern out of proportion with the symptoms being experienced.

Attempts have been made to clear up this confusion by relating somatization to Mechanic’s (1962) notion of abnormal illness behaviour, originally defined as, “…the ways in which given symptoms may be differently perceived, evaluated and acted (or not acted) upon by different kinds of persons.” (p. 189) Such a definition has the advantage of identifying a common link between many different ways in which somatization presents and connects these phenomena with a rich descriptive and research literature. Kirmayer and Robbins (1991), however, have pointed out that it is difficult to establish norms, even within a single culture, for determining
whether or not particular thoughts or behaviours should be considered abnormal, and that doing so too hastily can shift attention away from important social factors. Medical limitations form an additional obstacle to the idea of an abnormal illness behaviour, as our judgement is based in part on the current state of knowledge. Abnormal concern about an undetectable lesion may suddenly seem more understandable if that lesion is later found.

Kirmayer and Robbins (1991), rather than trying to identify common ground for somatization, argue that greater clarity can be reached by subdividing it into more homogeneous groups. They contend that unnecessary confusion has been introduced into the study of somatization by the use of this single term to describe several phenomena that are only tangentially related. Some patients present with a pattern of medically unexplained somatic symptoms that lead to disability and frequent help-seeking. Other patients worry about, or become convinced that they have, a physical illness without observable evidence of disease. Still other patients present with predominantly or exclusively physical symptoms despite having considerable psychosocial or emotional problems. These three distinct modes of presentation have been termed, respectively, *functional somatization*, *hypochondrical somatization*, and *presenting somatization*. Cultural explanations for relatively low rates of depression and high rates of neurasthenia among Chinese individuals primarily involve an emphasis on somatic over psychological symptoms in the context of psychosocial distress (e.g. Kleinman, 1982; Parker et al., 2001), fitting the definition for presenting somatization. The current work will therefore base discussions of somatization and psychologication on this definition.

One further refinement of the somatization construct will be necessary before proceeding. Many definitions of presenting somatization, particularly from older sources, require that somatic symptoms be presented to the exclusion of psychological symptoms. Such a definition is
unnecessarily strict, leaving out individuals who might be emphasizing somatic symptoms but not to the exclusion of psychological symptoms. As we shall see, it is this tendency toward the somatic, rather than a wholesale denial of the psychological, that is most often observed. Bridges and Goldberg (1985) defined facultative somatizers as individuals who are willing to entertain the possibility of a psychosocial explanation for their problems when directly asked. Kirmayer, Robbins, Dworkind, and Yaffe (1993) further described initial somatizers as individuals who spontaneously report only physical symptoms, but endorse psychological symptoms when directly asked about them. Both of these levels of presenting somatization are distinct from true somatizers, who meet the strict definition.

Empirical Comparison of Somatization Subtypes

Robbins and Kirmayer (1991) conducted a literature review of research pertaining to functional, hypochondriacal, and presenting somatization. They found that whereas the first two forms of somatization have similar characteristics, the latter form is very different. Individuals with functional or hypochondriacal somatization were both found to have high scores on negative affect, to focus on the body and on the self, to worry about both their illness status and their emotional state, to be willing to attribute their distress to psychological factors and to deny that their experience is normal. Individuals with hypochondriacal, but not functional, somatization were also willing to consider somatic attributions for their distress. In contrast, presenting somatizers were found not to worry about their emotional state, not to accept psychological attribution, and to accept their experience as being normal. No relation was identified between presenting somatization and negative affect, bodily focus, self focus, worry about illness status, or willingness to consider somatic attributions.
Kirmayer and colleagues (1993) conducted a study of 685 outpatients seen by primary care physicians in Montréal, 215 of whom had a CES-D score greater than or equal to 16, the accepted cut-off for a case of depression. The study focused primarily on presenting somatization, and patients were divided into several classes: (a) psychosocial presenters spontaneously reported at least one psychosocial problem; (b) initial somatizers presented with only physical symptoms but spontaneously offered a psychological explanation when asked about cause; (c) facultative somatizers presented with only physical symptoms and made only physical attributions, but were willing to accept the possibility of psychosocial contribution when directly asked; and (d) true somatizers presented with only physical symptoms, made only physical attributions, and were unwilling to consider a psychosocial contribution. The remaining 6% presented for reasons other than symptom complaints.

These four groups of patients were compared on mean CES-D score, severity of illness at initial visit, number of visits to the clinic over the following 12 months, and number of visits until psychological distress was recognized. Both facultative and true somatizers required significantly more visits before their psychological distress was recognized, and true somatizers were also found to have a significantly lower score on the CES-D as compared with psychosocial presenters, while. No differences were found for severity of illness or for number of visits. The researchers also assessed extent of hypochondriacal worry and number of lifetime medically unexplained symptoms, in order to assess functional and hypochondriacal somatization, and found that both variables were associated with an increased likelihood that psychological distress would be recognized. Actual level of physical symptom reporting had no effect on recognition. These results support Robbins and Kirmayer's (1991) contention that presenting somatization
has different characteristics than either functional or hypochondriacal somatization, and also
illustrates the effects on clinical recognition anticipated by Bridges and Goldberg (1985).

A Global Perspective on Somatization

Early studies conducted by the WHO suggested that the core features of emotional
distress are at least superficially similar in many societies (Kirmayer & Groleau, 2001), a finding
which has since been replicated many times (e.g. Abas & Broadhead, 1997; Beiser, 1999;
Escobar, Gomez, & Tuason, 1983; Weissman et al., 1996). Importantly, physical complaints are
a prominent part of these core symptoms. Japanese patients with social anxiety, concerned that
they are giving offence to others, become focused on their gestures, eye movements, and even
‘Weak nerves’ remains a prominent complaint among Hispanics and Appalachians in the United
States (Kleinman, 1988). Many of these complaints may be idioms of distress, or metaphors
representing experiences that cut across the physical, the psychological, and the social. Good
(1977), for example, showed how complaints of ‘heart distress’ among rural Turks in Iran
combined feelings of uncertainty and frustration, bodily discomfort, and problems in marriage,
family, and work. Focusing on the physical component allows for psychological and social
complaints to be dealt with indirectly, without becoming unduly threatening. People from Africa
might similarly complain of a ‘peppery feeling in the head’, while ‘rising heat’ might be noted
by Puerto Ricans complaining of nervous attacks, ataques de nervios.

Data from the WHO collaborative study have been analyzed to determine the extent to
which somatization is observed in various centers worldwide (Simon, VonKorff, Piccenelli,
Fullerton, & Ormel, 1999). This study involved screening of 25,916 outpatients in primary care
settings across 15 countries, 5,447 of whom were identified as possible cases and were assessed
using structured interviews for depression and somatoform disorder. The authors looked at three forms of somatization in the 1,146 individuals who met criteria for major depression: (a) reporting only physical symptoms as the reason for the visit (i.e. presenting somatization); (b) reporting three or more unexplained physical symptoms (i.e. functional somatization); and (c) denying psychological symptoms upon direct questioning (i.e. true presenting somatization). Sixty-nine percent of patients (range across sites = 45%-95%) presented with only physical symptoms, 50% (range = 30%-62%) reported unexplained symptoms, and 11% (2%-26%) denied psychological symptoms. No association was found between any form of somatization and geographical location (Western vs. non-Western). Presenting with only physical symptoms was, however, found to be more common at clinics in which patients see different physicians with every visit and where interactions take place in public rather than in private offices. On the whole, somatization appears to be very common overall, at least in primary care settings; indeed, at least 70% of patients in every site had at least one type of somatization. Far from being a Chinese-specific or a non-Western-specific way of presenting depression, somatization is a common way – and is perhaps the most common way – of experiencing and expressing depression worldwide (Isaac, Janca, & Orley, 1996).

A return to the previously discussed study conducted by Kirmayer and colleagues (1993) shows that not only can somatization be studied in the West, it is also extremely common. Of the 215 patients who were identified as depressed by the CES-D, 32% were initial presenting somatizers, 24% were facultative presenting somatizers, and 23% were true presenting somatizers. Only 14% of the sample presented with one or more psychological symptoms. A smaller sample of 75 patients who met criteria for depression or anxiety by structured interview yielded similar results, with 76% presenting with some form of somatization. Similarly high
rates have also been found by Bridges and Goldberg (1985) in the United Kingdom. Craig and Boardman (1990) report on data suggesting that more than half of patients in the U.K. presenting to family physicians because of depression do not actually mention depression during the consultation, despite being able to discuss it with the researchers afterwards. Finally, Singer (1975) noted more than a quarter-century ago that somatization has long been recognized as being particularly frequent among individuals with lower levels of education or SES. Such findings suggest that presenting somatization is in fact very common in the West, particularly in primary care settings.

While it is necessary to abandon the simple hypothesis that Chinese patients somatize distress while Western patients psychologize it, cultural variations in symptom reporting still demand an explanation. Somatization and psychologization occur in both cultures, but they do not necessarily occur with the same frequency. Indeed, Simon and colleagues (1999) note that although they find somatization at every site, there is considerable variability in the base rates, variability that is attributed to culture without further elaboration. In order to better understand observed differences in depression and neurasthenia, therefore, it is necessary to look at theory and evidence pertaining to whether there indeed exists a relative difference in somatization and psychologization.

Chinese Somatization

The notion that Chinese patients are likely to somatize emotional distress predates even the early work of Kleinman. Much of this work is not particularly sensitive to the nuances of cultural difference, however, most often borrowing from psychoanalytic understandings common at the time. Expressing emotional problems through physical symptoms was seen as a way of avoiding anxiety-provoking content and thus, from a culture-bound and Western point of view,
was usually viewed as an immature defense (Draguns, 1996). Kirmayer and Young (1998) have argued that this bias, with less of an overt psychodynamic tone, continues to influence today’s thinking in Western psychosomatic medicine. This interpretation of somatization was also used by some of the first Chinese clinicians to write about the phenomenon, with Tseng and Hsu (1970) recording that, “the Chinese are especially concerned with the body and find it relatively easy to somatize. They tend to manifest neurasthenic and hypochondriacal symptoms.” (p. 11) Regardless of the explanation, it is notable that a tendency towards somatic presentations of distress was clinically observed early on.

This view changed in the 1980s after Kleinman’s (1982, 1986) research on neurasthenia. Somatization was the term used to describe the tendency to present predominantly somatic symptoms, but the term was no longer used to refer to a psychodynamic process. In this view, somatization and psychologization are processes of communicating distress. When distress encounters the health care system it is given a diagnostic label which guides and shapes the ways in which this distress is dealt with by the patient, the practitioner, and the society as a whole. In the case of China, neurasthenia is an official label describing a disorder that results from somatized distress; in North America, depression is an official label describing a disorder that results from psychologized distress. Whereas neurasthenia and depression are categorical diagnoses, somatization and psychologization are dimensional tendencies.

Explanations for why there should be Chinese-Western differences for somatization and psychologization should occur are numerous, and some of them have been briefly touched upon in our discussion of neurasthenia. Detailed consideration of these explanations must be left aside for the moment. First, it is necessary to consider the research pertaining to whether this much-discussed cultural difference actually exists. If such a difference can be established, it will then
be important to determine the assessment conditions wherein this difference is observed. Only when these two issues have been dealt with can we return to causal explanation. One objective in reviewing this literature will be to identify gaps in knowledge, particularly empirical work that has not yet been conducted that could potentially clarify our current understanding of somatization and psychologization. These gaps will in turn be used to formulate the empirical research to be presented in subsequent chapters.

*Do Chinese Patients Somatize Depression?*

*Factor-analytic studies.* Evidence for somatization in Chinese samples has been sought from factor analytic studies of depression inventories, but results have generally been less than compelling. Chang (1985) compared the factor structures obtained for the Zung Self-Rating Depression Scale in small samples of Euro- and African-American college students and overseas Chinese students. In contrast to the two American groups, somatic symptoms constituted the strong first factor in the Chinese group. A much larger community sample was used by Ying (1988), who studied the structure of the CES-D in a Chinese-American community sample. The authors found that, unlike the normative sample, a separate somatic symptom factor did not emerge; instead, factors containing affective and interpersonal symptoms were both mixed with somatic symptoms. Ying, Lee, Tsai, Yeh, and Huang (2000) interpreted these prior findings as evidence of a greater mind-body and self-other integration in Chinese culture. However, it is risky, at best, to claim that a variable factor structure for individual items of a questionnaire measure is attributable to deep-seated cultural differences rather than to statistical fluctuation. Moreover, neither of these patterns was predicted in advance, nor were they tested with confirmatory methods. Ying and colleagues also looked at the structure of the CES-D in Chinese-American college students using confirmatory factor analysis, but found that the
symptom structure in this relatively highly acculturated sample more closely matched the American norms.

**Syndrome description studies.** Several studies have confirmed a tendency for depressed Chinese people to emphasize somatic features. For example, Tseng (1975) reported that over 70% of psychiatric patients at a university hospital in Taiwan had a predominantly somatic presentation. Tsoi (1985) studied 120 consecutive Chinese patients who had been given a diagnosis of either anxiety or depressive neurosis at a psychiatric outpatient clinic in Singapore. Patients’ responded to a symptom checklist, and rated ‘general discomfort’ most frequently, followed by ‘pain,’ ‘insomnia,’ and ‘anxiety’ before reporting ‘depression.’ Chan (1990) investigated the nomological net surrounding you-yu ("melancholy" or "depression") in Hong Kong medical students and nurses. The extensive use of external referents and indirect expression of emotion was interpreted as a concern with emotional restraint and with not imposing feelings on others. Finally, and in contrast, Cheng (1989) conducted an epidemiological study in Taiwan and did not find evidence of greater somatic symptom presentation than had been found in British studies.

**Cross-Cultural Comparison Studies.** Factor-analytic studies in this area failed to provide conclusive, interpretable, results. Meanwhile, empirical descriptions of depression in the Chinese context have failed to include a comparison group, relying instead on a general anecdotal understanding of how Western depression should look. Kleinman’s (1982) original study, previously described, also did not include such a group but made up for this weakness in its thorough interview-based assessment of Chinese patients. Unfortunately, none of these other studies have been designed with the same comprehensiveness in mind. Given the number of theoretical papers that have been written on the subject of Chinese somatization it is now
necessary to bolster these discussions with direct cross-cultural comparison studies. Two such papers have appeared in the literature in recent years and are discussed in some detail below.

Yen, Robins, and Lin (1999) conducted two studies of somatic symptom reporting in Chinese and Euro-American samples. The first study compared 112 Chinese patients with 112 control-matched Chinese university students on the Center for Epidemiological Studies Depression scale (CES-D; Rafloff, 1977), using a Chinese translation developed by Lin (1989). Three subscales were developed, for somatic, psychological, and positively-worded symptoms, based on a prior factor analysis by Yen and colleagues and yielding the same three factors identified by Lin (1989) in the original validation of his translation. Each subscale score was divided by the total score, based on the 17 of 20 items that showed a clean factor loading, in order to yield a measure of the relative extent to which each type of symptom was endorsed. As expected, the patient group had significantly higher total scores on the CES-D. This group also had significantly higher scores on the somatic subscale while the student group had significantly higher scores on the psychological subscale; no differences were found for positive symptoms. The authors conclude from this first study that, among the Chinese, patients are more likely to somatize distress than are non-patients.

The second study compared 100 Chinese students, 100 Chinese-American students, and 100 Euro-American students, again on the CES-D. Notably, the Chinese student group was found to have a significantly lower score on the somatic subscale and, in addition, no relation was found between symptom reporting and degree of acculturation. These findings run contrary to the idea that Chinese people, in general, have a tendency towards somatic symptom reporting. The authors interpret the findings as evidence that somatic symptom reporting is a consequence of the patient’s encounter with the health care system – for example, patients may draw the
conclusion that they can only receive needed resources if they present somatically, or they may be concerned about the stigma that may come with a psychological presentation. Unfortunately, neither study includes a Western patient sample, leaving unclear the extent to which the somatic emphasis of Chinese patients is culture-specific or a general feature of depression.

In the only cross-cultural patient comparison to date, Parker, Cheah, and Roy (2001) compared 50 Euro-Australians to 50 Chinese-Malaysian psychiatric outpatients. Interviewing psychiatrists recorded demographics, presenting complaint, and overall severity of depression, and then patients completed a questionnaire of 39 symptoms developed to assess Western and Chinese symptoms. Respondents first rank-ordered their top three complaints on this questionnaire, and then rated each of the symptoms. The questionnaire itself was designed by the authors to capture symptoms of depression commonly reported in both cultures. Western items were constructed by consulting common measures of depression, while Chinese items were constructed in consultation with Chinese-Malaysian psychiatrists. The questionnaire was developed in English and then translated into Chinese and Malay.

Sixty percent of the Chinese patients nominated a physical symptom as their first-ranked presenting complaint, as compared with 13% for the Western sample. They were also somewhat more likely to endorse certain somatic items, but were far more distinctive in their strong tendency to endorse fewer psychological items, particularly those representing cognitive as opposed to affective features of depression. There were some exceptions, however, with Euro-Australian patients more frequently endorsing loss of appetite and Chinese-Malaysian patients more frequently endorsing suicidal thoughts. A joint factor analysis yielded clear psychological and somatic factors, with the former being much more common in the Euro-Australian sample and the latter being somewhat more common in the Chinese-Malaysian sample. The authors also
used Rasch analysis to assess the severity of depression required before specific symptoms are endorsed. Unfortunately, although several examples were presented of somatic items being endorsed at lower levels of depression in Malaysia as opposed to Australia, the full results were not presented.

*When might the Chinese Somatize Depression?*

Most of the research conducted to date on Chinese somatization has relied on questionnaire methods, particularly for the assessment of symptoms. Moreover, no study has yet used a multi-method approach to study this issue. Not only would such an approach be useful to strengthen conclusions about somatization, but some writers have proposed that the specific context in which symptoms are assessed might affect the extent to which somatization takes place (Cheung, 1995). Kirmayer and colleagues (1993) found many patients, even in the West, who reported only somatic symptoms on spontaneous self-report but who were willing to endorse psychological symptoms when asked about them directly. A recent study of Chinese-Americans in primary care found that 76% spontaneously reported somatic symptoms whereas only 14% spontaneously reported psychological symptoms; none of the patients spontaneously reported depressed mood. At the same time, 93% of these patients endorsed depressed mood on a questionnaire (Yeung, Chang, Gresham, Nierenbeg, & Fava, 2004).

Work by Cheung (1984) supports the idea that Chinese individuals pay great attention the context in which help is sought, and will therefore present different problems to different types of people. Such a tendency would have a particularly strong effect on unstructured assessments in which chief complaints are freely presented, as such a method provides the greatest opportunity for the patient to present a set of symptoms appropriate to the context. Chan and Parker (2004), meanwhile, conducted a literature review suggesting that careful questioning will
elicit more psychological symptoms while relying on patient descriptions will yield an overwhelmingly somatic picture. Findings such as these should encourage researchers in this area to consider carefully the ways in which symptoms are being assessed, and to use multiple methods where possible to examine further some of these effects.

Why might the Chinese Somatize Depression?

Defence Mechanisms. The term ‘somatization’ was first introduced by psychoanalytic writers to refer to a process by which anxious affect is suppressed by defence mechanisms and allowed to reach consciousness only by means of visceral expression (Craig & Boardman, 1990). It differs from conversion in terms of being a chronic tendency rather than an acute episode (Kirmayer & Robbins, 1991). Simon (1991) notes that unexplained somatic symptoms were the primary spur to Freud and Breuer’s development of psychoanalytic theory. Simply put, conflicts that were defended from entering consciousness would present somatically; inability of the patient to accept this explanation was identified as resistance. The psychoanalytic view implies, therefore, that something else – a psychological problem of some kind – is being somatized. As the object of psychoanalysis is to help the patient get past these defences in order to resolve the deeper conflict, somatization thus comes to represent a lower state of mental health, a lack of psychological sophistication.

It is but a small step from this position to the one implying that Chinese culture, by leading to greater somatization, must be a less healthy, well adjusted, sophisticated culture. This view has, not surprisingly, been emphatically rejected as being out-of-date, reflecting a Western preference for psychological explanations, and misunderstanding the role of the body and of somatic metaphor in Chinese culture (Cheung, 1995; Draguns, 1996). Cheung (1984) argues that such views are remnants of the West’s continued adherence to mind-body dualism, in which the
most important features of personal identity are situated in the mind. She adds that even a
tendency towards somatization observed in Chinese patients does not preclude a simultaneous
awareness of psychological experience.

Linguistic development. Leff (1981) has argued that the Chinese tendency not to describe
dysphoric affect comes from a simple limitation - the Chinese language lacks the vocabulary to
describe dysphoric mood states with the same detail as Western languages such as English (see
also Kleinman, 1977 and Tseng, 1975). As a result, Chinese individuals may have depression but
they do not have the language to express it, and thus resort to somatic metaphors. This
explanation is part of Leff's (1977) larger theory linking linguistic capability to psychiatric
experience, in which the structure of a particular vocabulary directly reflects the emotional
expression of the population using that vocabulary.

This theory has also not gone unchallenged, especially as it lends itself to cultural
work for characterizing languages as being primitive or advanced. He argues that the tendency to
see mind-body dualism in language, or in experience, as superior to mind-body holism is a
Western bias, and moreover, is a particular bias of psychiatrists, noting further that research has
tended not to support such a direct link between vocabulary and experience. In any event, the
core assumption that the Chinese language is lacking in a vocabulary for depressive affect has
also been attacked on more straightforward grounds, namely, that the language indeed does have
an adequate number of words that are commonly used to describe psychological states (Chang,
1985; Cheung, 1995). These critics add that physical metaphors do not necessarily indicate a lack
of psychological experience.
Help-Seeking Patterns. Research on patterns of help-seeking among Chinese patients in Hong Kong, and also among Chinese-Canadians, has consistently demonstrate a tendency to delay help-seeking from Western mental health services (Cheung, Lau, & Wong, 1984; Kleinman, 1983; Lin et al., 1978; Ryder, Bean, & Dion, 2000). However, the elapsed time is spent in the pursuit of non-medical health care and self-care of various types, with patients consulting many more health practitioners before seeking the sort of care that gets them noticed by most researchers (Cheung & Lau, 1982). Cheung (1982, 1984) studied students in Hong Kong, presenting them with hypothetical physical and mental health problems and inquiring as to the students' attributions and proposed solutions. She noted that these students were willing to make psychological attributions, but would be more likely to consult friends than physicians; the reverse help-seeking pattern was found for physical health problems. Notably, these students expressed a preference for medical rather than mental health professionals when seeking help for mental health problems. These patients would then be more likely to present with somatic symptoms because those are the symptoms that are most appropriate to a regular health care setting (Cheung & Lau, 1982).

Cheung and Lau (1982) argue that researchers in this area would do well to consider the context in which clinical observations are made and in which data are collected, adding that individuals from a Chinese culture would tend to be particularly sensitive to contextual variables. They criticize Kleinman (1980) and others for making the generalization that Chinese patients somatize depression without accounting for the implications of help-seeking patterns and situational pressures. By conducting studies in medical centers, they claim, researchers are missing those patients who would rather talk to their friends than seek medical assistance and, moreover, it is the very medical context that is leading these patients to endorse somatic
symptoms at such high rates. Kleinman (1988) has replied that these Hong Kong students are not necessarily generalizable to Chinese patients, as they may be particularly westernized both by virtue of being students and of living in what was at that time a British colony. It is also unclear whether patients who do in fact end up presenting to Chinese psychiatric services, as opposed to medical services, would be under this same pressure. Cheung and Lau (1982) do make an important point about the relevance of contextual variables, and are correct in noting that psychological symptoms and psychological attributions are not rare in Chinese culture, at least not in Hong Kong. It is unclear, however, how their explanation for somatization would explain findings like those of Parker and colleagues (2001), where cultural differences remain despite the explicitly psychiatric context.

_Symptom Stigma._ Any consideration of differences in the extent to which certain symptoms are presented or denied must consider self-presentation biases. The study of self-presentation has a long history in clinical and social psychology, particularly in assessment where it was quickly realized that people motivated to present in a certain way could skew the results of psychological tests. Clinicians who are involved in conducting such tests must become sensitive to the context of assessment; a patient who minimizes depression in a child-custody case might exaggerate depression for a worker’s compensation case. In both cases, whether or not psychopathology is present or absent has serious implications for the patient, implications of which the patient is all too aware. Similarly, if we observe that a culture tends not to report a certain symptom we do well to ask what the negative implications might be of endorsing such a symptom.

Many writers in this area have thus turned to stigma as a potential explanation for why psychological symptoms might be deemphasized. Goffman (1963) has described stigma in
psychiatric illness as being a sense that the people with a mental illness have a spoiled identity experienced both by these individuals themselves and by those who interact with them. Individuals will thus be motivated to avoid stigmatizing labels and will be under considerable pressure from society, particularly friends and family, not to be categorized in this way. If such labeling does take place, moreover, a vicious circle can develop where the stigma itself worsens the illness. Evidence of this effect has been found for schizophrenia, depression, and other chronic disorders (Finkler, 1985; Ritsher, Otilingam, & Grajales, 2003). Somatization allows psychologically distressed individuals to inhabit the sick role in their societies without bearing the burden of stigma (Goldberg & Bridges, 1988).

There is considerable work demonstrating that mental illnesses, particularly those with overt behavioural pathology, are particularly stigmatized in Chinese societies (Lin & Lin, 1981; Shon & Ja, 1982; Ryder, Bean, & Dion, 2000). Although there may in fact be a greater tolerance for symptoms when the illness can be kept within the family (Lin, Tardiff, Donetz, & Goresky, 1978), Chinese families are particularly likely to attempt to shield the afflicted family member from the rest of the community. This tendency becomes particularly strong when the need for direct contact with psychiatric health service providers arises (Kirmayer, 1989). As a result, somatization should be more prominent when relatively public methods of assessment, such as interviews, are used and when the patient has not had sufficient opportunity to forge a personal relationship with the clinician. Somatization would be relatively less apparent in private questionnaire assessment and after the formation of a positive clinical relationship.

Many of the explanations that have been provided for the greater stigma of mental illness in Chinese culture, and the particular ways in which this stigma manifests itself, reflect the familial and interpersonal orientations of Chinese culture. Shon and Ja (1982) outlined three
reasons why mental illness reflects badly on the family: (a) physically, it is a result of heredity; (b) psychologically, it is a result of poor guidance and discipline; (c) and spiritually, it is a result of punishment for family sins. Furthermore, mental illness becomes a community issue as a result of the belief that a healthy mind contributes to social harmony (Zhi-Zhong, 1984). Family members are often seen as sharing the same problematic heredity, poor upbringing, and negative spirituality as the individual with mental illness, with serious implications for their interactions with the extrafamilial Chinese community (Lin & Lin, 1981). In the West, especially in recent years, the intrapersonal tendency towards introspection and the dissection of thoughts and feelings combines with an interpersonal tendency towards self-expression as a means of validating this inner life (Lasch, 1979). To the extent that such expression is tolerated and even encouraged, we would expect stigma to play a comparatively lesser role in inhibiting the expression of psychological symptoms.

Symptom Salience. Although past research has offered at least some support to the idea that there is more somatization in Chinese patients, there is little evidence that such patients always make exclusively somatic presentations. Depression is a complex clinical phenomenon that involves both somatic and psychological features; evidence of somatization in the Chinese suggests that the somatic symptoms are somehow more salient. In this view, different symptom presentations are more than merely strategies to obtain health care resources or to avoid stigma. Rather, patients who are somatizing depression may actually be experiencing somatic symptoms to a greater degree, or at the very least they are placing a greater emphasis and putting a greater focus on these symptoms.

There may, moreover, be specific psychological processes at play that contribute to a tendency to amplify this somatic distress. Barsky and colleagues (Barsky, Cleary, & Klerman,
1992; Barsky, Wyshak, & Klerman, 1990) have defined the construct of somatosensory amplification as tendencies towards bodily hypervigilance, focus on weak and infrequent bodily sensations, and appraisal of sensations as symptomatic of disease. Research by Pennebaker and colleagues has confirmed that increasing self-attention increases somatic symptom reporting (Pennebaker & Brittingham, 1982) without actually affecting the accuracy with which bodily changes are perceived (Pennebaker & Watson, 1988). To the extent that such concerns trigger help-seeking, help would most likely be sought from primary care physicians as opposed to psychiatrists. Pennebaker and Watson (1991) also report a link between somatic symptom reporting and negative affectivity, a temperamental trait that has itself been linked to internal hypervigilance (Gray, 1982).

Interest has also been shown in the extent to which somatization might be caused by difficulties in processing and expressing affect (Sayar et al., 2003). Alexithymia is a personality trait characterized by difficulty identifying emotions, difficulty communicating emotions, and externally-oriented thinking. Individuals who score highly on this trait are thought to be particularly likely to misinterpret emotional arousal as physical symptoms. Dion (1996) has argued that the construct of alexithymia might be unnecessarily judgmental when used as an explanation for cultural differences in somatization, noting that externally-oriented thinking, in particular, is assessed as a set of values rather than of difficulties. Alexithymia has been shown to have a strong negative relation to emotional intelligence (Parker, Taylor, & Bagby, 2001), a construct touted as measuring the ways in which the most functional members of our society are supposed to perform (Bar-On, 2000).

Alexithymia and emotional intelligence may carry the burden of pathologizing ways of engaging with emotions that are common in non-Western countries, but these constructs do have
the advantage of measuring an ideal Western emotional style. Individuals in China who prefer to engage in externally-oriented thinking for culturally approved reasons are not pathological, but they would still be expected to experience physical symptoms as being more salient and more important than psychological symptoms. A culturally appropriate person from the West with depression, meanwhile, would find that psychological experiences are particularly salient and important to communicate to others.

Symptoms and the Self-Concept. There has been renewed interest in the self since the early 1980s, both in cross-cultural and social psychology, and in the past ten years it has emerged as a vehicle for bringing these two disciplines closer together in the mainstream of psychological research. Much of this interest originated with work in East Asian, most often focusing on Japanese culture. According to Markus and Kitayama (1991), the Independent Self is characterized by a self-contained, individuated, separated self defined by clear boundaries from others, whereas the Interdependent Self is characterized by a relational, interconnected self with fluid boundaries. This distinction has already been briefly discussed in our consideration of cultural differences in emotions. It will here be considered in more detail.

Most of Western psychology – and thus most of psychology – assumes a single, independent, model of the self wherein the individual is a separate and autonomous entity comprising distinct attributes which in turn cause behaviour (Markus & Kitayama, 1991b). A major goal of the self is seen as being the maintenance of this independence accompanied by the exploration and expression of a unique personality composed of stable attributes (Johnson, 1985; Miller, 1988). In both social and clinical psychology, the healthy self is defined as one that maintains its integrity and boundaries across many and varied social contexts, differentiates itself
from significant others as it matures, and successfully defends itself from others (Greenwald, 1980; Markus, 1977; Markus & Kitayama, 1994; Tesser & Campbell, 1983).

In contrast, the view of the self that emerges in many non-Western cultures is fundamentally different, placing a much greater emphasis on the interconnectedness of selves with one another. The major task of the interdependent self is not differentiation, but instead involves maintaining good relationships, fulfilling the obligations of one’s role in a particular ingroup, and accounting for the thoughts, emotions, and behaviours of other people (Markus & Kitayama, 1994). This view of self, in general terms, has been said to characterize so many of the world’s peoples that it may in fact be the independent self that is relatively unusual, atypical, and exotic.

An extension of the interdependent-independent distinction between East Asian and North American selves has been to the ways in which the self is experienced as being part of an integrated mind and body or part of a separated mind. In mainstream North American culture body and mind are thought to exist dualistically, clearly separable and distinguishable. Moreover, in this conceptualization, the mind is privileged over the body as the seat of the ‘true self’ – a distinction best captured by Descartes’ famous dictum, “I think, therefore I am.” In searching for incontrovertible proof for the existence of his self, Descartes did not stop at social connectedness or corporeal existence as adequate for self-knowledge. Instead, he found that whereas his skepticism could cast sufficient doubt on the existence of the external world, it could not get around the existence of his own thoughts, of his own skeptical processes.

It is difficult to determine whether this view of self actually originated with Descartes’ observations, and there exists some evidence that dualistic thinking stretched as far back as the Ancient Greeks (Tarnas, 1991). What is more clear is that such a view of self increasingly
dominated Western Europe and North America in the centuries that followed, in both formal philosophy and subjective experience. In Western medicine, for example, physical and mental illness are differentiated (Fabrega, 1982; Lutz, 1985), with Jenkins (1994) noting that the classification of depression as a mood disorder accompanied by somatic symptoms represents a mind-body dichotomy. This notion has already arisen in the previous discussion on neurasthenia and its controversial reclassification as depression. Similarly, the idea of somatization suggests that the psychological precedes the physical, rather than the two concurrently and mutually reinforcing one another (Cheung, 1995).

In contrast, Chinese medicine – and culture as a whole – views mind and body as being integrated with one another as well as with social context (Kaptchuk, 1983; Wu, 1982). White and Marsella (1982) have argued that psychological, physical, and social factors combine to contribute to the Chinese sense of self as well as to the development of specific illnesses. Here, physical and psychological experiences are viewed as being a natural, simultaneous, and inseparable intertwining of mind and body (Cheung, 1995). This conceptualization of self is often used as an underpinning for more focused theories of East-West differences (e.g. Markus & Kitayama, 1991a; Nisbett et al., 2001). Unfortunately, direct investigation of cultural differences in the experience of mind and body is rare.

Cross-cultural work on emotions conducted by psychologists have yielded empirical findings that speak to important cultural differences, and much of this work has focused on the independent and interdependent selves. In a comparison of American and Japanese undergraduates, Matsumoto, Kudoh, Scherer, and Wallbott (1988) found that American participants reported having longer and more intense emotional reactions, regardless of whether the emotion in question was positive or negative, and were significantly more likely to report that
action was necessary to ‘resolve’ the emotional experience. This latter finding has been interpreted as evidence that internal attributes of the self, such as emotions, are more salient when independent selves are organizing their actions (Markus & Kitayama, 1991b). Similarly, Mesquita and Karasawa (2002) found that, over the course of a week, Japanese undergraduates reported experiencing no emotion about three times more frequently than their American counterparts.

In contrast, interdependent selves are more likely to be sensitive to the interpersonal aspects of emotions, a hypothesis explored by Kitayama and Markus (1990). Japanese students were asked to make similarity judgments among 20 emotions, 11 of which were derived from a set commonly used in Western research and 9 of which were derived from studies of Japanese indigenous emotions. In contrast to most research conducted in the West, a strong interpersonal engagement dimension emerged in the Japanese sample, suggesting that one should not assume the same underlying structure of emotions when comparing cultures.

Given the concern with relationships and ingroup harmony maintenance found in interdependent selves, one might also expect differences in terms of how emotions are expressed. For example, such people, given their greater interpersonal sensitivity, might be more concerned about the disruptive effect of emotional displays and be comparatively less willing to impose their internal experience upon others. Argyle, Henderson, Bond, Iizuka, and Contarello (1986) identified several rules that varied across four cultures studied. Specifically, they found that Hong Kong Chinese and Japanese cultures had a particularly large number of rules surrounding obedience to authority, avoiding loss of face, maintaining harmony, and restraining the expression of emotions. Chan (cited in Markus & Kitayama, 1991a) similarly found that
similarity judgments of emotions involving pairs of photographs in Chinese participants yielded a unique factor ordering emotions in terms of the degree of control involved.

Theoretical work on the independent and interdependent selves has established that these aspects of the self-concept have relatively different degrees of importance, with the interdependent self being more commonly primed in East Asian cultures. These cultural differences have been extended to include cultural beliefs regarding health and health care. Empirical work, moreover, suggests important links between the self-concept and emotions more generally. These efforts do not add up to evidence that cultural differences in depression are due to differences in the self-concept, but they do suggest that this domain is worth further investigation. Indeed, the potential role of the self-concept, and individualistic vs. collectivistic values more generally, has been suggested by numerous writers on the subject of Chinese somatization. Cheung (1995) has noted, however, that the role of the self-concept has been proposed and used, but has never been directly tested.

Conclusions

Research conducted over the past two decades suggests that somatization takes many forms which are only distantly related, most often represents a tendency towards somatic symptoms rather than a complete denial of psychological experience, and is also very common in the West. This last point, in particular, might appear at first to disqualify somatization as a candidate for further cross-cultural study, or as an explanation for cultural differences in depression and neurasthenia. Instead, the position here has been that somatization and psychologization are processes of symptom presentation that can be found in both cultures, but that they are particularly sensitive to cultural context. Thus, it might be the case that a relative tendency towards somatization is more common in Chinese individuals as a result of contextual
factors that are more common, at least at present, in that culture. Many such factors have been discussed in response to the few empirical studies existing in this literature, but they have yet to be considered as part of a research program on culture and symptom presentation.

Indeed, this cultural perspective implies that continuing to base theories of somatization on old research might yield incorrect conclusions about current realities. Much work on this subject uses Kleinman’s (1982) research as its starting point, yet Kleinman (1996) himself has articulated a theory – linked explicitly to political climate – that allows for, and even predicts, change. There is, furthermore, empirical evidence suggesting that depression rates are rising in China while neurasthenia rates are falling. Conducting new research thus allows us to address what may turn out to be a different reality, at the same time providing the opportunity to add to the existing database using methods that have not yet been incorporated into this literature.

A second implication is that if some of these contextual variables can be identified and measured, they can be included within the empirical work rather than being invoked at a later time in order to interpret the results. Although the results of such study must always be considered in light of past work, there is a sufficiently large theoretical literature to allow us to begin the process of testing explanatory hypotheses. The following two chapters describe two empirical studies which, taken together, are intended to test the presence and extent of Chinese-Western differences in symptom presentation, to determine the circumstances under which such a difference is likely to be observed, and to begin exploring and testing hypotheses from the literature regarding why such a difference might take place.
Chapter III – Symptom Presentation in Chinese, Chinese-Canadian and Euro-Canadian Students

In the first direct cross-cultural comparison of somatization, Yen and colleagues (2000) reported that Chinese students actually showed less somatic symptom reporting than did American students. Given that these authors had previously demonstrated that Chinese patients had shown more somatic symptom reporting compared with a Chinese community sample, they concluded that somatization is a result of the patient role in China and is not a function of the culture per se. This conclusion does not consider the possibility that somatization is instead a function of increased distress. Although it is interesting to observe that Chinese people are not constantly emphasizing somatic symptoms, the most pertinent question is whether distressed Chinese individuals have a tendency towards somatization. The simplest explanation for why somatization is only observed in Chinese patients is that the non-patients, as a group, are not endorsing a sufficient number of symptoms for a particular symptom presentation strategy to become visible. Cross-cultural differences observed in non-patients are harder to explain, but may be due to differences in how healthy members of the two cultures portray themselves. While interesting, such findings do not speak directly to symptom presentations made by distressed individuals.

The objective of the current study is to replicate the procedure used by Yen and colleagues (2000), modified in such as way so as to ensure that respondents are describing their recent response to a distressing event. Such events, and their symptomatic consequences, are by no means synonymous with the experience of psychopathology. This modification does ensure, nonetheless, that students are describing their response to some kind of notable stress from their recent experience, again using the CES-D. Four groups will be studied here: (a) Chinese students in China; (b) first-generation Chinese-Canadian students born in China; (c) second-generation
Chinese-Canadian students born in North America; and (d) Euro-Canadians students born in North America. More and less distressed subgroups will also be compared. In keeping with the findings of Yen and colleagues, it is not predicted here that Chinese students will have more somatization than the other groups or that Euro-Canadian students will have more psychologization than the other groups. What is anticipated is that these effects will be apparent only among those students who experienced a more serious event. The two main hypotheses of this study are therefore as follows:

**H1:** Individuals in the Chinese group will report a higher degree of somatic symptom presentation as compared with the other three groups in the context of a more serious event.

**H2:** Individuals in the Euro-Canadian group will show a higher degree of psychological symptom reporting as compared with the other three groups in the context of a more serious event.

Acculturation shall also again be explored, but this time using a more sensitive bidimensional measure of acculturation (Ryder, Alden, & Paulhus, 2000). No specific predictions will be made for these analyses given that Yen and colleagues (2000) found no effects for acculturation with a different assessment method.

**Methods**

**Participants**

Participants were undergraduate psychology students recruited from Hunan Normal Medical University in Changsha, Hunan, People’s Republic of China and from the University of British Columbia in Vancouver, British Columbia, Canada. Recruitment was conducted by announcing the study in large undergraduate classes, directing interested students to a Webpage containing information about the study, an explanation of informed consent, and an online questionnaire. Participants in Vancouver were entered into a draw for five prizes worth $100.00
each while those in Changsha received extra course credit. Only those participants who indicated that they agreed with the consent form were able to access the questionnaire. Participants were informed that only their email addresses would be required as identification, that these addresses would be stored separately from their responses, and that they would be deleted at the conclusion of the study.

The Chinese group consisted of 53 women and 38 men with a mean age of 20.7 years (Range = 17-32, SD = 2.7). All participants had a Han Chinese cultural background. In contrast, the Canadian group had considerable cultural heterogeneity, and three specific groups were extracted from a large sample of over 400 participants. The Asian-born Chinese-Canadian group consisted of 80 women and 20 men with a mean age of 19.8 years (Range = 16-25, SD = 1.6), the Western-born Chinese-Canadian group consisted of 50 women and 13 men with a mean age of 19.2 years (Range = 14-26, SD = 1.6), and the Euro-Canadian group consisted of 75 women and 14 men with a mean age of 20.8 (Range = 17-51, SD = 4.4). Group differences were found for age, $F(3,337) = 5.08, p < .05$, and also for sex, $X^2(3) = 13.4$. All analyses were therefore re-run controlling for these two variables. In no instance did these covariates have a significant relation with any dependent variables and in no instance did including these covariates change the pattern of results. For these reasons simple analyses, without covariates, are presented throughout this study.

**Questionnaire**

The online questionnaire presented to all participants included (a) demographics, (b) several specific questionnaires, and (c) a validity check. Each question was accompanied by either a drop-down menu of options or, in most cases, a series of ‘radio buttons’ clearly corresponding to degrees on a rating scale. Both formats allow for only one response per
question. The specific questionnaires totalled approximately 150 statements; questionnaires used for the present research are described below.

The validity check consisted of two statements, one stating that all the questions had been answered as accurately as possible and one stating that the questions had not necessarily been answered accurately. Each statement was accompanied by an independent checkbox; individuals who endorsed the second statement, who endorsed both statements, or who endorsed neither statement were not included in the database but nonetheless were included in the draw or given course credit. Participants were informed that responding to the validity statements honestly would not disqualify them from being eligible for the incentive.

Participants in the Chinese group completed the questionnaire in Mandarin Chinese using the simplified character set commonly used in Mainland China. All participants in Canada completed the questionnaire in English. The questionnaire was translated into Chinese by a bilingual undergraduate student in psychology with previous experience with translation, and checked by a bilingual psychology graduate student.

Event severity scale. Participants were asked to reflect on the previous three months and to focus on what they consider to be the most stressful event during that time. Six items were presented measuring aspects of severity (see Appendix) in order to estimate the extent to which the event affected the participant. Each item was rated on a 0-3 scale ranging from Disagree to Strongly Agree; items were summed to form a single scale. This scale had internal consistencies in the Chinese, Asian-born Chinese-Canadian, Western-born Chinese-Canadian, and Euro-Canadian groups of $\alpha = .81$, $\alpha = .62$, $\alpha = .64$, and $\alpha = .72$, respectively.

Center for Epidemiological Studies Depression Scale. The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) is a 20-item measure of depression designed
for use in multi-site survey research. Although it has primarily been used in Western samples, research has suggested that it has adequate psychometric properties in a Chinese sample (Cheung & Bagley, 1998; N. Lin, 1989; Zhang & Norvilitis, 2002). Each item was rated on a 0-3 rating scale ranging from Disagree to Strongly Agree. In this study, participants were asked to rate each item in reference to the week following the nominated event from the event severity scale, which was presented immediately before the CES-D.

Using this instrument in the current study allows for follow-up of work conducted by Yen and colleagues (2000). These researchers used factor analytic studies of the CES-D in China and North America to develop somatic and psychological symptom reporting scales. Three items were eliminated due to loading on both factors, and the final indices of symptom reporting were developed by dividing each scale by the remaining 17 items. The two scales therefore show the extent to which patients emphasized each class of symptoms relative to their overall symptomatology. In the current study the same method was used, although a third scale measuring positive symptoms was not calculated as it did not fit with the theory being tested.

*Vancouver Index of Acculturation.* The Vancouver Index of Acculturation (VIA; Ryder, Alden, & Paulhus, 2000) is a 20-item instrument designed to measure acculturation along two independent dimensions—Heritage and Mainstream cultural self-identity. Items are presented in pairs with regard to content domain, with one item in each pair referring to the heritage culture and the other item referring to the mainstream culture. These terms are first defined for the participants, who are then asked to nominate a heritage culture, defined as the culture which has influenced them the most, other than the mainstream culture: “It may be the culture of your birth, the culture in which you have been raised, or another culture that forms part of your background.” (Ryder, Alden, & Paulhus, 2000, p. 65).
In a series of studies, the VIA has been demonstrated to have adequate psychometric properties, including excellent internal consistency, a stable factor structure, and a meaningful pattern of correlations with demographics, peer ratings, and other acculturation measures in several cultural groups. Moreover, the instrument has yielded replicable findings in the domains of personality, self-identity, and psychosocial adjustment (Ryder et al., 2000). Each item is rated on a 9-point scale, ranging from strongly disagree to strongly agree. The instrument is only used in analyses involving the Asian-born and Western-born Chinese-Canadian groups; the two subscales each had internal consistencies of $\alpha > .80$ in both groups.

Results

Symptom Reporting

Somatic symptom reporting. A significant group difference was found for somatic symptom reporting, $F(3,333) = 10.16, p < .05$. Tukey's Least Significant Difference test found that Chinese students in Changsha reported significantly less somatic symptom reporting as compared with the Asian-born Chinese-Canadian group, the Western-born Chinese-Canadian group, and the Euro-Canadian group, all $ps < .05$, ESs = 0.60, 0.72, and 0.65, respectively. No differences were found between any of the groups in Vancouver. This finding goes against the idea that Chinese individuals are more likely to somatize in general, but fits with results obtained by Yen and colleagues (2000).

In order to further explore the extent to which the seriousness of the target event affected somatic symptom responding, the total event severity score was split along the median. A 4x2 ANOVA was then conducted, with four cultures and two levels of event severity. Again, a significant group difference was found for culture, $F(3,329) = 5.62, p < .05$, partial $\eta^2 = .05$. Although no main effect difference was found for event severity, $F(1,329) = 0.68, ns$, a significant interaction
was found, $F(3,329) = 7.04, p < .05$, partial $\eta^2 = .06$. This interaction is depicted in Figure 3.1. While the three groups in Vancouver showed slightly less somatic symptom reporting in the context of a more stressful trigger event, significantly more somatic symptom reporting was reported in Changsha with a more stressful trigger event. That said, differences in the extent of somatic symptom reporting were not sufficient to differentiate the groups in the predicted fashion – with a more stressful event, there were no significant differences between the groups.

Psychological symptom reporting. No significant group differences were found for psychological symptom reporting, $F(3,333) = 1.82, ns$. Individuals in all groups did show
significantly more psychological symptom reporting in response to a more stressful trigger event, $F(1,329) = 21.04, p < .05$, partial $\eta^2 = .06$. No significant interaction between cultural group and event severity was found, $F(3,329) = 0.40, ns$.

**Acculturation**

In order to explore the effects of acculturation on the other variables, separate correlation matrices were computed for the Asian-born Chinese-Canadian group and the Western-born Chinese-Canadian group. Each matrix crossed heritage and mainstream acculturation with somatic symptom reporting, psychological symptom reporting, and somatization tendency, resulting in six analyses per cultural group. As there were no a priori hypotheses, a Bonferroni-corrected $p$-value of .0083 was required for significance. No significant correlations were found. Splitting the samples by event severity also did not yield any significant correlations.

**Conclusions**

The results of this study in large part constitute a replication of those obtained by Yen and colleagues (2000). Contrary to expectations in the literature of Chinese somatization, students from Changsha in fact engaged in the lowest amount of somatic symptom reporting and none of the groups differed in terms of psychological symptom reporting. Also similar to this prior research, symptom presentation was not affected by the degree of acculturation despite the use of a bidimensional measure. At the same time, it was suggested in Chapter Two that such findings might be attributable at least in part to non-patients not reporting a sufficient number of symptoms overall for differences in presentation to be detectable. To take an extreme example, a person who is prone to somatization but who currently has no symptoms could not show a somatic symptom presentation. By this reasoning, the identification of somatization or
psychologization in patients but not in students is not solely due to cultural factors influencing the patient role but relate instead to the overall amount of distress being experienced.

Some evidence of this explanation can be identified in the finding that somatic symptom reporting showed a notable increase in Chinese students who experienced more a serious stressful event. At the same time, somatic symptom reporting decreased somewhat in Asian-born Chinese-Canadians and decreased even more so in Canadian-born Chinese Canadians and in Euro-Canadians when a more stressful event had been experienced. These changes were not sufficient to provide strong support for H1, as there was no point at which the Chinese students endorsed greater somatic symptom reporting than the other students. Nonetheless, these findings do suggest that as distress increases, somatization increases among the Chinese and decreases among those in the West. It follows that even more somatization would be observed among Chinese individuals with clinical levels of distress.

This explanation does not explain the failure of H2 – i.e., the lack of group differences in psychological symptom presentation. Yen and colleagues (2000) also obtained this result, and modifying the method to ensure that specific distressing events were being referenced was not sufficient to show any change. Similarly, no clear explanation has been advanced for the finding that there is in fact significantly less somatic symptom reporting overall in Chinese students, although possibilities such as modesty leading to mild endorsement of psychological symptoms were discussed in Chapter Two. Now that this result has been replicated, it is worth considering another potential explanation, one that relates directly to the methods used both here and by Yen and colleagues.

Questionnaires can yield problematic findings in cross-cultural studies even when the instruments themselves have been validated in both cultures. They do so because it is all but
impossible for individuals to rate themselves in a completely objective way, and in part rate themselves based on what they consider the norm to be. This norm is established by the larger cultural milieu; in the current study, that would be Chinese culture in the case of the Chinese group and Western culture in the case of the other three groups. Although this tendency has been most clearly established for self-concept and values measures (Heine, Lehman, Peng, & Greenholtz, 2002; Peng, Nisbett, & Wong, 1997), it could conceivably happen on symptom measures as well. Thus if there is a Chinese norm towards more complaining about serious somatic symptoms, students with only minimal distress may see themselves as not suffering at all by comparison. Although there is no way to establish that this bias is operating here, it is possible to design the next study so that it is less likely to operate. It should be noted, as well, that although cross-cultural mean comparisons can be problematic, interaction effects do not suffer from the same limitations. The study described in the next chapter will, therefore, focus on individuals who are clearly experiencing distress and will use multiple assessment methods rather than relying on questionnaires.
Chapter IV – Symptom Presentation in Chinese and Canadian Psychiatric Outpatients

The first study presented here helps to clarify previous work and turns our focus more squarely to the experience of individuals experiencing psychopathology. Rather than simply attempting to find individuals who are experiencing life distress, the focus of the current chapter will be on those whose distress has led them to seek out help from mental health services. This multimethod study will allow us to directly test hypotheses related to the three key questions posed in Chapter Two, framed here in relation to Chinese somatization: (a) does somatization occur? (b) when does somatization occur? (c) why does somatization occur?

The theoretical and historical review presented in the first two chapters discusses arguments for the Chinese somatization hypothesis, noting that there is at present insufficient empirical evidence to justify this claim. Moreover, historical change over the past twenty years raises the possibility that the hypothesis was once tenable but no longer holds true. This paper takes the position, nonetheless, that a lack of direct comparison studies and potential historical change does not eliminate the considerable theoretical and clinical literature predicting that Chinese patients somatize depression; instead, they create a greater need for further study. The research hypothesis tested here will therefore be that Chinese patients are indeed more likely to somatize depression. Similarly, the related hypothesis that Western patients are more likely to psychologize depression will also be tested.

A general prediction in favour of Chinese somatization and Western psychologization does not necessarily mean that these phenomena will be apparent regardless of the assessment method used. Unfortunately, in making specific hypotheses we are limited by a paucity of prior work relevant to this subject. As there is no firm way of differentiating between the different assessment modes in a way that would lead to hypotheses specific to each assessment method,
the approach here will be to anticipate Chinese somatization and Western psychologization for all methods used. That said, some speculation is possible about the extent to which confidence in each of these hypotheses is warranted, speculation which can help to guide interpretation in the event that different methods yield different results.

To the extent that Chinese somatization occurs because somatic symptoms are more salient, we would expect the greatest likelihood of confirming the somatization hypothesis using unstructured methods. These methods grant the patient the maximum opportunity for presenting his or her experience unaffected by the content of specific questions. At the same time, issues that are difficult to talk about are easier to pass over when they are not being queried directly. If we anticipate that somatic symptoms are easier than psychological symptoms for Chinese patients to discuss, and if this difference is smaller or is absent in the West, we would expect greater Chinese somatization and greater Western psychologization using interview methods. The unstructured interview comes closest to reflecting the ways in which a patient is most comfortable being viewed by a health care professional, and thus should be most reactive to the various sociocultural forces shaping that encounter. We can therefore predict with the most confidence that:

**H1: Chinese psychiatric patients will show greater somatic symptom presentation than will Western psychiatric patients using unstructured interviews.**

**H2: Western psychiatric patients will show greater psychological symptom presentation than will Chinese psychiatric patients using unstructured interviews.**

Although questionnaire methods are more structured, they have the advantage of being completed in greater privacy and, moreover, we have prior cross-cultural research evidence
showing Chinese somatization using questionnaire (Parker et al., 2001; Yen et al., 2000). We can therefore additionally predict with some confidence that:

**H3:** Chinese psychiatric patients will show greater somatic symptom presentation than will Western psychiatric patients using questionnaires.

**H4:** Western psychiatric patients will show greater psychological symptom presentation than will Chinese psychiatric patients using questionnaires.

Structured interviews are generally considered the most rigorous assessment methodology, they have the fewest a priori theoretical reasons for showing a Chinese bias towards somatic symptom presentation, and there is no prior research showing a cross-cultural difference in interview-based findings. Previous research on somatization in the West, discussed earlier, suggests that patients who first present in a preferred manner will often admit to other symptoms once they are asked about them directly (e.g. Bridges & Goldberg, 1985; Sayar et al., 2003). We will therefore predict, but with the least amount of confidence, that:

**H5:** Chinese psychiatric patients will show greater somatic symptom presentation than will Western psychiatric patients on structured interviews.

**H6:** Western psychiatric patients will show greater psychological symptom presentation than will Chinese psychiatric patients on structured interviews.

Note that not only have these three groups of hypotheses been presented in decreasing order of certainty, they are also presented in increasing order of the extent to which support of each hypothesis provides compelling evidence for the somatization hypothesis as a whole. Structured interviews are generally considered to be superior to other research methods for the assessment of psychopathology (First et al., 1997). Questionnaires, while not quite as rigorous, are still more comprehensive and more psychometrically sound than are brief, coded, and unstructured interviews. Of course, the most compelling evidence would be provided by agreement on findings across these three methods.
The third question posed by this research, and addressed by this study, is that of why there should be cultural differences in somatization and psychologization. As has been noted previously, many reasons have been proposed, but few have been proposed in advance and tested empirically. Thoroughly testing all available hypotheses would be well beyond the scope of this research, but it is possible to begin the process of exploring possible explanations in a systematic way. The approach that will be taken here involves attempting to 'unpack' culture. One of the important implications of recent work in cultural psychology has been to appreciate the role of both individual and cultural levels of analysis for psychological variables. To take a simple example, one can discuss national differences in wealth while at the same time remembering that individual wealth may vary widely in both countries. There exists the possibility of identifying, for example, Chinese individuals who present with depressed mood, anhedonia, and hopelessness as well as Western individuals who present with headache, insomnia, and muscle pain.

Simultaneous consideration of both cultural and individual levels can allow us to strengthen our explanations by "unpackaging culture," showing that our explanatory variables explain differences both within and across cultures (Heine et al., 2002). Returning to our example of wealth, we might study levels of happiness in two countries and find that the happier country also happens to be the wealthier country. Concluding that differences in happiness are attributable to differences in wealth is premature, however, as there are numerous other variables that might differ between these two countries. If, however, wealth and happiness are also shown to be positively associated within each country, we can be more confident in concluding that wealth is a plausible explanation for the observed differences in happiness. Similarly, each explanatory hypothesis to be presented here involves four relationships – (1) a cross-cultural
difference on Variable A, (2) a cross-cultural difference on Variable B, (3) a correlation between A and B in Culture X, and (4) a correlation between A and B in Culture Y (Ryder et al., 2002).

With these requirements in mind, explanatory hypotheses can be specified with greater clarity. Three general explanations for the Chinese somatization hypothesis have been reviewed in this paper that (a) remain open as possibilities in the literature and (b) can be tested empirically. First, a cross-cultural difference in symptom presentation might be attributable to the extent to which certain symptoms are acceptable or are stigmatized in each culture. Second, the difference might be attributable to the relative degree of attention paid to various classes of symptoms in each culture. Third, and finally, the difference might be attributable to links between symptom presentation and self-concept. These possibilities are not mutually exclusive. Following the structure required for unpacking culture, hypotheses for each of these explanations can be articulated. For cultural differences in stigma, we would predict the following:

**H7:** Chinese outpatients, relative to Canadian outpatients, will show (1) more somatic symptom reporting and (2) higher stigma of mental illness; these two variables will be positively correlated in both (3) China and (4) Canada.

**H8:** Chinese outpatients, relative to Canadian outpatients, will show (1) less psychological symptom reporting and (2) higher stigma of mental illness; these two variables will be negatively correlated in both (3) China and (4) Canada.

As it is expected that a greater focus on, and tendency to articulate, certain symptoms differs cross-culturally and also predicts greater reporting of these symptoms, we would also predict the following:

**H9:** Chinese outpatients, relative to Canadian outpatients, show (1) more somatic symptom reporting and (2) higher alexithymia; these two variables will be positively correlated in both (3) China and (4) Canada.

**H10:** Chinese outpatients, relative to Canadian outpatients, show (1) less psychological symptom reporting and (2) higher alexithymia; these two variables will be negatively correlated in both (3) China and (4) Canada.
Finally, as we have predicted a link between an independent self-concept and psychologization, and between an interdependent self-concept and somatization, we would predict the following:

**H11:** Chinese outpatients, relative to Canadian outpatients, show (1) more somatic symptom reporting and (2) lower independent self-concept; these two variables will be negatively correlated in both (3) China and (4) Canada.

**H12:** Chinese outpatients, relative to Canadian outpatients, show (1) less psychological symptom reporting and (2) lower independent self-concept, and these two variables will be positively correlated in both (3) China and (4) Canada.

**H13:** Chinese outpatients, relative to Canadian outpatients, show (1) more somatic symptom reporting and (2) higher interdependent self-concept; these two variables will be positively correlated in both (3) China and (4) Canada.

**H14:** Chinese outpatients, relative to Canadian outpatients, show (1) less psychological symptom reporting and (2) higher interdependent self-concept; these two variables will be negatively correlated in both (3) China and (4) Canada.

After presenting the methods, this chapter will first proceed to test those hypotheses pertaining to whether the Chinese somatization hypothesis actually holds, and under what assessment circumstances. The chapter will then move to those hypotheses testing whether unpackaging culture can help us to understand why there is a tendency towards different symptom presentations in Chinese versus Western culture.

**Method**

**Sites**

The Chinese group consists of clinical outpatients from the Neurosis Clinic, Center for Psychological Research, Hunan Medical University – 2nd Affiliated Hospital in Changsha, Hunan, People’s Republic of China. China is the most populous country in the world with 1.3 billion inhabitants, over 90% of whom are of Han Chinese origin. The country has a median age of 31.5 years and a life-expectancy of 72.2 years (Central Intelligence Agency, 2004). Changsha
serves as the capital of Hunan province and has a metropolitan area of 6.0 million people (Wikimedia Foundation, 2004), 1.8 million of whom live in the city proper (Encyclopaedia Britannica, 2004). The Neurosis Clinic is the premier site in the region for the treatment of a broad range of psychiatric problems, including those that in North America would be termed mood, anxiety, somatoform, and personality disorders. Complex cases are often referred there and, by virtue of its medical school affiliation, the clinic has mandates for teaching and research as well as for clinical work. Note that by having a catchment area that is predominantly a modernized urban center, cultural differences are expected to be smaller than would be found in a rural setting.

The North American group, meanwhile, consisted of clinical outpatients from the Depression Clinic, Mood and Anxiety Program, Centre for Addiction and Mental Health in Toronto, Ontario, Canada. Canada is the second-largest country in the world by landmass but has a population of 32.2 million inhabitants, about half the population of Hunan province. Canada has also been marked by high rates of immigration, and today about 34% of the population claims a non-European background. The country has a median age of 37.8 years and a life-expectancy of 79.8 years (Central Intelligence Agency, 2004). Toronto serves as the capital of the province of Ontario and has a metropolitan area with 4.7 million people, 2.5 million of whom live in the city proper (Encyclopaedia Britannica Online, 2004). The Mood and Anxiety Program, like the Neurosis Clinic in Changsha, is the premier site in the region for the treatment of mood and anxiety disorders, and also has research and teaching mandates.

Participants

All outpatients who entered the former facility between April 1\textsuperscript{st} and September 30\textsuperscript{th}, 2002, or the latter facility between April 20\textsuperscript{th} and September 13\textsuperscript{th}, 2002, were considered for
inclusion into the study. However, potential subjects were immediately excluded if (a) their initial presentation, either self-reported or indicated by a referring physician, included symptoms of psychosis, mania, or cognitive impairment, (b) they were younger than 18 or older than 65, or (c) they lived outside the metropolitan area of Changsha or Toronto. Potential subjects were asked for permission to include the results of their assessment in the current project and were given a consent form which explained the procedures and clearly stated that refusal to participate would not affect access to treatment. Institutional approval was obtained from both sites.

In Changsha, a total of 215 outpatients were approached for inclusion into the study, 208 (97%) of whom were willing to provide informed consent. Twelve additional subjects (6%) were excluded as a result of psychotic, manic, or neurocognitive symptoms that became apparent over the course of the assessment. All subjects in Changsha reported a Han Chinese cultural background. In Toronto, a total of 163 outpatients were approached for inclusion into the study, 155 (95%) of whom were willing to provide informed consent. Nine subjects (6%) were excluded as a result of psychotic, manic, or neurocognitive symptoms that became apparent during the assessment. Twenty-three (14%) subjects in Toronto reported a cultural background that was not Euro-Canadian; although data were collected from them for use in other research, their results have not been included in the present study. After applying these exclusion criteria, 196 patients in Changsha and 123 patients in Toronto provided data that were analyzed in the present study.

In order to maximize comparability between the two samples, an additional set of exclusion criteria was applied to the data after they had been collected. Two potential problems were addressed with this approach. First, the clinic in Toronto had a narrower mandate than did the clinic in Changsha, focusing more directly on depression. Both clinics would accept a
depressed patient, a mixed depressed-anxious patient, or a depressed-personality disordered patient. Pure anxiety or personality disorder patients, on the other hand, would be referred elsewhere. In Changsha, all of these categories would fall under the general rubric of ‘neurosis’ and would be seen in the clinic. Second, the Toronto clinic would occasionally receive medication consults involving patients no longer experiencing any current psychopathology. To address these concerns, only patients with at least one of the core symptoms of depression or neurasthenia, across a combination of the DSM-IV, ICD-10, and CCMD-2-R systems, would be included in the study. Specifically, patients who did not have at least one of depressed mood, anhedonia, fatigue, sleep problems, emotional arousal, or pain, as assessed by structured interview were eliminated from all further analyses. This procedure ensured that all patients in the sample had at least one potential symptom of depression or neurasthenia, and resulted in the loss of 21 (11%) participants in Changsha and 16 (13%) participants in Toronto.

The final Changsha sample consisted of 80 men and 95 women of Han Chinese background with a mean age of 31 years (Range = 18-65; SD = 11). Of the 175 participants, 6 (3.4%) had not finished elementary school, 39 (22.3%) had finished elementary school only, 68 (38.9%) had finished secondary school, 58 (33.1%) had a bachelor’s degree, and 4 (2.3%) had a master’s degree. In terms of past treatment, 143 (81.7%) had been in some form of treatment in the previous month, and 74 (42.3%) first sought help for their current problem during that month.

The final Toronto sample consisted of 46 men and 61 women of Euro-Canadian background with a mean age of 36 years (Range = 18-60; SD = 10). Of the 107 participants, 9 (8.4%) had finished only elementary school, 31 (29.0%) had finished secondary school, 49 (45.8%) had a bachelor’s degree, 16 (15.0%) had a master’s degree, and 2 (1.9%) had doctoral
degrees. In terms of past treatment, 85 (79.4%) had been in some form of treatment in the previous month, and 23 (21.5%) first sought help for their current problem during that month.

Comparing the two samples, there were no significant differences in sex, $X^2(1) = .20, ns$, and treatment in past month, $X^2(1) = .22, ns$. There were, however, significant differences in age, $t'(238.6) = 3.89, p < .05$, and first seeking help in the past month, $X^2(1) = 12.7, p < .05$. Specifically, there was a tendency for the Chinese participants to be younger and to have sought help more recently. The age difference noted earlier for China and Canada as a whole is mirrored in the two samples, suggesting that they are both demographically representative of their respective countries. Also, the definition of treatment-seeking did not include informal help-seeking within the family, a process which in Chinese patients often delays formal treatment in either biomedical or traditional Chinese medical settings (Ryder, Bean, & Dion, 2000).

In order to compare the two samples on education level, a numerical rank was assigned to each education level with higher ranks reflecting higher educational attainment: not finishing elementary school, rank = 1; finishing elementary school, rank = 2; finishing secondary school, rank = 3; having a college diploma or bachelor’s degree, rank = 4; having a master’s degree, rank = 5; having a doctoral degree, rank = 6. Sample differences were tested using the Mann-Whitney $U$ and showed a higher educational level in the Canadian sample, $U = 5970.5, p < .05$. Much of the difference was created by a much higher number of Chinese patients who had not completed elementary school. Although educational statistics for China were not readily available, this difference is likely related to the discrepancy in literacy rates noted earlier.

*Interview*

All subjects were assessed using the *Structured Clinical Interview for DSM-IV, Axis I, Patient Version* (SCID-I/P) modules for Mood, Anxiety, and Somatoform Disorders (First,
Spitzer, Gibbon, & Williams, 1997). Only those results from the Mood Disorders module are reported in the current study. Several modifications were made especially for the present study in order to improve the utility of this instrument for cross-cultural use. The reduction to three modules and the various modifications were designed to fit the SCID-I/P modification guidelines provided by First, Gibbon, Spitzer, & Williams (2004):

1. All disorders were supplemented with questions assessing unique criteria provided by the *International Classification of Diseases* (ICD-10) and the *Chinese Classification of Mental Disorders* (CCMD-2-R). These questions were developed by the research team and evaluated by a psychiatrist familiar with the ICD-10 and CCMD-2-R diagnostic systems. This step was critical for ensuring that a cross-cultural study of psychopathology would not be unduly constrained by the symptoms thought to be important in only one of the cultures. However, additional questions were placed at the end of each section in order to protect the official SCID-I sequence of questions from excessive modification.

2. Second, all symptoms were assessed, regardless of whether syndrome criteria were met, as suggested by Ballenger and colleagues (2001). For example, all symptoms of Dysthymic Disorder were queried even if the participant had already denied two consecutive years of depressed mood. This method allows all symptoms to be included in the analysis instead of potentially being dropped due to exclusion criteria developed in one culture, thereby increasing validity. This change also has the effect of reducing a response bias in favour of denying symptoms in order to shorten the interview.
(3) A neurasthenia section was developed in order to assess this disorder according to international and indigenous Chinese diagnostic criteria. This module was developed in the same way as the additional symptom questions discussed above, and placed at the end of the mood disorders module. Including this section was part of ensuring that both Chinese and Western syndromes, and their respective symptoms, were being properly accounted for.

(4) Fourth, an initial section allowing for verbatim coding of spontaneously reported presenting symptoms was added and is described in more detail below. This section simulates the opening of a standard clinical interview, in which the patient simply reports those symptoms which are most salient and which he or she is most willing to talk about.

(5) Finally, the rating scheme was expanded in order to allow for dimensional assessment of symptom severity. Each symptom was rated, as in the original SCID-I/P (First et al., 1997), as either present or absent. Once this decision was made, however, interviewers were asked to make their final ratings along a 0-3 scale. Absent symptoms were coded as 0 if they were completely absent and 1 if they were present in some form but beneath the threshold for diagnosis and/or clinical significance. Present symptoms were coded as 3 if the symptom was present and severe (defined for interviewers as, “at least within the top quartile of clinical outpatients and leading to marked impairment.”) and as 2 in all other cases. Use of dimensional rather than dichotomous rating scales facilitates parametric and multivariate statistical analyses (Gorsuch, 1997). This rating system is based on the coding system for the Present State Examination, Tenth Edition (PSE-10; Wing, Sartorious, & Üstün, 1998).
The interview was developed in English and then translated into Chinese by a bilingual psychiatrist experienced in translating assessment instruments. Insufficient resources were available to allow a full back-translation; instead, the English and Chinese versions of the interview were carefully scrutinized by a bilingual doctoral student in clinical psychology with no prior exposure to the instrument. Only a few minor problems were detected, and improvements were made based on discussions between the translator, the checker, and the principal investigator. Note that having a bilingual expert at both the translation and the checking stage is often considered superior to the more commonly applied back-translation method (Hambleton, 1993; Van de Vijver & Leung, 1997). The specific interview components are described below.

**Spontaneous problem report.** The spontaneous problem report (SPR) section allowed assessment of the patient’s self-described reasons for seeking treatment. Several interview prompts are provided, and the experimenter is asked to record problems. Here, prompts are designed to elicit problems in general and to encourage the patient to elaborate on them; interviewers were instructed neither to inquire about any problems that were not spontaneously reported, nor to suggest possibilities if the patient’s own description was unclear.

Problems were recorded in the order in which they were described by the patient, and the first four were coded by pairs of trained research assistants familiar with either Chinese or English, as appropriate. The coding system was developed by going through the depression, dysthymia, and neurasthenia of the enhanced SCID-I and creating a problem category based on each symptom. As many anxiety symptoms were also reported, an additional category was created for each individual anxiety disorder listed in *DSM-IV* (no additional anxiety disorders are found in CCMD-2-R or ICD-10). A final two categories were created, one for reporting a range
of practical life problems and one for specific physical symptoms that could potentially serve as Chinese idioms for emotional distress (Kleinman, 1986). The resulting system contained 44 symptom categories. Within each sample, the two research assistants each coded 60% of the problems, allowing for some overlap. Kappa coefficients calculated for the randomly selected overlapping areas were adequate for both Chinese and North American samples, .80 and .84, respectively. The coding scheme, with examples of specific problems, is presented in Table 4.1.

To organize the symptom categories into a small number of theoretically useful groups, symptom categories were further divided into psychological and physical classes following Kleinman (1986). Separate classes were also created for anxiety symptoms and reversed physical symptoms (i.e. hyperphagia, hypersomnia, and agitation). The 44 symptom categories were first sorted into these four classes by two undergraduate research assistants who achieved 100% agreement. Then, the individual patient responses to these 44 categories were recoded into the four classes and two variables were calculated for physical and psychological symptom reporting. These variables measured the percentage of responses that were physical and psychological, respectively. As neither anxiety nor reversed symptoms were part of the theoretical model being tested here, they were not considered further in this study.

Structured interview. The first section of the structured clinical interview (SCI) was based on DSM-IV criteria for a current Major Depressive Episode (MDE), supplemented by criteria for: (a) DSM-IV atypical and melancholic subtypes; (b) ICD-10 MDE plus atypical and
Table 4.1

Coding System for Self-Reported Symptoms

<table>
<thead>
<tr>
<th>Symptom Name</th>
<th>Symptom Class</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depressed Mood</td>
<td>Psychological</td>
<td>Sad all the time; feeling down; unhappy; melancholy mood</td>
</tr>
<tr>
<td>Anhedonia</td>
<td>Psychological</td>
<td>Not interested in anything; don’t enjoy things</td>
</tr>
<tr>
<td>Aphagia</td>
<td>Somatic</td>
<td>Losing a lot of weight; not eating much; never hungry</td>
</tr>
<tr>
<td>Hyperphagia</td>
<td>Rev. Somatic</td>
<td>Eating way too much; always craving food</td>
</tr>
<tr>
<td>Insomnia</td>
<td>Somatic</td>
<td>Can’t get to sleep; keep waking up at night; restless sleep</td>
</tr>
<tr>
<td>Hypersomnia</td>
<td>Rev. Somatic</td>
<td>Sleeping all the time; have trouble waking up</td>
</tr>
<tr>
<td>Fatigue / No Energy</td>
<td>Somatic</td>
<td>Always tired; don’t have energy to do things</td>
</tr>
<tr>
<td>Retardation</td>
<td>Somatic</td>
<td>Speaking really slowly; move more slowly than I used to</td>
</tr>
<tr>
<td>Agitation</td>
<td>Rev. Somatic</td>
<td>People say I’m talking to quickly; body feels restless</td>
</tr>
<tr>
<td>Worthlessness</td>
<td>Psychological</td>
<td>Feel like I’m no good; hate myself</td>
</tr>
<tr>
<td>Guilt</td>
<td>Psychological</td>
<td>Always feeling bad about things I’ve done</td>
</tr>
<tr>
<td>Concentration</td>
<td>Psychological</td>
<td>Can’t keep my mind on things; trouble paying attention</td>
</tr>
<tr>
<td>Problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indecisiveness</td>
<td>Psychological</td>
<td>Unable to make up my mind; agonize over minor decisions</td>
</tr>
<tr>
<td>Other Thinking Probs.</td>
<td>Psychological</td>
<td>Keep forgetting things; bad memory</td>
</tr>
<tr>
<td>Suicidality</td>
<td>Psychological</td>
<td>Want to die; tried to kill myself; always think about death</td>
</tr>
<tr>
<td>Low Libido</td>
<td>Somatic</td>
<td>Not interested in sex; sex drive lower than before</td>
</tr>
<tr>
<td>Other Sex Problems</td>
<td>Somatic</td>
<td>Worry about sex; have trouble getting aroused</td>
</tr>
<tr>
<td>Hopelessness</td>
<td>Psychological</td>
<td>Despair about the future; doubt things will ever change</td>
</tr>
<tr>
<td>Pessimism</td>
<td>Psychological</td>
<td>Don’t expect much from life; always assume the worst</td>
</tr>
<tr>
<td>Low Self-Esteem</td>
<td>Psychological</td>
<td>Feel bad about myself; often tell myself I’m no good</td>
</tr>
<tr>
<td>Mood Lability</td>
<td>Psychological</td>
<td>Am really moody; emotional outbursts; temperamental</td>
</tr>
<tr>
<td>Social Avoidance</td>
<td>Psychological</td>
<td>Prefer to stay away from people; cutting off my friends</td>
</tr>
<tr>
<td>Irritability</td>
<td>Psychological</td>
<td>Get angry a lot; bad temper; everyone gets on my nerves</td>
</tr>
<tr>
<td>Nervousness / Tension</td>
<td>Anxiety</td>
<td>Often feel nervous and tense; all wound up</td>
</tr>
<tr>
<td>Overwhelmed / Stressed</td>
<td>Psychological</td>
<td>Can’t deal with things; stressed at work; too much to do</td>
</tr>
<tr>
<td>Tearfulness</td>
<td>Psychological</td>
<td>Crying all the time; can’t hold back tears</td>
</tr>
<tr>
<td>Pain</td>
<td>Somatic</td>
<td>Frequent headaches; pain all over; joints and back are sore</td>
</tr>
<tr>
<td>Gastro. Problems</td>
<td>Somatic</td>
<td>Lots of stomachaches; indigestion; diarrhea</td>
</tr>
<tr>
<td>Somatization</td>
<td>Somatic</td>
<td>Winds moving in my body; pushing on my chest</td>
</tr>
<tr>
<td>Symptoms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panic</td>
<td>Anxiety</td>
<td>Feel panicky a lot; get all worked up into an anxious fit</td>
</tr>
<tr>
<td>Agoraphobia</td>
<td>Anxiety</td>
<td>Afraid to leave the house; hate crowds</td>
</tr>
<tr>
<td>Social Anxiety</td>
<td>Anxiety</td>
<td>Can’t stand social gatherings; nervous even with friends</td>
</tr>
<tr>
<td>General Anxiety / Worry</td>
<td>Anxiety</td>
<td>Worried all the time; keep thinking bad things will happen</td>
</tr>
<tr>
<td>Fearfulness</td>
<td>Anxiety</td>
<td>Sick of being afraid; very fearful; living in fear</td>
</tr>
<tr>
<td>Obsessions</td>
<td>Anxiety</td>
<td>Thoughts I can’t get rid of; thinking things over and over</td>
</tr>
<tr>
<td>Compulsions</td>
<td>Anxiety</td>
<td>Always washing my hands; strong urge to count things</td>
</tr>
<tr>
<td>Health Concerns</td>
<td>Anxiety</td>
<td>Keep thinking I have cancer; worry too much about health</td>
</tr>
<tr>
<td>Specific Fear</td>
<td>Anxiety</td>
<td>Can’t stand dogs; won’t go in airplanes; afraid of heights</td>
</tr>
<tr>
<td>Interpersonal Conflict</td>
<td>Psychological</td>
<td>Keep fighting with husband; children don’t understand me</td>
</tr>
<tr>
<td>Helplessness</td>
<td>Psychological</td>
<td>Feel like nothing can save me; no power to change things</td>
</tr>
<tr>
<td>Existential Concerns</td>
<td>Psychological</td>
<td>Worry about my purpose in life; afraid it’s all meaningless</td>
</tr>
<tr>
<td>Amotivation</td>
<td>Psychological</td>
<td>No motivation; no will to get things done</td>
</tr>
<tr>
<td>Suppressed Emotions</td>
<td>Psychological</td>
<td>Can’t express myself; emotions are constricted</td>
</tr>
</tbody>
</table>
somatic subtypes; and (c) CCMD-2-R MDE plus Neurotic Depression. Space was also provided to allow recording of the specific form taken by multivalent criteria; for example, “insomnia or hypersomnia nearly every day” allows coding of whether insomnia or hypersomnia is present. Note that although “feelings of hopelessness” are not a part of any diagnostic system, CCMD-2-R does include, “pessimism without complete hopelessness.” In order to properly measure this less serious symptom, assessment of hopelessness was included as well. The second section was based on CCMD-2-R criteria for Neurasthenia, supplemented by some additional details required for an ICD-10 diagnosis. Specific symptoms and their placement in the three diagnostic systems used here are presented in Table 4.2.

The final section of the interview allowed the interviewer to provide a provisional diagnosis and to record overall impairment. Provisional diagnoses were made according to the local system, CCMD-2-R in Changsha and DSM-IV in Toronto, and were based on interviewers’ impressions and the results of the interview. In addition, after data had been collected and entered, computer algorithms were used to generate diagnoses from the structured interview results based on the specific requirements of each disorder and system. The interviewer was also asked to fill out an overall impairment scale consisting of four domains of functioning: (a) physical and psychological health problems; (b) workplace or academic problems; (c) family relationship problems; and (d) interpersonal problems. Each item was rated on a 0-3 scale (0 = no impairment, 1 = minor impairment, 2 = clinically significant impairment, and 3 = severe impairment) and the items were summed to generate an overall impairment score. Finally, the interviewer was asked to record whether there were any signs of psychosis, mania, or cognitive impairment during the interview, allowing identification of patients who should not be included in the study.
Table 4.2

Symptoms of Depression and Neurasthenia from Structured Interview

<table>
<thead>
<tr>
<th>Major Depressive Disorder</th>
<th>DSM-IV</th>
<th>CCMD-2-R</th>
<th>ICD-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Depressed Mood</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1b) Depression worse in morning</td>
<td>+1</td>
<td>-</td>
<td>+4</td>
</tr>
<tr>
<td>2) Diminished interest or pleasure</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>2b) Decreased interest without complete loss</td>
<td>-</td>
<td>+3</td>
<td>-</td>
</tr>
<tr>
<td>3) Weight or Appetite loss/gain</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>4) Insomnia/hypersomnia</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>4b) Early morning awakening</td>
<td>+1</td>
<td>-</td>
<td>+4</td>
</tr>
<tr>
<td>5) Psychomotor agitation/retardation</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>6) Fatigue or loss of energy</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>7) Feelings of worthlessness or guilt</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>7b) Low self-esteem but able to be cheered up</td>
<td>-</td>
<td>+3</td>
<td>-</td>
</tr>
<tr>
<td>8) Poor concentration or decision making</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>9) Suicidality</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>10) Loss of sexual desire</td>
<td>-</td>
<td>*</td>
<td>+4</td>
</tr>
<tr>
<td>11) Loss of confidence or self-esteem</td>
<td>-</td>
<td>-</td>
<td>*</td>
</tr>
</tbody>
</table>

Additional Depressive Symptoms

| 1) Feelings of hopelessness | -      | -        | -      |
| 1b) Pessimism without complete hopelessness | -      | +3       | -      |
| 2) Lack of emotional reactions | -      | -        | +4     |
| 3) Low/high reactivity       | +1/2   | -        | -      |
| 4) Leaden paralysis          | +2     | -        | -      |
| 5) Avoidance of social interaction | -      | +3       | -      |
| 6) Interpersonal rejection sensitivity | +2     | -        | -      |

Symptoms of Neurasthenia

| 1) Emotional disturbance. | -      | *        | *      |
| 2) Mental arousal with uncontrollable thoughts. | -      | *        | -      |
| 3) Easily fatigued.      | -      | *        | *      |
| 4) Aches and pains.      | -      | *        | *      |
| 5) Sleep disturbance.    | -      | *        | *      |
| 6) Dizziness.            | -      | -        | *      |

* = core symptom; + = additional symptom; 1 = Melancholic subtype symptom; 2 = Atypical subtype symptom; 3 = Neurotic Depression symptom; 4 = Somatic Syndrome symptom.
To generate variables for physical and psychological symptom reporting, it was first necessary to categorize the structured interview symptoms. Two different methods were used. First, the symptoms from the depression and neurasthenia modules were coded into physical and psychological symptoms using the same method described for the SRS. Two undergraduate research assistants coded the symptoms separately, with agreement on every symptom except for the ICD-10 neurasthenia symptom of ‘dizziness’. Second, Principal-Axis factor analysis (PAF) was conducted on the set of symptoms from the structured interview, following Gorsuch (1997) who suggests this method when sets of individual items are being factored. A Promax oblique rotation was conducted on the overall sample as one would expect two factors measuring psychopathology to be positively correlated. The ‘eigenvalues greater than one’ (EV>1) criterion indicated 4 factors whereas visual inspection of the scree plot suggested a more parsimonious 2-factor solution. Although the EV>1 criterion is more objective, it also has a tendency to produce too many factors (Gorsuch, 1997). Moreover, the 4-factor solution resulted in a small factor (i.e. < 3 loadings) and several cross-loading items that were difficult to interpret. The 2-factor solution, in contrast, showed a clear division between physical and psychological symptoms and was thus retained (see Table 4.3). Moreover, this solution matched the one obtained by coding the symptoms, although it also showed that three symptoms – including ‘dizziness’ – did not exceed a minimum loading of .30. These three symptoms were dropped and the remaining two groups of symptoms were summed to create SCI variables for physical and psychological symptom reporting.

**Interviewers.** Interviews in Changsha were conducted by one doctoral student in clinical psychology and two clinical psychologists while interviews in Toronto were conducted by three doctoral students in clinical psychology and one masters-level psychometrician. All interviewers
Table 4.3

Principal-Axis Factor Analysis of Structured Interview Symptoms

<table>
<thead>
<tr>
<th></th>
<th>Factor 1 (Psychological)</th>
<th>Factor 2 (Somatic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Self-Esteem</td>
<td>.83</td>
<td></td>
</tr>
<tr>
<td>Worthlessness / Guilt</td>
<td>.83</td>
<td></td>
</tr>
<tr>
<td>Loss of Interest</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td>Social Avoidance</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td>Hopelessness</td>
<td>.65</td>
<td></td>
</tr>
<tr>
<td>Suicidality</td>
<td>.63</td>
<td></td>
</tr>
<tr>
<td>Depressed Mood</td>
<td>.58</td>
<td></td>
</tr>
<tr>
<td>Lack of Emotions</td>
<td>.44</td>
<td></td>
</tr>
<tr>
<td>Loss of Libido</td>
<td>.35</td>
<td></td>
</tr>
<tr>
<td>Thinking Problems</td>
<td>.32</td>
<td></td>
</tr>
<tr>
<td>Sleep Disruption</td>
<td></td>
<td>.80</td>
</tr>
<tr>
<td>Insomnia / Hypersomnia</td>
<td></td>
<td>.77</td>
</tr>
<tr>
<td>Fatigue / Loss of Energy</td>
<td></td>
<td>.60</td>
</tr>
<tr>
<td>Deterioration</td>
<td></td>
<td>.57</td>
</tr>
<tr>
<td>Retardation / Agitation</td>
<td></td>
<td>.45</td>
</tr>
<tr>
<td>Leaden Paralysis</td>
<td></td>
<td>.42</td>
</tr>
<tr>
<td>Aphagia / Hyperphagia</td>
<td></td>
<td>.35</td>
</tr>
<tr>
<td>Pain</td>
<td></td>
<td>.31</td>
</tr>
</tbody>
</table>

% Explained Variance  28.15%  7.23%

had considerable prior experience with conducting clinical and structured interviews both for clinical purposes and as part of research studies. Interviewers in Changsha were trained, observed, and approved by a bilingual psychiatrist experienced in collecting clinical research data before beginning the study. Interviewers in Toronto had been similarly trained and approved for previous research using the SCID-I/P but were not directly observed for the present study. Nevertheless, all had previously been observed and approved for studies using the SCID-I at the Toronto site.

One potential problem with the interview methods used in this study is that the principal investigator also carried out 61 of the 107 (57%) interviews in Toronto. As described previously, the interview was used to develop four measures of symptom presentation which were central to
the data analysis: (a) self-reported psychological symptoms; (b) self-reported somatic symptoms; (c) structured interview psychological symptoms; (d) structured interview somatic symptoms. No significant difference was found on any t-test comparing the 61 protocols collected by the principal investigator and the 46 protocols collected by the other three interviewers on any of these measures, all ps > .30.

**Questionnaire**

After completing the interview, patients were given a written questionnaire to complete privately and return to the interviewer on the same day. This questionnaire was composed of a variety of instruments, some originally developed in English and some in Chinese. When pre-existing and, especially, pre-validated translations existed, those versions were obtained and used. The remaining questionnaires were translated by a bilingual undergraduate research assistant with previous formal training and experience in translation, and back-translated by a second bilingual research assistant with a background in psychology.

*Center for Epidemiological Studies Depression (CES-D) Scale.* This scale was described in Chapter Three. In this study, however, patients were not asked to complete the scale in reference to a specific stressful event. Instead, they were instructed to report on their symptoms over the past week. Symptom reporting subscales were again calculated using the method described by Yen and colleagues (2000) and presented in Chapter Three.

*General & Chinese Health Questionnaires.* The 30-item version of the General Health Questionnaire (GHQ-30; Goldberg, 1972; Goldberg & Williams, 1988) was designed to detect cases of minor psychiatric morbidity, i.e. unipolar depression and anxiety. An original item pool of 200 common symptoms was developed and the thirty items that best predicted the presence vs. absence of a diagnosable psychiatric disorder were incorporated into the scale. Each item was
rated on a 0-3 rating scale, ranging from No-Disagree to Yes-Strongly Agree. This instrument has been validated in a Chinese context (Chan & Chan, 1983).

Recognizing the utility of such broad and brief symptom questionnaires in multi-national surveys, but their potential inadequacy for detecting Chinese cases, Cheng and Williams (1986) developed the 30-item Chinese Health Questionnaire (CHQ-30). This scale has also been validated in a Chinese context (Choong & Wilkinson, 1989), although not in a Western one. Here, the initial item pool consisted of the GHQ-30 items plus 30 new items thought to better represent Chinese psychopathology, and reduced to the thirty best predictors in a large Chinese sample; the final instrument contains 15 original GHQ-30 symptoms plus 15 of the new symptoms. In the present study, the two questionnaires were combined so as to first present the GHQ-30 in its original order, followed by the 15 unique items from the CHQ-30; this combined 45-item instrument is labeled the GHQ/CHQ.

In order to develop physical and psychological symptom presentation variables, the items from the GHQ/CHQ were sorted using the same dual method followed for the SCI. First, the 45 symptoms were sorted into positively and negatively coded items. Only the negatively coded items (i.e. present symptoms) were used in the current study, as previous research has shown that the positively-coded items tend to form a single factor (e.g. Huppert, Walters, Day, & Elliot, 1989), a factor that would not be relevant to the theory being tested here. The 29 remaining items were then coded by the same trained research assistants into physical and psychological symptoms with 93% accuracy. Two items were miscoded, “feeling panicky,” and, “giddy feeling.”

Following coding, the 29 symptoms were then factor analyzed again using Principal-Axis factor analysis with Promax oblique rotation (Gorsuch, 1997). As with the interview data, the
Table 4.4
Principal-Axis Factor Analysis of GHQ/CHQ Symptoms

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1 (Psychological)</th>
<th>Factor 2 (Physical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feel Worthless</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td>Loss of Confidence</td>
<td>.87</td>
<td></td>
</tr>
<tr>
<td>Believe Life is Worthless</td>
<td>.79</td>
<td></td>
</tr>
<tr>
<td>Unhappy</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>Hard to Enjoy Things</td>
<td>.75</td>
<td></td>
</tr>
<tr>
<td>Hard to Face Problems</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>Hopelessness</td>
<td>.73</td>
<td></td>
</tr>
<tr>
<td>Feel a Burden to Others</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>Hard to Get Along</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>Under Strain</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>Stressed</td>
<td>.51</td>
<td></td>
</tr>
<tr>
<td>Loss of Energy</td>
<td>.51</td>
<td></td>
</tr>
<tr>
<td>Hard to be Alert</td>
<td>.49</td>
<td></td>
</tr>
<tr>
<td>Hard to Concentrate</td>
<td>.48</td>
<td></td>
</tr>
<tr>
<td>Nervousness</td>
<td>.42</td>
<td>.37</td>
</tr>
<tr>
<td>Chest Discomfort</td>
<td>.73</td>
<td></td>
</tr>
<tr>
<td>Heart Problem</td>
<td>.68</td>
<td></td>
</tr>
<tr>
<td>Loss of Sleep</td>
<td>.60</td>
<td></td>
</tr>
<tr>
<td>Respiration Problem</td>
<td>.58</td>
<td></td>
</tr>
<tr>
<td>Numbness in Limbs</td>
<td>.52</td>
<td></td>
</tr>
<tr>
<td>Weakness of Nerves</td>
<td>.48</td>
<td></td>
</tr>
<tr>
<td>Feeling Panicky</td>
<td>.31</td>
<td>.45</td>
</tr>
<tr>
<td>Body Pain</td>
<td>.44</td>
<td></td>
</tr>
<tr>
<td>Restlessness</td>
<td>.44</td>
<td></td>
</tr>
<tr>
<td>Unease</td>
<td>.40</td>
<td></td>
</tr>
<tr>
<td>Giddy Feeling</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>Taking Things Hard</td>
<td>.32</td>
<td>.35</td>
</tr>
<tr>
<td>Worry About Relatives</td>
<td>.31</td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td>.29</td>
<td></td>
</tr>
<tr>
<td>% Explained Variance</td>
<td>33.85%</td>
<td>5.54%</td>
</tr>
</tbody>
</table>

Note. As stated in the text, positive ‘symptoms’ are not included in this analysis.

EV>1 criterion yielded several small and uninterpretable factors whereas visual inspection of the scree plot yielded a clear 2-factor solution. Psychological symptoms loaded on the first factor and physical symptoms loaded on the second factor (see Table 4.4). Three items loaded on both factors (including one of the previously miscoded items), one item had a loading < .30, and one item, “worry about relatives,” ended up loading on the opposite factor to the one on which it was placed during the coding procedure. These five items, plus the other previously miscoded item,
were dropped from the final scales. The remaining items were used to develop physical and psychological symptom reporting scales for the GHQ/CHQ. Following the procedure used by Yen and colleagues (2000) for the CES-D, the scales were divided by the total score of all items used.

Demoralization Scale. The stigma scale used here, Link’s (1987) Demoralization Scale (LDS), is a 4-item scale derived from a larger set of items designed to assess the experience of stigma by individuals suffering from psychopathology. This particular set of items is intended to assess the extent to which such individuals feel different from others and ashamed of themselves as a result of their mental illness. Ryder, Alden, and Paulhus (2000) successfully used this instrument with Chinese-Canadian psychotic patients in both its original and translated form. Inclusion of this scale allows for evaluation of the extent to which cultural differences in physical and psychological symptom reporting are attributable to differences in perceived stigma. Each item is rated on a 5-point scale, ranging from strongly disagree to strongly agree. This scale had an internal consistency of $\alpha = .72$ in Changsha and $\alpha = .68$ in Toronto.

Toronto Alexithymia Scale. The Toronto Alexithymia Scale (TAS; Bagby, Taylor, & Parker, 1994) is a 20-item scale designed to measure the tendency to not clearly experience or articulate emotional states, with the negative pole often being associated with psychological mindedness. Although in the West this construct has a pathological connotation, Dion (1996) notes that in East Asian cultures it may instead tap into a self-concept that does not involve a clear distinction between mind and body. It is with that understanding that the instrument is used in the present study. The TAS can also be used to generate three subscales, Difficulty Identifying Feelings, Difficulty Describing Feelings, and Externally-Oriented Thinking. Inclusion of this scale allows for evaluation of the extent to which cultural differences in physical and
psychological symptom reporting are attributable to differences in the experience and articulation of emotional states. The instrument has been tested and validated in 18 languages, including Chinese, and has been evaluated in 19 countries (Taylor, Bagby, & Parker, 2003). Each item is rated on a 5-point scale ranging from strongly disagree to strongly agree. This scale had an internal consistency of $\alpha = .81$ in Changsha and $\alpha = .75$ in Toronto.

**Self-Concept Scales.** Two instruments designed to measure different aspects of the self-concept were adopted for the present study to begin the process of examining the role of psychological characteristics in cross-cultural symptom presentation. The Revised Self-Consciousness Scale (RSS; Scheier & Carver, 1985) was developed to assess three aspects of self-consciousness: (a) *private self-consciousness*, or awareness of intrapsychic processes; (b) *public self-consciousness*, or awareness of interpersonal processes; and (c) *shyness*, which was not used in this study. The Self-Construal Scale (SCS; Singelis, 1994) is based on the theoretical writings of Markus and Kitayama (1991) and assesses the two dimensions of self-construal previously discussed: (a) *independent self-construal*, or the extent to which the self is seen as being a separate and autonomous entity; and (b) *interdependent self-construal*, or the extent to which the self is seen as being enmeshed within a group.

The top four items were selected from the two RSS subscales, and six items were selected from the two SCS subscales. Selected items had the highest loadings on their predicted factor with trivial loadings on the other factor. Inclusion of these two scales allows for evaluation of the extent to which cultural differences in physical and psychological symptom reporting are attributable to differences in the cultural meaning of self. Later in this paper, private self-consciousness and independent self-construal are together called individualistic self-identity, whereas public self-consciousness and interdependent self-construal are together called
collectivistic self-identity. All items were rated on a five-point scale ranging from strongly disagree to strongly agree.

Private self-consciousness, public self-consciousness, independent self-construal, and interdependent self-construal had internal consistencies of $\alpha = .75, .81, .41,$ and $ .64$ in Changsha and $\alpha = .76, .85, .65,$ and $.51$ in Toronto. These results indicate that independent self-construal was not well measured in Changsha and that interdependent self-construal was not well measured in Toronto. Although these variables will be retained in the following analyses, results must be interpreted with these problematic reliabilities in mind. Considerably more weight should be given to variables from the RSS.

**Data Analysis**

The results section is divided into four subsections, with the first subsection comparing the two samples in terms of their clinician-rated impairment, in order to ensure that they are having comparably serious experiences. The second subsection deals with the first two questions posed earlier: (1) Is somatization greater in Chinese patients and psychologization greater in Western patients? and (2) If question 1 is confirmed, under what assessment circumstances are these effects observed? The third subsection is devoted to the final question: (3) What aspects of culture might be responsible for these differences? Finally, the fourth subsection contains supplementary analyses focusing on the SCI, beginning the effort to develop hypotheses based on a more fine-grained understanding of physical and psychological symptom reporting.

The specific statistical methods used in subsections two and three to deal with the three core questions will now be outlined in more detail. In dealing with questions 1 and 2, the second subsection presents the results for physical symptom reporting (i.e. somatization) followed by those for psychological symptom reporting (i.e. psychologization). The samples are first directly
compared using a separate-variance t-test (i.e. $t'$), the preferred technique when groups are
different sizes and heterogeneity of variance could interfere with accurate results. Note that this
method yields degrees of freedom that are not whole numbers. This test is followed up in each
case by a 2x2 (i.e. culture by sex) ANCOVA, controlling for age and education, in order to
determine whether obtained results can be better explained by these demographic variables.

Three domains relevant to question 3 and discussed at length in the introduction are
looked at in the third subsection, namely, stigma, emotional experiencing, and self-concept.
Here, the objective is to determine whether these variables can be used to ‘unpack’ culture in
order to explain symptom differences. This can be said to have occurred if the two cultures differ
on both symptom variables and the explanatory variables, and if these two sets of variables are
correlated within each culture. The same statistical method, again using $t'$, is used to assess
cultural differences on each explanatory variable. Then, the relation between these two sets of
variables is explored within each sample using the General Linear Model (GLM), which allows
for multiple dimensional predictors and multiple dependent variables. Within each of the three
explanatory domains a GLM is presented within each culture for both physical and psychological
symptom reporting, for a total of four GLMs within each domain and 12 GLMs in total. The
specific variables within each explanatory domain are entered as dimensional predictors while
the four symptom measures, either physical or psychological as required, are entered as
dependent variables. Univariate effects for the individual symptom reporting methods are
examined only if the multivariate effect was significant, in order to prevent alpha inflation.
Results

Clinician-Rated Impairment

Participants in Changsha and Toronto were compared on the 4-item clinician-rated impairment scale. No significant difference was found between the two groups, $t'(164.54) = 1.42$, $ns$. It was thus not necessary to control for overall impairment in the analyses that follow.

Symptom Reporting

Somatic symptom reporting. Participants in Changsha endorsed a significantly higher level of somatic symptom reporting than did participants in Toronto using SRP, SCI, and GHQ/CHQ, $t'(246.66) = -2.58$, $t'(243.96) = -2.82$, and $t'(279.87) = -3.85$, all $ps < .05$, ESs = 0.31, 0.34, and 0.43, respectively. However, no significant differences were obtained with the CES-D, $t'(245.18) = -1.45$, $ns$. These findings demonstrate a greater level of somatic symptom reporting in Changsha for three of the four methods used (see Figure 4.1).

Follow-up 2x2 ANCOVAs (i.e. culture by sex, covarying out age and education) on the significant findings reduced the cultural difference on SRP to a marginally significant trend, $F(1,271) = 3.13$, $p < .10$. Here, a negative relation was found between education and somatic symptom reporting, $F(1,271) = 4.04$, $p < .05$. For SCI, meanwhile, a significant cultural difference was maintained, $F(1,276) = 7.80$, $p < .05$, with older patients also being more likely to report somatic symptoms, $F(1,276) = 13.07$, $p < .05$. There was also a significant interaction between culture and sex in predicting somatic symptom reporting, $F(1,276) = 5.66$, $p < .05$, with women reporting more somatic symptoms than men in Changsha, and vice versa in Toronto. Finally, the additional covariates did not attain significance on the GHQ/CHQ and did not affect the result.
Psychological symptom reporting. Participants in Toronto endorsed a significantly higher level of psychological symptom reporting than did participants in Changsha using SRP and SCI, \( t'(253.60) = 3.15 \) and \( t'(246.74) = 3.02 \), both \( ps < .05 \), ESs = 0.37 and 0.36, respectively. The same differences were also observed on both questionnaires, the CES-D and GHQ/CHQ, \( t'(263.15) = 4.66 \), \( t'(263.17) = 4.46 \), both \( ps < .05 \), ESs = 0.56, and 0.52, respectively. Taken together, these findings demonstrate a consistently greater level of psychological symptom reporting in Toronto.

Follow-up ANCOVAs on these findings (i.e. crossing culture with sex and co-varying for age and education) maintained the same pattern of results. On the structured interview, older patients were significantly more likely to report psychological symptoms, \( F(1,276) = 12.11, p < .05 \). No additional effects were found on any of the other instruments (see Figure 4.2).
Explaining Symptom Reporting Differences

Stigma. Patients in Changsha reported greater levels of stigma than did patients in Toronto, as expected, $t(244.22) = -2.12, p < .05$, ES = 0.25. Also keeping with predictions, stigma predicted increased somatic symptom reporting in both Changsha and Toronto, $F(4,165) = 2.99$ and $F(4,102) = 2.85$, Wilks’ $\lambda$s = .94 and .90, both $p$s < .05, $\eta^2$s = .07 and .10. This effect was carried by the SCI in both cases, $F(1,168) = 5.11$ and $F(1,105) = 9.50$, both $p$s < .05, $\eta^2$s = .03 and .08. More surprisingly, however, stigma was also associated with more psychological symptom reporting in both Changsha and Toronto, $F(4,165) = 2.71$ and $F(4,102) = 4.84$, Wilks’ $\lambda$s = .94 and .84, both $p$s < .05, $\eta^2$s = .06 and .16. The SCI was again involved in both sites, $F(1,168) = 10.30$ and $F(1,105) = 15.20$, both $p$s < .05, $\eta^2$s = .06 and .13, with the CES-D also contributing to prediction in Toronto, $F(1,105) = 8.32, p < .05$, $\eta^2 = .07$. 
Emotional focus. As predicted, patients in Changsha showed a greater tendency to focus away from emotion on the TAS, \( t(190.85) = -2.69, p < .05, ES = 0.34 \). Looking at the TAS subscales revealed, moreover, that this difference was carried solely by Externally Oriented Thinking, \( t'(186.82) = -6.49, p < .05, ES = 0.83 \). Neither Difficulty Interpreting Feelings nor Difficulty Describing Feelings showed a significant effect, \( t'(204.92) = 0.75 \) and \( t'(185.65) = 0.08 \), both \( ps \) ns. This pattern of effects suggests a less pathological interpretation of the TAS findings.

Externally-Oriented Thinking showed the expected relation with greater somatic symptom reporting in both Changsha and Toronto, \( F(4,163) = 3.59 \) and \( F(4,100) = 4.65 \), Wilks’ \( \lambda = .92 \) and .84, both \( ps < .05, \eta^2 s = .08 \) and .16. In Changsha this effect was carried by the SCI and the GHQ/CHQ, \( F(1,166) = 4.92 \) and 4.02, both \( ps < .05, \eta^2 s = .03 \) and .02, respectively, whereas in Toronto the effect was carried by the SCI and the CES-D, \( F(1,103) = 4.09 \) and 12.05, both \( ps < .05, \eta^2 s = .04 \) and .11. No relation between Externally-Oriented Thinking with decreased psychological symptom reporting was found in either Changsha or Toronto, \( F(4,163) = 1.03 \) and \( F(4,100) = 1.94 \), both \( ps \) ns. The relation shown here between Externally-Oriented Thinking and physical symptom reporting successfully begins the process of unpacking culture; the two cultures show different levels of both variables, and the two variables are correlated in the same direction in both cultures.

One additional and unexpected effect was found in Changsha, with Difficulty Interpreting Feelings also predicting increased somatic symptom reporting, \( F(4,163) = 5.07 \), Wilks’ \( \lambda = .89, p < .05, \eta^2 = .11 \), an effect carried by the SCI, \( F(1,166) = 18.16, p < .05, \eta^2 = .10 \). This relation was not found in Toronto, \( F(4,100) = 1.94 \), ns. Difficulty Interpreting Feelings did not predict psychological symptom reporting in either Changsha or Toronto, \( F(4,163) = 2.81 \) and \( F(4,100) = \).
3.69, both $ps$ ns. Finally, Difficulty Describing Feelings did not show any significant effects, neither with somatic symptom reporting in Changsha or Toronto, $F(4,163) = 1.96$ and $F(4,100) = 0.57$, both $ps$ ns, nor with psychological symptom reporting in Changsha or Toronto, $F(4,163) = 3.29$ and $F(4,100) = 0.85$, both $ps$ ns.

**Self-Concept.** Contrary to prediction, private and public self-concept were both found to be significantly higher in Toronto, $t'(239.40) = 3.66$ and $t'(234.44) = 2.14$, both $ps < .05$, ESs = 0.44 and 0.26, respectively. Also contrary to prediction, neither independent nor interdependent self-construal showed a significant difference between the two sites, $t'(230.27) = -0.53$ and $t'(192.38) = 1.90$, both $ps$ ns. Neither private self-concept nor independent self-construal showed the predicted relation with psychological symptom reporting in Changsha, $F_s(4,162) = 1.31$ and 0.98, both $ps$ ns, or Toronto, $F_s(4,99) = 0.28$ and 0.84, both $ps$ ns. They also did not have a relation with physical symptom reporting in Changsha, $F_s(4,162) = 2.06$ and 0.41, both $ps$ ns, or Toronto, $F_s(4,99) = 2.04$ and 1.59, both $ps$ ns.

Similarly, neither public self-concept nor interdependent self-construal showed the predicted relation with somatic symptom reporting in Changsha, $F_s(4,162) = 0.78$ and 1.61, both $ps$ ns, or Toronto, $F_s(4,99) = 1.99$ and 0.56, both $ps$ ns. They also did not predict psychological symptom reporting in Changsha, $F(1,162) = 2.06$ and 0.41, both $ps$ ns, or in Toronto, $F(4,99) = 0.38$ and 1.07, both $ps$ ns. In short, no expected or consistent cultural differences in self-concept were found in this study; as well, no significant links between self-concept and either somatic or psychological symptom reporting were detected.
Table 4.5
Sample Comparisons on Individual Structured Interview Symptoms

<table>
<thead>
<tr>
<th></th>
<th>Chinese Sample (N = 175)</th>
<th>Canadian Sample (N = 107)</th>
<th>F</th>
<th>Partial $\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Psychological Symptoms</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Self-Esteem</td>
<td>1.38</td>
<td>0.93</td>
<td>1.81</td>
<td>0.98</td>
</tr>
<tr>
<td>Worthlessness / Guilt</td>
<td>1.32</td>
<td>0.99</td>
<td>1.59</td>
<td>0.90</td>
</tr>
<tr>
<td>Loss of Interest</td>
<td>0.98</td>
<td>1.11</td>
<td>1.57</td>
<td>1.00</td>
</tr>
<tr>
<td>Social Avoidance</td>
<td>1.17</td>
<td>1.02</td>
<td>1.57</td>
<td>0.82</td>
</tr>
<tr>
<td>Hopelessness</td>
<td>0.55</td>
<td>0.96</td>
<td>1.16</td>
<td>1.03</td>
</tr>
<tr>
<td>Suicidality</td>
<td>1.17</td>
<td>0.96</td>
<td>1.26</td>
<td>1.11</td>
</tr>
<tr>
<td>Depressed Mood</td>
<td>1.88</td>
<td>0.91</td>
<td>1.72</td>
<td>0.88</td>
</tr>
<tr>
<td>Lack of Emotions</td>
<td>1.12</td>
<td>1.00</td>
<td>0.80</td>
<td>1.02</td>
</tr>
<tr>
<td>Loss of Libido</td>
<td>1.14</td>
<td>1.00</td>
<td>1.48</td>
<td>1.09</td>
</tr>
<tr>
<td>Thinking Problems</td>
<td>1.86</td>
<td>0.91</td>
<td>1.95</td>
<td>0.79</td>
</tr>
<tr>
<td><strong>Somatic Symptoms</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleep Disruption</td>
<td>1.98</td>
<td>0.93</td>
<td>1.64</td>
<td>0.90</td>
</tr>
<tr>
<td>Insomnia / Hypersomnia</td>
<td>1.81</td>
<td>1.05</td>
<td>1.61</td>
<td>0.97</td>
</tr>
<tr>
<td>Fatigue / Loss of Energy</td>
<td>2.04</td>
<td>1.00</td>
<td>1.61</td>
<td>0.94</td>
</tr>
<tr>
<td>Deterioration</td>
<td>2.13</td>
<td>0.74</td>
<td>1.96</td>
<td>0.85</td>
</tr>
<tr>
<td>Retardation / Agitation</td>
<td>1.49</td>
<td>0.95</td>
<td>1.12</td>
<td>0.93</td>
</tr>
<tr>
<td>Leaden Paralysis</td>
<td>0.78</td>
<td>0.89</td>
<td>0.56</td>
<td>0.86</td>
</tr>
<tr>
<td>Aphagia / Hyperphagia</td>
<td>1.24</td>
<td>1.03</td>
<td>1.36</td>
<td>0.96</td>
</tr>
<tr>
<td>Pain</td>
<td>1.18</td>
<td>1.06</td>
<td>1.19</td>
<td>1.03</td>
</tr>
</tbody>
</table>

*p < .05

Supplementary Analyses

In order to further examine the differences between individual symptoms, supplementary analyses were conducted on the individual symptoms from the structured interview. Separate MANOVAs were run for somatic and psychological symptoms, allowing for multivariate confirmation of expected cultural differences followed by a univariate analysis comparing each symptom across the two samples (see Table 4.5). A significant multivariate effect was found for psychological symptoms, $F(10,271) = 10.60, p < .05$, Wilks’ $\lambda = .72, \eta^2 = .28$, with the univariate findings confirming that patients in Toronto reported higher levels of loss of interest,
worthlessness/guilt, low libido, hopelessness, low self-esteem, and social avoidance. Notably, patients in Changsha reported higher levels of emotional numbness. A significant multivariate effect was also found for the somatic symptoms, $F(8,273) = 3.70, p < .001$, Wilks’ $\lambda = .90$, $\eta^2 = .10$, with the Changsha sample reporting higher levels of retardation/agitation, fatigue or loss of energy, leaden paralysis, and sleep disruption, as well as deterioration at a trend level. It should be noted that the effect sizes for individual symptoms are very low; the larger effect sizes for somatic and psychological symptom reporting are created by an aggregate of small differences.

Several of the symptoms included in the above analysis can themselves be broken down into individual components. In some cases, these components are conceptually similar (e.g. worthlessness and guilt), in other cases they are conceptually opposite (e.g. insomnia and hypersomnia). Table 4.6 shows the breakdown of symptoms with multiple components. Chi-square analyses (culture by symptom) were used for all group comparisons, as components were generally assessed as present or absent. In four cases, nuances are revealed by analyzing each component separately. The higher scores for worthlessness/guilt and for suicidality obtained in Toronto are largely due to higher levels of guilt and thoughts of death; indeed, there is a trend in Changsha for patients to report more actual suicide attempts. Finally, patients in Toronto actually reported higher levels of the two reversed somatic symptoms, hyperphagia and hypersomnia, associated with atypical depression.

Supplementary descriptive statistics were also generated for spontaneously reported problems that are potentially culture-bound. Kleinman (1986) listed seven such complaints that he identified in his own research in Changsha. Several of these complaints were not spontaneously reported by this sample, although Kleinman noted that many of the culture-bound
Table 4.6

Chi-Square Analyses of Symptom Components

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Chinese Sample (N = 175)</th>
<th>Canadian Sample (N = 107)</th>
<th>χ²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Absent</td>
<td>% Present</td>
<td>% Absent</td>
</tr>
<tr>
<td><strong>Weight or Appetite Change</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight Loss</td>
<td>81.1</td>
<td>18.9</td>
<td>87.9</td>
</tr>
<tr>
<td>Appetite Loss</td>
<td>65.1</td>
<td>34.9</td>
<td>66.4</td>
</tr>
<tr>
<td>Weight Gain</td>
<td>98.3</td>
<td>1.7</td>
<td>84.1</td>
</tr>
<tr>
<td>Appetite Gain</td>
<td>98.9</td>
<td>1.1</td>
<td>88.8</td>
</tr>
<tr>
<td><strong>Insomnia or Hypersomnia</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insomnia</td>
<td>42.9</td>
<td>57.1</td>
<td>57.0</td>
</tr>
<tr>
<td>Hypersomnia</td>
<td>94.3</td>
<td>5.7</td>
<td>82.2</td>
</tr>
<tr>
<td><strong>Psychomotor Change</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retardation</td>
<td>72.0</td>
<td>28.0</td>
<td>80.4</td>
</tr>
<tr>
<td>Agitation</td>
<td>77.7</td>
<td>22.3</td>
<td>81.3</td>
</tr>
<tr>
<td><strong>Worthlessness or Guilt</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worthlessness</td>
<td>61.7</td>
<td>38.3</td>
<td>56.1</td>
</tr>
<tr>
<td>Guilt</td>
<td>75.4</td>
<td>24.6</td>
<td>53.5</td>
</tr>
<tr>
<td><strong>Poor Concentration or Indecisiveness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor Concentration</td>
<td>36.0</td>
<td>64.0</td>
<td>28.0</td>
</tr>
<tr>
<td>Indecisiveness</td>
<td>53.7</td>
<td>46.3</td>
<td>46.7</td>
</tr>
<tr>
<td><strong>Suicidality</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thoughts of Death</td>
<td>65.7</td>
<td>34.3</td>
<td>52.3</td>
</tr>
<tr>
<td>Suicidal Ideation</td>
<td>71.4</td>
<td>28.6</td>
<td>73.8</td>
</tr>
<tr>
<td>Specific Plan</td>
<td>93.1</td>
<td>6.9</td>
<td>89.7</td>
</tr>
<tr>
<td>Suicide Attempts</td>
<td>91.4</td>
<td>8.6</td>
<td>97.2</td>
</tr>
</tbody>
</table>

*p < .05  +p < .10

Symptoms become apparent only after detailed questioning (see top half of Table 4.7). An additional set of somatic symptoms were uniquely or predominantly found in Changsha, although the potential meanings of these complaints await focused investigation (see bottom half of Table 4.7). Interestingly, both heaviness in chest and dizziness were each reported once in Toronto; more unexpectedly, a patient from Toronto was the only participant in the study to spontaneously report "weak nerves."
Table 4.7

Breakdown of Spontaneously Reported ‘Chinese Culture-Bound’ Symptoms

<table>
<thead>
<tr>
<th>Symptom</th>
<th>#</th>
<th>%</th>
<th>#</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complaints Identified by Kleinman (1986)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cold Fire in Body</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Excess of Hot Inner Energy</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Fear of Cold</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Fear of Excessive Semen Loss</td>
<td>1</td>
<td>0.6</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Fear of Ghosts</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Heaviness or Pressure in Chest</td>
<td>8</td>
<td>4.6</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Sourness in Heart or Body</td>
<td>3</td>
<td>1.7</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Additional ‘Culture-Bound’ Complaints</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breathing Problems, Blocked Throat</td>
<td>6</td>
<td>3.4</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Dizziness, Shakiness</td>
<td>9</td>
<td>5.1</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>Eye Problems</td>
<td>2</td>
<td>1.1</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Gasses Wandering in Body</td>
<td>2</td>
<td>1.1</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Bad Nerves</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Loss of Hair</td>
<td>1</td>
<td>0.6</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Numbness in Limbs or Neck</td>
<td>3</td>
<td>1.7</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Unnatural Facial Expressions or Head Movements</td>
<td>3</td>
<td>1.7</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Conclusions

A simple answer can be provided to the first two questions posed in this study, with few exceptions: Chinese somatization and Western psychologization both occur, and they occur consistently across research methods. At the beginning of this chapter, H1 through H6 were presented and linked with either somatization or psychologization across three assessment methods. Chinese somatization with unstructured interview (H1) was partially confirmed, as differences in somatic symptom presentation on the SPR were reduced to a trend level when demographics were controlled. Chinese somatization with questionnaire (H3) was also partially confirmed, being observed on the GHQ/CHQ but not on the CES-D. Finally, Chinese somatization with structured interview was fully confirmed (H5). Note that the most rigourous method, in which the least confidence had been placed, yielded the best confirmation of Chinese
somatization. This finding suggests that the quality of the assessment was more important in this case than the fact of the assessment being more structured and more public.

Support for Western psychologization was consistent regardless of the assessment method used. This tendency was observed with unstructured interview (H2), questionnaire (H4), and structured interview (H6). Demographic variables did not affect this pattern.

Chinese patients reported a greater sense of stigma than did Western patients, and stigma was related to somatic symptom reporting in both samples. These findings raise the possibility that having an increased sense that psychiatric illness is stigmatizing causes patients to emphasize somatic symptoms in their presentation, confirming H7. However, stigma was also related to psychological symptom reporting in both samples, contrary to H8, a finding that is hard to reconcile with this particular account. The set of findings may be better explained by seeing stigma as a consequence rather than a cause of symptom reporting and, moreover, as a consequence of symptoms in general rather than relating to a particular mode of reporting. In other words, the more psychopathology an individual is experiencing, the more they are taking on a general sense of internalized stigma.

Individuals in the Chinese group had higher scores on alexithymia, a variable that was itself positively correlated with somatic symptom reporting in both China and Canada, confirming H9. No such relation was found for psychological symptom reporting, thus disconfirming H10. The link between alexithymia and somatization was refined by breaking the former construct down into its constituent parts. This further analysis revealed that the observed cross-cultural variability for somatization is related in part to cultural differences in internally- vs. externally-oriented thinking, suggesting that somatic symptoms are noticed more by individuals who are not focusing on their emotional state.
Hypotheses H11 to H14 were not confirmed. This study does not show any relation between symptom presentation and the self-concept. However, these findings may be due, in part, to the unacceptably low reliability coefficients for many of the self-concept scales. The relation between symptom presentation and the self-concept consequently remains unknown.

A closer investigation of the various explanatory analyses, particularly those that yielded significant results, shows that the various assessment methods did not make equal predictive contributions. When significant multivariate effects were obtained the weight was carried consistently by the structured interview. The unstructured interview, by contrast, made no contributions. Similar to the consistency found for somatic symptom presentation, the structured interview was again the superior assessment method and appears to provide the most powerful index of symptom reporting. Such a finding has ramifications for future research into these questions.

The use of interview methods also allows for a closer investigation of individual symptoms. Although the focus has been on somatic and psychological symptom presentations in general, looking more closely at the individual symptoms raises additional questions. Of course, the post hoc nature of these analyses precludes firm conclusions, but does indicate possibilities for future research. At the most general level, these results provide further support for the idea that just as cultures cannot be neatly categorized under somatization or psychologization, not every symptom follows the cultural trend. Most strikingly, depressed mood itself was not shown to differ cross-culturally and the other strictly affective symptom, emotional numbness, was actually endorsed by more patients in China.

Parker and colleagues (2001) noted a similar tendency in their sample for cross-cultural differences in psychological symptom reporting to be most apparent for the cognitive rather than
the affective symptoms. Perhaps affective symptoms are so central to depression that they do indeed present universally, whereas the accompanying thoughts are more culturally idiosyncratic. That said, it should again be emphasized that none of these thoughts were so specific to the West that they did not appear at all in China. Similarly, some of the more ‘exotic’ and supposedly culture-bound symptoms were spontaneously reported by individuals in the West as well.

As has been noted earlier, depression as a clinical syndrome has always been thought to involve somatic symptoms even where the emphasis has been psychological. A look at the individual structured interview symptoms suggests that many of them were endorsed as frequently in the West as they are in China. Only three of the symptoms had higher scores in China – sleep disruption, fatigue, and retardation/agitation. The first two of these symptoms have long been considered classic symptoms of neurasthenia. It is also notable that deterioration and pain, part of CCMD-2-R neurasthenia and not part of DSM-IV depression, were endorsed as frequently in the West as in China.

Several of these symptoms can themselves be broken down into component parts. Doing so revealed that the reversed somatic symptoms went against the general cultural trend, being considerably more common in the West than in China. Such a finding suggests that the DSM-IV designation of atypical depression may in fact be even more atypical in China, to the point that it is perhaps not a valid entity. No atypical depression diagnosis exists in CCMD-2-R. Component separation also revealed that insomnia, taken alone, was in fact significantly more common in the Chinese sample. Meanwhile, breaking down worthlessness/guilt reveals that both groups report worthlessness to an equal degree but guilt was reported almost twice as frequently in the West. This finding fits with the notion of Western cultures as being guilt-based (Benedict, 1946),
although the feeling is far from absent in China. Finally, looking at the individual components of suicidality showed that whereas thoughts of death were significantly more common in the West, actual suicide attempts had a trend towards being more common in China. In fact, attempts were three times more common in China; the effect was not significant because of the low overall rates in both groups. The problem of suicide has in recent years been acknowledged and targeted by Chinese government, whereas before it went largely undiscussed (Lee, 1999).
Chapter V - General Discussion

This paper began with a brief description of cultural psychopathology and noted that the question of Chinese-Western differences in rates of depression, and the somatization hypothesis, have become paradigmatic of the field as a whole. A considerable amount of effort has been spent attempting to explain this phenomenon, and much of that work was reviewed in the first two chapters. Chapter One examined briefly the history of both depression and neurasthenia in both cultures, and outlined cultural-historical factors that may have led to a shift towards depression in the West while maintaining the status of neurasthenia in China. The chapter also discussed countertrends that have recently emerged, towards depression in China and towards the neurasthenia-like CFS in the West. Chapter Two moved the focus from diagnostic constructs to underlying processes of symptom presentation. Just as neurasthenia and depression are not cleanly split between China and the West, so too can both somatization and psychologization be observed in both cultures. There is evidence, nonetheless, that the cultures do differ in terms of the extent to which these symptom presentation modes are expressed.

Although the sizeable number of theoretical papers on this issue provides a good framework for research with many testable hypotheses, the high ratio of these papers to actual studies is striking. In an effort to contribute to the empirical literature on Chinese and Western symptom presentation, Chapters Three and Four presented two empirical studies. Results of these studies, and the extent to which they support the proposed hypotheses, have already been discussed. The purpose of this chapter is to integrate the two studies and discuss them and their conclusions in two ways. First, the present research will be evaluated in terms of its contribution to existing work addressing these issues and, second, this research will be evaluated in terms of its contribution to future work in this area.
Evaluation of the Present Study as a Response to Past Work

Do Somatization and Psychologization Occur, and When?

Although three core questions were addressed by the present paper, the first question is of cardinal importance. Without an affirmative answer to this question – do somatization and psychologization occur? – there would be no need to consider the issue further. The historical review showed that there indeed has been a relatively greater attention to depression in the West then there has been in China, and that this difference has persisted for centuries. Twentieth century history shows a further increase in the Western focus on the psychological and the shift away from somatic diagnoses such as neurasthenia. A comparable increase did not take place in China, and arguably there was a move towards an even greater somatic focus during the Cultural Revolution. On the other hand, there appears to have been a more recent cultural shift towards the psychological in China, and more recent clinical and epidemiological studies suggest that rates of depression there are not as low as were previously observed.

A similarly mixed picture emerges from research on somatization and psychologization. Most of the research conducted using Chinese samples indicates that a somatic focus is common; at the same time, it is clear that somatization is far from unique to China. Indeed, it appears to be the most common mode of symptom presentation worldwide, and somatic symptom presentation is commonly observed in the West as well. Complicating the issue further, although somatization appears to be very common it does not frequently present as a complete denial of psychological symptoms. In the majority of cases, an individual who somatizes depression emphasizes somatic symptoms while still reporting psychological symptoms. On the psychologization side, depression has long been recognized in the West as including somatic components. The simplistic idea that cross-cultural differences in symptom presentation will result in Chinese
expression of somatic symptoms and Western expression of psychological symptoms must be abandoned. Somatization and psychologization should instead be studied as tendencies, a position that is adopted by most researchers studying this question.

The two prior cross-cultural studies of depression and somatization themselves yielded mixed findings, with a student comparison showing no evidence of Chinese somatization (Yen et al., 2000) and a patient comparison showing this difference (Parker et al., 2001). Both student and patient samples were used in the current research, and the findings matched – hypotheses of cultural difference were not supported in students and were supported in patients. The replication of both halves of this story provides increased confidence in the results, but the failure to replicate across student and patient samples raises concerns. Yen and colleagues (2000) explained their negative findings with students by arguing that somatization was the result of cultural pressures created by the health care systems in the two cultures. In short, patients somatize in China because they are patients, and are responding to situational pressures.

Importantly, however, there was an interaction between somatic symptom reporting and the severity of a recent event in the student sample. This finding raises the possibility that the cultural differences observed in the clinic can be extended to a normal sample, but only in the context of a recent stressful event and the consequent increased distress. By this reasoning, it is not surprising that the patients, who likely have an even greater amount of recent stress, show the greatest cultural difference in somatic symptom reporting. This effect may take place because a certain amount of distress is required before differences in symptom reporting become apparent. Another, and by no means mutually exclusive, possibility is that the cultural difference in symptom presentation cannot be observed in individuals who are not actively experiencing and communicating distress, rather than reporting on some negative aspects of everyday life.
This alternative does not, however, eliminate the argument of Yen and colleagues (2000), especially as a more severe event only served to bring the Chinese level of somatic symptom reporting up to the level of the other groups. Although the research presented here does not allow for firm conclusions regarding the role of clinical context, two features of the patient study described here might be expected to weaken the strength of this explanation. First, the data in the second study were collected from two centres, in Changsha and in Toronto, that are well-known both professionally and locally as specialty clinics for the treatment of emotional distress by psychiatrists. Unlike studies of primary care, which show a large degree of somatic symptom presentation regardless of where they are conducted, patients who present at these sites know that they are there to discuss psychological problems; indeed most of the patients did describe such problems, even if they emphasized the somatic. The use of psychiatric centres may have reduced cultural differences but clearly did not eliminate them, suggesting that the current findings may in fact represent conservative estimates of actual cross-cultural difference.

Second, the tendency towards Chinese somatization and Western psychologization was for the most part observed regardless of the assessment method used, a striking within-sample and cross-method replication. While one might have expected the Chinese medical context to impact on the SPR, it seems less likely that these same patients would then maintain this bias during careful and structured interviewing, and then maintain it again on a private questionnaire. Past research has suggested that denial of, or failure to mention, psychological symptoms can be lessened considerably by the use of careful interview methods (Chan & Parker, 2004). The context of the clinic may well be playing a role in the findings reported here, but they do not appear to be sufficient to explain them.
Regardless of whether the mode of analysis is historical, cultural, or empirical, somatic and psychological symptom presentations can be observed in both cultures. At the same time, they are expressed to different extents and have been observed to shift in relation to one another across cultures and over time. Although there have been recent changes suggesting that somatization might no longer be observed in China, it was in fact observed across three different assessment methods in an explicitly psychiatric context. Chinese people on the whole do not appear to somatize, but they do so when they are distressed. Western patients, meanwhile, show an even greater tendency towards psychological symptom presentation. Overall, however, effect sizes for somatic and psychological symptom reporting were in the small-to-medium range, demonstrating that it does not make sense to characterize each culture as exclusively or even predominantly somatizing or psychologizing. Cultural differences should not be translated into cultural stereotypes, and individuals across the entire spectrum of symptom presentation can be found in both cultures.

There are therefore cross-cultural differences in symptom presentation tendencies and at the same time there is considerable within-culture variability on these tendencies. If it is possible to identify other variables that can plausibly be linked with symptom presentation, that also differ across cultures, and that appear to have shifted historically within each culture as the presentation modes themselves have shifted, we can begin to test these variables empirically. ‘Unpackaging culture’ in this way can lead us from the identification of a phenomenon to an explanation of why this phenomenon occurs. It is to this effort that we now turn.

Why do Somatization and Psychologization Occur?

Once a particular effect has been established, there are numerous candidate variables that can help to explain why the effect takes place. Three explanations have been repeatedly
emphasized in the literature on Chinese somatization, and all three of them involve aspects of culture that can be assessed at an individual, psychological, level. To briefly review, these explanations involve cultural differences in (a) the extent to which psychological symptoms are stigmatized, (b) the extent to which thinking is oriented away from internal experiences, and (c) the extent to which a particular view of the self is emphasized. At a more general level, the first study examined the extent to which symptom presentation changes with acculturation. None of these explanations are mutually exclusive and they could easily be linked. For example, psychological symptoms might be stigmatized in China because they are a product of a culturally inappropriate internal focus of the self. As this study represents an early stage in efforts to explain Chinese somatization with empirical data, the various hypotheses are tested simply and independently in order to determine which ones might be viable targets for future research.

It will be clear to the reader by this point that efforts made here to explain somatization and psychologization were not nearly as successful as efforts to establish these phenomena in the first place. Self-concept was not associated with symptom reporting in either culture, a set of findings potentially attributable to the poor reliability of the measures used in the Chinese sample. Stigma, in contrast, was well measured and showed some relations with symptom reporting, but may have been acting as an outcome variable rather than as a predictor. Both of these variables should be revisited in future work with more thorough measurement. For stigma, there now exist measures that are more comprehensive than the four-item scale used here (Ritsher et al., 2003) and for self-concept, assessment using measurement techniques other than questionnaire should be considered (Heine et al., 2002). Acculturation showed no relations with symptom reporting in the first study, although this finding is not surprising given that the groups themselves did not differ in the culturally expected way. The beginnings of an explanation may
lie with differences in symptom salience caused by differences in thinking orientation. Although this successful ‘unpackaging of culture’ only involved somatization, and not psychologization, it is an effect that deserves a further look.

Early writers attempting to explain Chinese somatization had a tendency to invoke explanations in which somatization is a more pathological mode of symptom reporting. The construct of alexithymia describes a difficulty in experiencing and expressing emotions that has been linked with somatization in the West (e.g. Grabe, Spitzer, & Frayberger, 2004). In the current research, although there was indeed a greater degree of alexithymia among Chinese patients, this effect was carried by the least pathological component which measures not difficulty but instead a preference towards externally- vs. internally-oriented thinking. Thus, these patients are able to experience and express their emotions, but they do not focus on these emotions. Some evidence for the influence of culture on emotional focus has been provided by Chen, Guarnaccia, and Chung (2003), who found that Asian immigrants to the United States pay increasingly greater attention to affective aspects of experience with greater acculturation. They also found that acculturation is related to a decreased somatic focus.

The conclusion that cultural differences in focus on emotions may in part explain somatic symptom reporting of course begs the question of why this difference exists. This study is not equipped to answer that question empirically. It is nonetheless worth returning to the most prominent explanation in the literature, that provided by Kleinman (1995). In brief, he argues that the political climate of the Cultural Revolution rendered emotional experience so threatening that the focus of the individual is systematically turned elsewhere. Not only did psychological symptoms reporting become increasingly policed externally, but they were policed internally as well and only allowed to emerge somatically. Future research would need to be designed
explicitly to address this hypothesis, although it is important to note some obstacles that this account needs to overcome. First, the low rates of depression that were observed in China were also observed in Taiwan. Similarly, the popularity of neurasthenia as a diagnostic label that allows for a somatic explanation of psychological concerns has also been reported in both Taiwan and Hong Kong, as well as in Japan (Yamamoto, 1991). Finally, the worldwide ubiquity of somatization suggests that the phenomenon demanding an explanation is its relatively low level in the West, and especially the Western emphasis on psychological symptom presentation relative to other parts of the world. The reason for the differences in thinking orientation and symptom salience remains an open question.

Evaluation of the Present Study as a Starting Point for Future Work

Unanswered Questions

There are few if any definitive studies in the social sciences. Interdisciplinary fields such as cultural psychopathology require an even greater amount of labour, as the various constituent disciplines each make their contribution (Ritsher et al., 2002). The current study was structured in part by the work that came before it, and its results must be interpreted with that work in mind. Most importantly, at the same time as this study fills certain holes in the literature its completion also highlights the holes that remain. The previous section reviewed some of the specific gaps that were revealed by the outcomes of these studies, particularly regarding efforts to explain somatization and psychologization; future research would do well to reconsider all of these variables and to focus on them in a more systematic way. Here, the focus shifts to questions left unanswered by the structure of these studies, rather than their findings – the participants not included, the measures not used, the procedures not followed. It is hoped that this discussion will
illustrate more clearly what can and cannot be concluded from these studies, and thereby suggest some directions for future research.

*Students, patients, and the limits of generalization.* The first study used students as a stand-in for the general population whereas the second study used outpatients. In both cases, the choice of sample places constraints on generalizability and arguably in both cases the preferred sample would have been drawn from the community. An advantage to using student samples is that certain variables can be controlled across cultures to a greater extent, in that the samples are roughly of equivalent age, are academically inclined relative to the general population, and are engaged in similar pursuits. However, it is clear that a community sample would more closely reflect the population as a whole. Clinical samples, meanwhile, do not necessarily represent anyone who is suffering from a given set of symptoms. In order to end up in the study, individuals had to present for help to a major urban psychiatric centre meaning that only those people who are willing to engage in that kind of help-seeking pattern are represented here. With these limitations in mind, it is important to remember that Chinese students and urban psychiatric help-seekers would be expected to be more westernized than would, for example, Chinese labourers or rural users of TCM. Thus, the choice of samples for these studies would tend to work against the hypotheses.

The fact remains that the best study of this question would take an epidemiological approach, avoiding bias and capturing a full range of psychopathology by selecting participants from the population. Even better, this ideal study would be conducted cross-culturally and would incorporate symptoms from the traditions of both cultures. The greatest limitation to such a study would be cost, of course, but international studies of psychiatric epidemiology do get conducted, by the WHO and other organizations, including those studies that established the different
depression rates in the first place. Unfortunately, there has been a strong tendency for these studies to study syndromes rather than symptoms – they are not trying to measure differences in depressed mood, insomnia, hopelessness, etc., but instead are trying to establish incidence and/or prevalence rates for MDD as a single omnibus diagnosis. Many of the instruments designed for these studies use a branching system to ensure that ‘redundant’ symptoms are not queried so that, in the case of DSM-IV MDD, the other depression symptoms are ignored if the respondent does not have depressed mood and/or anhedonia. This problem has specifically been identified in a position paper on the cross-cultural study of depression and anxiety, raising the possibility that more comprehensive investigations of symptoms will be conducted in future (Ballenger et al., 2001)

*Sociological and geographical factors.* It is obvious, to say the least, that in a cross-cultural study such as this one, the Chinese patients are in China and the Canadian patients are in Canada. This is good insofar as we wish to study individuals in their cultural context. However, it consequently becomes difficult to separate out psychological factors from other explanations, such as those provided by sociology or geography – one reason why cultural psychopathology must be studied in a multidisciplinary way. For example, hotter climates might lead to more somatization, with climate being confounded with culture in this study. Similarly, Kleinman’s (1995) link between symptom presentation and the Cultural Revolution is difficult to investigate directly. One possibility, raised by Parker and colleagues (2001), is that increased somatic symptom reporting in China is due to the lower level of overall health in that country. Patients are presenting for psychiatric help, but also happen to be more likely to have a physical ailment of some kind that increases the number of somatic symptoms they are experiencing. A study such as this one cannot test such a hypothesis, although this account would not explain the link
with externally-oriented thinking, nor the high rates of psychological symptom reporting in the West. All the same, we have no way of estimating the extent to which it may be a contributing factor.

**Acculturation.** One of the advantages of studying acculturation is that one can study the effects of more than one culture within the same group of people. Moreover, the cultures can be measured dimensionally with each individual having scores for their heritage culture and for the mainstream culture. These scores can in turn be correlated with variables of interest, allowing the researcher to assess psychological changes that occur with the shift from one culture to another (Ryder et al., 2000). Such samples also control for context to a certain extent, as the entire sample is generally collected from the same location. Although the first study did measure acculturation for the Chinese-Canadians, it became apparent that the expectation of decreased somatization and increased psychologization with increased exposure to Western culture would not be observed in a non-clinical sample. The more important findings with regard to symptom presentation came from the second study, which lacked an acculturating sample. A study which investigated acculturation and symptom presentation in a clinical or community sample would therefore be invaluable and would address concerns that many of the observed effects are due to sociological or geographical factors.

**Illness beliefs and help-seeking.** Although the present study did allow patients to describe their presenting problems in their own words, the coding system reduced these descriptions to isolated symptoms. We also do not know what the patients believe to be the name of their illness or its cause. The pattern of help-seeking that was followed in the past is equally unclear. Cultural differences may emerge most clearly for these sorts of variables – two patients might both present with feelings of guilt, but could experience it very differently because of variance in
beliefs regarding its object, its cause, and the best ways of dealing with it. Incorporation of these sorts of questions into a future study would allow for testing of additional hypotheses. For example, Chinese individuals who have tended to use TCM or who have a more traditional explanation for their symptoms might show a higher degree of somatization.

*Clinician-patient relationship.* Although the present research does use different assessment methods that vary in the importance of the clinician-patient relationship, the structure of the second only allows for a superficial clinician-patient relationship. A careful and structured interview may not be sufficient to prompt all Chinese patients to fully disclose their psychological symptoms. Patients in both Changsha and in Toronto were meeting with clinicians with whom they had no previous relationship, and a limited amount of time could be spent establishing a relationship. The Chinese patients may have had a prior history of describing all of their symptoms to a trusted professional, who had then referred them to the specialty clinic. It is therefore possible that the observed cultural differences would have been reduced by allowing for the development of a relationship or by studying patients consulting with their regular physicians. Such a study would have been considerably longer and more expensive.

*Contributions of Psychology to Cultural Psychopathology*

The present paper has been constructed to serve two purposes. First, it has been designed to address the literature pertaining to the Chinese somatization hypothesis and to make an empirical contribution to that literature. Second, it has been designed more generally to show the ways in which clinical and cultural psychology can contribute to the study of cultural psychopathology. We will therefore conclude with a return to the premise of the introduction, that the study of the Chinese somatization hypothesis has become emblematic of the field as a whole, illustrating many of the challenges of studying psychopathology in context. The topic is
ideal for research-minded psychologists, as considerable literature has been contributed by other disciplines thereby allowing clear and culturally informed hypotheses to be framed. Moreover, even though the content changes, techniques used here can be transferred to other disorders and to other cultures.

Unlike mainstream psychiatry, clinical psychology has had a more uncertain relationship with *DSM* (Beutler & Malik, 2002). This skepticism can be put to good use in the cross-cultural study of psychopathology, and can be observed here in the use of diagnostic instruments. Although psychiatric interviews are normally used to reach a *DSM-IV* diagnosis they are instead used here to simply create a broad list of symptoms. Each symptom is assessed in turn, regardless of the assumption of a given diagnostic system, and three different systems are used to expand as much as possible the universe of symptoms available. It is premature here, as it generally is when bringing diagnostic systems to other cultures, to assume that syndromes are organized the same way universally (Kleinman, 1988). Both the literature review and the two studies combine to present somatization and psychologization as two processes that differ cross-culturally in degree rather than in kind. A concern with the underlying dimensions of psychopathology, rather than syndrome categorization, is more common on the whole to psychology (e.g. Widiger & Sankis, 2000) and can be brought to bear on complex cultural questions.

Clinical psychology has unfortunately had a tendency to be atheoretical when it comes to questions of culture (Smith et al., 2001). When group differences are found they are attributed to ‘culture’, and the specific causes go unexplored or are left to be speculated upon in the discussion. Cultural psychologists, by contrast, have grown increasingly adept at studying specific aspects of culture and designing studies that address questions of *why* cultures differ in
specific ways. The present paper investigated several explanations for the Chinese somatization hypothesis frequently discussed in the literature and presented a study designed in part to begin the process of investigating why this cultural difference is observed. Provided that hypotheses can be clearly stated and the variables involved can be measured at an individual level in some way, the techniques of cultural psychology can be imported to any culture for the study of any disorder. At the same time, cultural psychologists have advanced considerably over the past decade and a half in developing a literature on many basic processes that can be related to psychopathology. In particular, work on the cultural basis of emotion and motivation is relevant, one assumes, to the cultural basis of psychopathology.

This paper ends, as most do, with some questions answered and some new ones raised. Efforts to address the Chinese somatization hypothesis since Kleinman’s (1982) original research have not been in vain. Distressed Chinese individuals do have a tendency to emphasize somatic symptoms relative to their Western counterparts, who in turn are more likely to emphasize psychological symptoms. This effect can still be observed, across assessment methods, after 20 years of modernization, westernization, and distance from the Cultural Revolution. Part of the reason for this difference relates to a specific aspect of culture, namely, the extent to which individuals tend to maintain an internal or an external focus. At the same time, the differences are not extreme – symptoms of both types are observed in both cultures, resulting in modest effect sizes. Past research shows that somatic symptom presentations are common in the West, and it appears that psychological symptom presentations are not unheard of in China. The interaction of culture, local context, and individual differences in predicting these different presentations, within and across cultures, will be rich terrain for future study.
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Appendix

Study One Questionnaires

Center for Epidemiological Studies Depression Scale

1. I was bothered by things that usually don't bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with help from my family and friends.
4. I felt that I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt everything was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I thought my life had been a failure.
20. I felt people disliked me.

Event Severity Scale

1. How negative was the impact of this event on your physical health?
2. How negative was the impact of this event on your emotional well-being?
3. How negative was the impact of this event on your work or academic performance?
4. How negative was the impact of this event on your social life?
5. How negative was the impact of this event compared to other stressful events in your life?
6. How negative was the impact of this event compared to stressful events that have happened to other people you know?

Vancouver Index of Acculturation

1. I often participate in my heritage cultural traditions.
2. I often participate in mainstream North American cultural traditions.
3. I would be willing to marry a person from my heritage culture.
4. I would be willing to marry a North American person.
5. I enjoy social activities with people from the same heritage culture as myself.
6. I enjoy social activities with typical North American people.
7. I am comfortable working with people of the same heritage culture as myself.
8. I am comfortable working with typical North American people.
9. I enjoy entertainment (e.g. movies, music) from my heritage culture.
10. I enjoy North American entertainment (e.g. movies, music).
11. I often behave in ways that are typical of my heritage culture.
12. I often behave in ways that are ‘typically North American.’
13. It is important for me to maintain or develop the practices of my heritage culture.
14. It is important for me to maintain or develop North American cultural practices.
15. I believe in the values of my heritage culture.
17. I enjoy the jokes and humor of my heritage culture.
18. I enjoy typical North American jokes and humor.
19. I am interested in having friends from my heritage culture.

Study Two Questionnaires

*Center for Epidemiological Studies Depression Scale*

Please refer to listing under Study One, above.

*General Health Questionnaire / Chinese Health Questionnaire*

1. Been suffering from headache or pressure in your head?
2. Had palpitations and worried that you might have a heart trouble?
3. Had discomfort or a feeling of pressure in your chest?
4. Been suffering from shaking or numbness of your limbs?
5. Lost much sleep over worry?
6. Been taking things hard?
7. Been getting along well with your family and close relatives?
8. Been losing confidence in yourself?
9. Been feeling nervous and highstrung?
10. Been feeling hopeful about your future?
11. Been worrying about your family or close relatives?
12. Been feeling that life is entirely hopeless?
13. Been having a good memory?
14. Been feeling giddy?
15. Been full of verve when you wake up in the morning?
16. Been feeling that your respiration is not smooth?
17. Been having aches and pains over your body?
18. Felt that your mind is clear without excessive worrying?
19. Felt that everything is on top of you?
20. Been feeling weakness of nerves?
21. Been feeling uneasy or irritable over trivialities?
22. Been interested in ordinary leisure activities?
23. Been outdoors as frequently as usual?
24. Been satisfied with the way you handle things?
25. Been able to show warmth or affection towards others near you?
26. Been feeling constantly under strain?
27. Felt in general things are well managed?
28. Felt that others could not do better in your place?
29. Felt that you are a burden to your family and close relatives?
30. Felt that your sexual functioning is normal?
31. Been feeling worthless?
32. Felt that life is not worth living?
33. Been feeling depressed and unhappy?
34. Felt scared and panicky?
35. Been having restless and disturbed nights?
36. Been finding it difficult to stay alert?
37. Felt that you had no energy?
38. Been finding it difficult to concentrate?
39. Been keeping busy and occupied?
40. Been finding it easy to make decisions?
41. Been managing as well as most people?
42. Felt that you were playing a useful part in things?
43. Been finding it difficult to get along with others?
44. Been finding it difficult to enjoy things?
45. Felt that you could not face problems?

Toronto Alexithymia Scale

1. I am often confused about what emotion I am feeling.
2. It is difficult for me to find the right words for my feelings.
3. I have physical sensations that even doctors don’t understand.
4. I am able to describe my feelings easily.
5. I prefer to analyze problems rather than just describe them.
6. When I am upset, I don’t know if I am sad, frightened, or angry.
7. I am often puzzled by sensations in my body.
8. I prefer to just let things happen rather than to understand why they turned out that way.
9. I have feelings that I can’t quite identify.
10. Being in touch with emotions is essential.
11. I find it hard to describe how I feel about people.
12. People tell me to describe my feelings more.
13. I don’t know what’s going on inside me.
14. I often don’t know why I am angry.
15. I prefer talking to people about their daily activities rather than their feelings.
16. I prefer to watch “light” entertainment shows rather than psychological dramas.
17. It is difficult for me to reveal my innermost feelings, even to close friends.
18. I can feel close to someone, even in moments of silence.
19. I find examination of my feelings useful in solving personal problems.
20. Looking for hidden meanings in movies or plays distracts from their enjoyment.
Link's Demoralization Scale

1. There is something about being in a psychiatric hospital that sets me apart from others.
2. There is an important part of me that only another person with a psychiatric illness could understand.
3. Having a psychiatric illness makes me feel very different from others.
4. Being in a psychiatric hospital makes me feel ashamed.

Self-Consciousness Scale

1. I'm always trying to figure myself out.
2. I'm concerned about how I present myself to others.
3. I think about myself a lot.
4. I'm self-conscious about the way I look.
5. I generally pay attention to my inner feelings.
6. I usually worry about making a good impression.
7. I'm constantly thinking about my reasons for doing things.
8. I'm concerned about what other people think of me.

Self-Construal Scale

1. I have respect for the authority figures with whom I interact.
2. I'd rather say "no" directly than risk being misunderstood.
3. My happiness depends on the happiness of those around me.
4. I am comfortable being singled out for praise or rewards.
5. I will sacrifice my self-interest for the benefit of the group I am in.
6. I feel comfortable using someone's first name soon after I meet them, even when they are much older than I am.
7. I often have the feeling that my relationships with others are more important than my own accomplishments.
8. I prefer to be direct and forthright when dealing with people I've just met.
9. It is important for me to respect the decisions made by the group.
10. I enjoy being unique and different from others in many respects.
11. I will stay in a group if they need me, even when I'm not happy with the group.
12. My personal identity, independent of others, is very important to me.