

***Shenjing Shuairuo* and the DSM-IV: Diagnosis,  
Distress, and Disability in a Chinese Primary Care  
Setting**

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**Abstract** This study examines diagnostic concordance, symptomatology and disability among Chinese patients with *shenjing shuairuo*, ICD-10 neurasthenia, and DSM-IV diagnoses. Patients ( $N = 139$ ) with unexplained somatic complaints completed the Structured Clinical Interview for

DSM-III (SCID), the Brief Symptom Inventory (BSI), and the Short Form 36 (SF-36). *Shenjing shuairuo* could be reclassified as DSM-IV undifferentiated somatoform disorder (30.6%) and somatoform pain disorder (22.4%); however, 44.9% did not qualify for a core DSM-IV diagnosis. Concordance of neurasthenia and *shenjing shuairuo* was significant ( $p < .001$ ). Symptom distress and disability was similar to that reported by patients with somatoform and anxiety disorders. Within the Chinese context, *shenjing shuairuo* describes a heterogeneous group with clinically significant levels of disturbance and disability.

**Key words** diagnosis • neurasthenia • neurosis • somatoform disorders

Building on previous cross-cultural research, this article examines changing disease conceptions in China and the current nosological relationship between *shenjing shuairuo* (Chinese ‘neurasthenia,’ or ‘weakness of nerves’) and the DSM-IV (American Psychiatric Association [APA], 1994). Initially identified in 1869 by the neurologist George Beard (1869), neurasthenia was characterized by a variety of somatic and psychological complaints including fatigue or weakness, poor concentration, memory loss, irritability, excitability, aches and pains, and sleep disturbance. Introduced into China in the early 1900s, neurasthenia quickly became the most common psychiatric disorder, with up to 80% of psychiatric out-patients diagnosed with *shenjing shuairuo* by 1980 (Kleinman, 1982). Meanwhile, beginning in the 1920s, the concept of neurasthenia began to lose professional and popular support in the US and was rendered obsolete when it was finally excised from DSM-III (APA, 1980). The transformation of the ultimate American disease into a Chinese ‘culture-bound syndrome’ is one of modern psychiatry’s stranger reversals, providing a striking illustration of the role of history, politics and culture in shaping diagnostic practice and illness experience (Kleinman, 1988; S. Lee, 1998; Lin, 1989).

Although *shenjing shuairuo* remained the most common psychiatric disease in China up to the mid-1980s, a convergence of political, professional, social and economic forces has led to its gradual depreciation in urban psychiatric circles (S. Lee, 1999). In the first study to systematically examine the overlap between *shenjing shuairuo* and western disease categories, Kleinman (1982) reported that of 100 Chinese psychiatric subjects with *shenjing shuairuo*, 87 could be re-diagnosed with DSM-III-R major depression, 69 with an anxiety disorder, and 25 with a somatoform disorder. Aiming to address criticisms regarding the generality of *shenjing shuairuo*, specific diagnostic criteria were outlined in the first edition of the Chinese Classification System of Mental Disorders (CCMD) (Chinese Society of Neurology & Psychiatry, 1985). With the publication

of the CCMD-2-R (Chinese Medical Association and Nanjing Medical University, 1995) and the recent CCMD-3 (Chinese Psychiatric Society, 2001), a diagnosis of *shenjing shuairuo* now requires any three of five groups of persistent symptoms: (i) fatigue or weakness (physical or mental), (ii) irritability or worry, (iii) excitability, (iv) nervous pain and (v) sleep disturbances. Most significantly, the diagnosis now requires the exclusion of all mood and anxiety disorders, reflecting the increasing epistemological convergence between the CCMD, DSM and ICD systems. As S. Lee (1994) has observed, few if any of the subjects studied by Kleinman would be diagnosed with *shenjing shuairuo* today.

The DSM-IV references *shenjing shuairuo* ('neurasthenia') in its glossary of culture-bound syndromes and in its discussion of undifferentiated somatoform disorder (USD) (APA, 1994). Defined as 'a syndrome described frequently in many parts of the world and characterized by fatigue and weakness' (p. 451), neurasthenia is technically classified as USD if symptoms have persisted for longer than 6 months. However, the DSM-IV's emphasis on fatigue and weakness as core symptoms of neurasthenia suggests a closer relationship to its definition in the *International Classification of Mental and Behavioural Disorders, 10th edition* (ICD-10; World Health Organization [WHO], 1992), than the CCMD-2-R and CCMD-3 concept of *shenjing shuairuo*. It has been estimated that the ICD-10 definition of neurasthenia excludes approximately 84% of Chinese patients with *shenjing shuairuo* who report prominent symptoms other than fatigue (S. Lee, 1994).

Although studies have recently examined ICD-10-defined neurasthenia in relation to other psychiatric disorders (Zheng et al., 1997), there has been no rigorous examination of the nosological relationship between Chinese conceptions of *shenjing shuairuo* and western diagnostic entities since Kleinman's research in the early 1980s. The aims of this study were (i) to examine the DSM-IV classification of patients diagnosed with *shenjing shuairuo* in China, and (ii) to clarify the defining features of *shenjing shuairuo* vis-à-vis DSM-IV mood, anxiety and somatoform disorders through a comparison of demographic features, symptom profiles and functional disability.

## METHOD

### STUDY SITE

The study was conducted at the Second Affiliated Xiangya Hospital of Central South University, one of three main referral centers for Hunan Province (population 60,000,000) and the site of Kleinman's (1982) original psychiatric study of *shenjing shuairuo*. Data collection took place from November 1997 to August 1998 in the out-patient departments of

internal medicine, neurology and traditional Chinese medicine, three popular treatment sites for *shenjing shuairuo*.

### PROCEDURE

Consecutive patients aged between 18 and 55 years were screened for this study. The exclusion criterion was a medical diagnosis that accounted for their somatic symptoms as determined by physical examinations or other diagnostic procedures. One to two mornings per week were spent in each unit for screening and recruitment. All communication was conducted in Mandarin Chinese.

Psychiatric symptom reports, clinical presentation, and medical records were evaluated for evidence of somatization or significant psychological symptoms by an interdisciplinary team consisting of a clinical psychology doctoral student (DFC), a psychiatrist (SY), and the on-duty physician within each department. Somatization was defined as an excessive degree of functional somatic distress unaccounted for by degree of organic pathology, or hypochondriacal worry in the absence of serious illness (Bridges & Goldberg, 1985). Verbal informed consent was obtained from participating subjects.

### SUBJECTS

All told, 916 subjects were screened across the three departments. Of these, 709 (77.4%) were excluded due to prominent organic illness, and 207 (22.6%) were recruited for further assessment. A total of 139 subjects completed both stages of the research protocol. Forty-nine subjects (35.3%) met criteria for CCMD-2-R *shenjing shuairuo*, 27 (19.4%) were diagnosed with ICD-10 neurasthenia, 70 (50.4%) with one or more DSM-IV diagnoses, and 19 (13.7%) did not meet criteria for any psychiatric diagnoses.

### MEASURES

#### *Psychiatric Symptoms*

The Brief Symptom Inventory (BSI) (Derogatis & Melisaratos, 1983) was used to assess distress along nine symptom dimensions. Subscale scores range from 0 to 4 and the Global Severity Index represents the global mean. Cronbach's alpha coefficients ranged from .66 (psychoticism) to .83 (obsessive-compulsive, anxiety), and were comparable with other studies (Derogatis & Melisaratos, 1983). An additional 24 somatic symptoms commonly reported by neurasthenic patients were also assessed (Zheng & Lin, unpublished instrument [Available from Keh-Ming Lin, Department

of Psychiatry, Harbor-UCLA Research Center on the Psychobiology of Ethnicity 1124 W. Carson St., B-4 South, Torrance, CA 90502, USA, E-mail: linkeh@harbor2.humc.edu]). This measure had a Cronbach's alpha coefficient of .86.

### *Psychiatric Diagnosis*

The Chinese version of the Structured Clinical Interview for DSM-III (SCID; Li & Xie, 1994) was updated to generate DSM-IV Axis I diagnoses. In addition, subjects were screened for CCMD-2-R and ICD-10 neurasthenia using a similar structured interview format (Y. Lee, Chong, Hsu, & Wen, 1996). Three Chinese psychiatrists were trained to administer and code the SCID and the neurasthenia supplement. Inter-rater reliability was 84.7%, assessed via 10 audio-taped interviews scored by all three raters. Final diagnoses were verified by the principal investigator on the basis of interview transcripts.

### *Functional Impairment*

The 36-item Short-Form Health Survey (SF-36) (Ware, Snow, Kosinski, & Gandek, 1993) measures eight key health concepts: physical functioning, role limitations due to physical problems, social functioning, bodily pain, general mental health, role limitations due to emotional problems, vitality and general health perception. Chinese translations of the SF-36 have been shown to meet minimum psychometric criteria for most scales (Chang, Chun, Takeuchi, & Shen, 2000; Lam, Gandek, Ren, & Chan, 1998). The Mainland Chinese version of the SF-36 (Phillips, unpublished) was selected for use in this study. Scale scores range from 0 (worst functioning) to 100 (best functioning). Cronbach's alpha coefficients ranged from .67 (GH) to .90 (PF).

### *Analysis Plan*

The kappa statistic was used to evaluate the concordance between *shenjing shuairuo* and ICD-10 neurasthenia, and the DSM-IV disorders. Chi-square tests were conducted to test for diagnostic group differences on categorical variables. Group differences for continuous variables were assessed with Student's *t*-test if the data were normally distributed. Nonparametric means were compared using the Mann-Whitney *U*-test. The level of statistical significance was set at .01 to reduce the risk of chance findings and all tests were two-tailed.

## RESULTS

Of the 49 (22 female, 27 male) subjects diagnosed with *shenjing shuairuo*, 26 also met criteria for ICD-10 neurasthenia and 27 met criteria for a

**TABLE 1**  
DSM-IV diagnoses of 49 primary care patients with *shenjing shuairuo*

DSM-IV diagnosis	<i>n</i>	(%)
Undifferentiated somatoform disorder	15	(30.6)
Somatoform pain disorder	11	(22.4)
Somatization disorder	2	(4.1)
Hypochondriasis	1	(2.0)
Number of patients with no DSM-IV diagnosis	22	(44.9)

Note. Numbers do not add up to 49 because of comorbidity in two subjects.

current DSM-IV diagnosis. As shown in Table 1, the most common DSM-IV diagnoses were USD and somatoform pain disorder. Twenty-two (44.9%) of the subjects with *shenjing shuairuo* did not meet criteria for any core DSM-IV disorder due to the shorter duration of their symptoms. Of these, 12 subjects met criteria for both *shenjing shuairuo* and ICD-10 neurasthenia and 10 for *shenjing shuairuo* only.

The diagnostic concordance of ICD-10 neurasthenia and *shenjing shuairuo* was described by a  $\kappa$ -statistic of 0.59,  $p < .001$ , with ICD-10 neurasthenia being more specific to subjects with prominent and persistent symptoms of fatigue. Comparisons of *shenjing shuairuo* with DSM-IV USD yielded a  $\kappa$ -statistic of .24,  $p < .001$ , identifying it as *shenjing shuairuo*'s closest counterpart in the DSM-IV system. Comparisons of ICD-10 neurasthenia with the DSM-IV somatoform disorders did not result in a significant  $\kappa$  for any pairwise comparison, although the relationship between ICD-10 neurasthenia and any DSM-IV somatoform disorder approached significance,  $\kappa = .17$ ,  $p < .05$ . Comparisons with all other DSM-IV disorders were not significant.

#### DIAGNOSTIC GROUP COMPARISONS

Based on the diagnostic interviews, four mutually exclusive diagnostic groups were created. Subjects with comorbidity across diagnostic classes (i.e. mood and anxiety disorders) were excluded with one exception. The 15 subjects with *shenjing shuairuo* who also met DSM-IV criteria for USD were included in the *shenjing shuairuo* group because USD is viewed as a residual category. The single case meeting criteria for ICD-10 neurasthenia only was excluded, as was the single case of schizophrenia. The remaining 106 subjects were divided into four groups: *shenjing shuairuo* ( $n = 36$ ), somatoform disorders ( $n = 27$ ), mood disorders ( $n = 26$ ) and anxiety disorders ( $n = 17$ ).

Of the 106 subjects (49 male, 57 female), 57.6% were aged 31 to 55 years. Three-quarters of the subjects were married and the modal level of education was a high school degree (35.8%). Over 60% lived in rural areas; 30.2% were employed as farmers or laborers, and 46.3% were employed in white-collar professions or by the government. The average number of doctor visits in the previous month was 1.54 ( $SD = 3.45$ ); the median duration of illness was 18 months (range 1–240 months). Fifty percent of subjects were recruited from neurology, 36.8% from internal medicine, and 13.2% from traditional Chinese medicine. No group differences were found for any of the demographic variables.

#### PSYCHIATRIC SYMPTOMATOLOGY

Subjects with DSM-IV mood disorders scored significantly higher than those with *shenjing shuairuo* on the BSI Global Severity Index, revealing a higher degree of symptomatology and overall distress,  $t(60) = -3.52$ ,  $p < .001$ . As shown in Table 2, subjects with *shenjing shuairuo* had significantly lower scores than those with mood disorders on the depression,  $U(60) = 225.00$ ,  $p < .001$ , phobic anxiety,  $t(60) = -3.35$ ,  $p < .01$ , paranoid ideation,  $t(60) = -3.00$ ,  $p < .01$  and psychoticism subscales,  $U(60) = 211.00$ ,  $p < .001$ . In contrast, scale profiles for the *shenjing shuairuo* group were similar to those for the anxiety disorders group, with the exception of significantly lower scores for the phobic anxiety,  $t(51) = -3.96$ ,  $p < .01$  and anxiety scales,  $t(51) = -3.70$ ,  $p = .001$ . There were no significant differences between the *shenjing shuairuo* and the somatoform disorders group on any of the symptom scales.

The most distressing symptoms (defined by a score of 4 – *extremely distressing*) endorsed by individuals with *shenjing shuairuo* were tiredness/fatigue (30.6%), ‘swelling’ in the head, neck or brain (25.0%), fatigue upon waking (22.2%), trouble falling asleep (22.2%), feeling disturbed about past events (19.4%), faintness or dizziness (16.7%), nervousness or shakiness inside (16.7%), ringing in the ears (16.7%), ‘heaviness’ in the head (13.9%), sleeping more than usual (13.9%) and hair falling out (13.9%).

#### FUNCTIONAL IMPAIRMENT

As shown in Table 3, patients with *shenjing shuairuo* reported clinically significant levels of disability and missed 3.3 days ( $SD = 7.5$ ) from work in the previous month due to illness. They reported less bodily pain than did the somatoform disorders group,  $t(61) = 2.61$ ,  $p < .01$ , and significantly better mental health than those with a mood disorder,  $t(59) = 2.77$ ,  $p < .01$ . There were no significant group differences on any of the other subscales.

**TABLE 2**  
Group comparisons on BSI symptom scales<sup>a</sup>

<i>Parameter</i>	<i>SJSR (n = 36)</i>	<i>SOM (n = 26)</i>	<i>ANX (n = 17)</i>	<i>MOOD (n = 27)</i>	<i>Paired comparisons with SJSR</i>
Global Severity Index	0.89 ± 0.51	1.01 ± 0.65	1.13 ± 0.43	1.37 ± 0.57***	SJSR<MOOD
Somatization	1.30 ± 0.76	1.53 ± 0.78	1.71 ± 0.88	1.55 ± 0.81	—
Obsessive-Compulsive	1.61 ± 0.93	1.33 ± 1.04	1.67 ± 0.68	1.94 ± 0.94	—
Interpersonal Sensitivity	0.78 ± 0.91	0.93 ± 1.11	0.74 ± 0.70	1.35 ± 1.00	SJSR<MOOD
Depression	0.58 ± 0.59	0.74 ± 0.72	0.52 ± 0.52	1.41 ± 1.03***	SJSR<MOOD
Anxiety	1.00 ± 0.72	1.14 ± 0.95	1.80 ± 0.60***	1.45 ± 0.72	SJSR<ANX, MOOD
Hostility	0.82 ± 0.65	1.03 ± 0.88	1.14 ± 0.71	1.05 ± 0.71	—
Phobic Anxiety	0.43 ± 0.53	0.57 ± 0.62	1.08 ± 0.72**	0.95 ± 0.68**	SJSR< ANX, MOOD
Paranoid Ideation	0.60 ± 0.76	0.56 ± 0.63	0.50 ± 0.52	1.22 ± 0.86**	SJSR<MOOD
Psychoticism	0.48 ± 0.51	0.76 ± 0.78	0.53 ± 0.41	1.12 ± 0.77***	SJSR< MOOD
Somatization Addendum	1.19 ± 0.65	1.07 ± 0.59	1.42 ± 0.73	1.28 ± 0.53	—

*Note.* The *shenjing shuairuo* (SJSR) group was compared with the other diagnostic groups. Dashes indicate that none of the three DSM-IV groups were significantly different from the SJSR group.

SOM, somatoform disorders; ANX, anxiety disorders; MOOD, mood disorders.

<sup>a</sup>Lower scores indicate better functioning.

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

**TABLE 3**  
Group comparisons on SF-36 scales<sup>a</sup>

<i>Parameter</i>	<i>NT (n = 36)</i>	<i>SOM (n = 27)</i>	<i>ANX (n = 17)</i>	<i>MOOD (n = 26)</i>	<i>Paired comparisons with SJSR</i>
Physical Functioning	79.57 ± 19.20	67.78 ± 22.59*	76.47 ± 22.76	68.20 ± 29.93	NT>SOM
Role-Physical	34.03 ± 36.91	39.81 ± 40.58	32.35 ± 35.59	26.00 ± 33.45	NS
Bodily Pain	45.48 ± 16.91	32.84 ± 21.14*	45.31 ± 19.59	35.51 ± 23.33	NT>SOM
General Health	35.97 ± 15.99	31.96 ± 17.49	29.65 ± 17.35	29.38 ± 22.07	NS
Vitality	38.33 ± 11.46	40.77 ± 16.83	39.41 ± 10.59	32.33 ± 13.36	NS
Social Functioning	64.06 ± 23.50	68.51 ± 26.89	66.91 ± 13.76	53.25 ± 27.84	NS
Role-Emotional	25.93 ± 34.83	32.05 ± 40.53	14.58 ± 27.13	9.33 ± 22.61*	NT>AFF
Mental Health	50.83 ± 13.51	46.92 ± 19.74	51.29 ± 9.82	41.92 ± 10.46**	NT>AFF
No. work days missed in past month	3.34 ± 7.52	5.54 ± 11.54	5.53 ± 10.00	6.72 ± 11.15	NS

*Note.* The neurasthenic (NT) group was compared with the other diagnostic groups.

SOM, somatoform disorders; ANX, anxiety disorders; MOOD, mood disorders.

<sup>a</sup>Higher scores indicate better functioning.

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

## DISCUSSION

Whereas the vast majority of studies have examined *shenjing shuairuo* in psychiatric patients, the current study was conducted in a primary care setting at the very hospital that hosted Kleinman's (1982) psychiatric study 15 years before. The reasoning behind this sampling modification was simple. Because of the stigma surrounding mental illness, patients presenting in psychiatry are frequently referred by other medical departments or brought in by their families against their will. Thus, they may be said to represent a group with more significant psychopathology and functional impairment. Although not as rigorous as a community study, we believe that a primary care study of neurasthenia provides a more representative sample of patients seeking relief within the social and economic constraints of modern Chinese medicine. Furthermore, cross-cultural studies conducted in the past 25 years suggest that somatic symptoms are the most common clinical expression of distress worldwide (Kirmayer & Young, 1998), accounting for between one third and three quarters of total visits to primary care (Collyer, 1979; Katon, Kleinman, & Rosen, 1982; Regier, Goldberg, & Taube, 1978).

Over 40% of individuals meeting criteria for *shenjing shuairuo* did not meet symptom criteria for a core somatoform disorder, thereby relegating this group to the Somatoform Disorder Not Otherwise Specified category. Undifferentiated somatoform disorder (USD) was the most common DSM-IV diagnosis given to individuals with *shenjing shuairuo*, however, the heterogeneity of *shenjing shuairuo* is reflected in the reclassification of other patients into categories of pain disorder, hypochondriasis and somatization disorder. Whereas a diagnosis of USD requires that symptoms exceed 6 months' duration, the Chinese conception of *shenjing shuairuo* simply requires that symptoms be 'persistent' over time, recognizing different courses of the disorder. The latter's more flexible definition of clinical significance distinguishes those cases of *shenjing shuairuo* who did not meet criteria for USD as having a more episodic or less chronic course of illness.

Much as Kleinman observed in the 1980s, Chinese patients in this study invoked the term *shenjing shuairuo* in reference to a range of complaints including depressed mood, 'vexatiousness' (*fan nao*), anxiety, pain and other somatic discomforts. In this regard, *shenjing shuairuo* may be still seen as an idiom of distress particularly among individuals living in rural areas of China. While recent generations of Chinese psychiatrists readily apply western concepts of depression and anxiety, some continue to use the term *shenjing shuairuo* to communicate with their more traditional patients and engage them in treatment (Rin & Huang, 1989). In the present study, ethnographic observations of everyday interactions between doctor and patient revealed that discussions of *shenjing shuairuo* carried an

assumption of sociogenesis that served to validate patients' experiences of stress and suffering. In contrast, some would argue that the term *somatoform disorder* has very little clinical usefulness in either western or eastern cultural contexts (Tyrer, 1989; Xu, 1994).

Although drawing parallels between some subgroups of *shenjing shuairuo* and the somatoform disorders may assist western clinicians in recognizing meaningful clusters of symptoms for particular cultural groups, it is incorrect to say that these categories are conceptually equivalent. Different cultural frameworks for conceptualizing illness require that diagnostic categories be interpreted within the contexts in which they were developed (Kleinman, 1977). As S. Lee (1998) has noted, an analysis of *shenjing shuairuo* through the lens of traditional Chinese medicine reveals that the disorder cannot be said to be exclusively somatic in nature. Rather, so-called physical symptoms such as fatigue, sleep disturbances and dizziness are conceptualized as somato-cognitive-affective symptoms resulting from the functional disharmony of mutually interdependent vital organs. This holistic conceptualization of *shenjing shuairuo* is not captured in the concept of somatoform disorders and helps to explain the former's status among laypersons in diverse Chinese cultural settings.

As reflected in the significant concordance between *shenjing shuairuo* and ICD-10 neurasthenia, fatigue or weakness was reported by the majority of subjects with *shenjing shuairuo*. While this finding contrasts with prior studies of *shenjing shuairuo* in psychiatric patients (Kleinman, 1982; Rin & Huang, 1989), international studies indicate that fatigue is quite common among general medical patients (Lewis & Wessely, 1992). In this study, 20% of 906 primary care patients reported being 'quite a bit' or 'extremely' distressed by fatigue.

Interestingly, subjects with *shenjing shuairuo* revealed a preoccupation with symptoms localized in the head, brain (*nao*) and/or central nervous system (*shenjing*), which may suggest a semantic connection with their preference for help-seeking in neurology (*shenjing ke*). From the perspective of the patient, the ability to transform personal suffering into the language of neurology (e.g. 'weakness of nerves') may be part of *shenjing shuairuo*'s enduring appeal. Additional analyses revealed that subjects recruited from the neurology department reported significantly fewer somatic complaints but comparable affective complaints compared with those in internal medicine and traditional Chinese medicine. This suggests that the department of neurology may function as a *de facto* out-patient psychiatry service, without the attendant stigma.

In conclusion, this study reveals the continued phenomenological and clinical significance of *shenjing shuairuo* among rural Chinese patients, despite its increasing marginalization in professional psychiatric discourse. Rather than attempting to apply affective, anxiety, or somatoform disease

constructs to these patients, our findings suggest that there may be therapeutic benefits to retaining *shenjing shuairuo* at least in the immediate future. Given the poorer clinical picture associated with mood disorders in the present study, research is needed to examine whether affective exploration and expression is necessarily beneficial for traditional rural Chinese patients. While the sampling design was an improvement on prior studies, limitations include its relatively small sample size and reliance on self-report data. Additional research is needed to investigate possible group differences in treatment response, disease progression, relapse rates, and family illness histories. However, given the spread of western psychiatric thinking across the globe, we also recognize that the concept of *shenjing shuairuo* is likely to continue evolving, perhaps to be replaced with newer hybridized expressions of distress.

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