Assessment of the Structured Clinical Interview (SCID) for DSM-5 for Somatic Symptom Disorder in General Hospital Outpatient Clinics in China

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Abstract

Background: It is still unknown whether the “Somatic symptom disorders (SSD) and related disorders” module of Structured clinical interview for DSM-5, research version (SCID-5-RV) is valid in China. This study aimed to assess the SCID-5-RV for SSD in general hospital outpatient clinics in China.

Methods: This multicenter cross-sectional study was conducted in the outpatient clinics of nine tertiary hospitals in Beijing, Jincheng, Shanghai, Wuhan, and Chengdu, between May 2016 and March 2017. The “SSD and related disorders” module of SCID-5-RV was translated, reversed-translated, revised, and used by trained clinical researchers to make a diagnosis of SSD. Several standardized questionnaires measuring somatic symptom severity, emotional distress, and quality of life were used to compare with SCID-5-RV.

Results: A total of 699 patients were recruited, and 236 were diagnosed with SSD. Of these, 46 had mild SSD, 78 had moderate SSD, 100 had severe SSD, and 12 were excluded due to incomplete data. SCID-5-RV for SSD correlated high with somatic symptom severity, emotional distress, and quality of life (all P<0.001), and could distinguish non-severe forms of SSD from severe ones.

Conclusions: This study suggests that SCID-5-RV for SSD can distinguish SSD from non-SSD patients, and severe patients from non-severe patients. It has good discriminative validity with other tools and reflects the DSM-5 diagnostic approach that emphasizes excessive emotional, thinking, and behavioral responses related to symptoms.

Background

Somatic symptom disorder (SSD), formerly known as somatoform disorder (SFD) [1], is common and one of the most common reasons for visiting physicians [2]. SSD includes the somatic symptoms that are not associated with other mental disorders or cannot be medically explained in relation to a patient’s general medical condition [2]. SSD has tremendous relevance for health care systems. Therefore, somatoform symptoms have to be reliably classified in order to improve detection, adequate treatment, and relevant research efforts.

SFD was introduced in the DSM-III [3] and modified for DSM-IV [1], but almost all psychiatrists agree that the definition of SFD needed substantial revision. The current diagnostic DSM-5 criteria for SSD encompass the former diagnoses of SFD, pain disorder, and undifferentiated somatoform disorder, and, in part, hypochondriasis. Compared with DSM-IV, DSM-5 introduced two major changes. First, the somatic symptoms criterion is no longer limited to medically unexplained symptoms; this eliminates the difficult and subjective distinction between medically explained and unexplained symptoms and mind-body dualism [4, 5]. Second, criterion B now includes positive psychological diagnostic criteria; this criterion now includes excessive thoughts, feelings, and behaviors that are related to the somatic symptoms experienced by the patient or associated with health concerns. For criterion B, the patients have to present at least one of the following: 1) disproportionate and persistent thoughts about symptoms, 2) persistently
high anxiety about health or symptoms, and 3) excessive time and energy devoted to the symptoms. Third, according to criterion C, the symptoms have to persist for at least 6 months. Patients with SSD are classified as mild SSD (at least one B criterion), moderate SSD (two or more B criteria), and severe (two or more B criteria plus criterion C).

The DSM system is a common nomenclature to describe psychopathology, but it has been criticized repeatedly [6, 7]. The major critique is that the DSM conceptualizes disorders as categorical entities for which the individuals are dichotomized as being with or without the disorder, which leads to a risk of over-medicalization [6, 7]. Indeed, multiple studies have shown that most psychopathologies are not categorical entities, but are rather continuous or dimensional hybrids of dimensional and categorical constructs [8-11].

Structured clinical interview for DSM-5, research version (SCID-5-RV) is a guide for semi-structured interviews for the major DSM-5 diagnoses; the latest version was published by the American Psychiatric Association in 2015 in English[12]. It is still unknown whether the categorical and symptom severity dimensional constructs of the “Somatic symptom disorders and related disorders” module of SCID-5-RV are valid.

Therefore, the aim of this study was to assess the SCID-5-RV for SSD in general hospital outpatient clinics in China. This should provide some basis for the further validation of the SCID-5-RV approach and for its official translation in Chinese.

**Methods**

**Study design and settings**

This study is a secondary analysis of a dataset that was collected for a previous multicenter cross-sectional study that was conducted from May 2016 to March 2017 in outpatient clinics of nine tertiary hospitals in North, North-Central, East, Central, and West China (Beijing, Jincheng, Shanghai, Wuhan, and Chengdu) [13]. The modern biomedical setting was represented by the neurology and gastroenterology departments, the Traditional Chinese Medicine (TCM) department represented the TCM setting, and the psychological medicine department represented the psychosomatic medical settings. For each setting, 220 patients were supposed to be recruited.

**Subjects**

The screening days at each center were randomly determined. All patients who were admitted to one of the study departments were approached for participation in the study using an informational hand-out. An informed consent form was used to explain the aims of the study to the patients. The patients were fully informed that their participation was voluntary, that the data would be analyzed anonymously, and that there were no disadvantages in case of refusal to participate.
The inclusion criteria were: 1) ≥18 years old 2) visiting for treatment (i.e., not only picking up a prescription); 3) able to read and write; and 4) signed the written consent form. The exclusion criteria were: 1) language barrier; 2) limited writing skills; 3) cognitive impairment; 4) psychosis; or 5) acute suicidal ideation.

Smoking was classified as never smoking, former smoker, and current smoker. Drinking was classified as never drinking, drinking only socially, drunk in the past but quit drinking, and currently drinking >3 days/week. Exercise was classified as >2 h/day, 1-2 h/day, <1 h/day, and no physical exercise.

Assessments

Figure 1 presents the study process. All patients who provided written informed consent filled in questionnaires for general information and quantitative assessment of psychopathology: 1) Patient Health Questionnaire 15 (PHQ-15) for the number and severity of somatic symptoms; 2) Somatic Symptom Scale-8 (SSS-8) for the somatic symptom burden; 3) Patient Health Questionnaire 9 (PHQ-9) for depression; 4) General Anxiety Disorder-7 (GAD-7) for anxiety; 5) Whiteley-7 for health-related anxiety (WI-7); 6) WHO Disability Assessment Schedule (WHO-DAS 2.0); 7) Somatic Symptom Disorder B-criteria (SSD-12); 8) 12-item short-form health survey (SF-12) for quality of life; 9) questions on health care utilization; and 10) sociodemographic data (age, sex, level of education, marital status, etc.).

The PHQ-15 was validated in Chinese for somatic symptoms [14, 15]. SSS-8 is a self-rating scale used to quantify the somatic symptom burden of patients in the past week and has been validated in Chinese [16]. The severity of depression and generalized anxiety were assessed using the 9-item depression scale PHQ-9 and the 7-item GAD-7, respectively. PHQ-9 and GAD-7 are validated and reliable in their Chinese versions [17-19]. Illness anxiety was evaluated using the 7-item WI-7 Chinese version [20]. Population-level and clinical practice health and disability were assessed using the WHO-DAS 2.0, Chinese version [21]. Patients’ perception of their symptom-related thoughts, feelings, and behaviors was assessed using the SSD-12, which was developed based on the DSM-5 criteria [22]. The SF-12 captures information on health-related quality of life (QoL) and was validated in Chinese [23, 24].

Diagnostic interview

For our research purpose, the “Somatic Symptom Disorders and Related Disorders” module of SCID-5-RV was purchased. The nine participating centers, all of which being authoritative centers in the field of psychiatry in China, cooperated to translate the SCID-5-RV into Chinese, to translate it back into English again, and to compare it with the initial English version, finally confirming that the translation was accurate [13]. A final version was accepted and agreed upon by all Chinese researchers after translations were discussed. The Chinese translation did not get the APA’s sanction; therefore, the present study is a preliminary study that establishes the basis for a future Chinese version.

All patients underwent an interview (SCID-5-RV) following the criteria of DSM-5 for SSD. All the research assistants (psychiatrists and postgraduate medical students in psychiatry) were trained with the SCID-5-
RV interview. The assistants worked under the direct supervision of attending psychiatrists with >3 years of experience (i.e., the clinical heads of psychosomatic medicine.

The self-evaluation of treatment satisfaction and efficacy were divided into six grades (0-5 points): 0 means "not satisfied with the treatment in the past 6 months at all" or "considered that the treatment in the past 6 months was completely failed"; and 5 means "very satisfied with the treatment in the past 6 months" or "considered that the treatment in the past 6 months was very successful".

Based on the results of the SCID-5-RV, the patients could be diagnosed with SSD in the presence of criteria A and B [2]. Patients with one B criterion were classified as mild SSD, those with at least two B criteria were classified as moderate SSD, and those with at least two B criteria and the C criterion were classified as SSD.

The results of the SCID-5-RV were compared with the results of the other scales. The combination of the PHQ-15 and SSD-12 is considered diagnostic for SSD [25].

**Statistical analysis**

All data were stored at the University Medical Centre Freiburg. The same center was responsible for monitoring the project sites and for data analysis. The study was approved by the ethics committees of all participating centers. The approval number at the University Medical Centre Freiburg was S-K276. The data were collected by research assistants between May 2016 and March 2017.

All statistical analyses were performed using SPSS 22.0 (IBM, Armonk, NY, USA). Categorical variables were described as numbers and percentages and analyzed using the chi-square test. Continuous variables were presented as means and standard deviations and analyzed using the Student t-test for two independent groups. One-way analysis of variance and the LSD post hoc test were used for the comparison of continuous variables among multiple groups. The Spearman correlation was used to analyze the relationship between SCID-5-RV and the other scales. Two-tailed P-values <0.05 were considered significant. Alpha-inflation might be an issue, and to mitigate it, only P-values <0.001 were considered as being high-impact differences or correlations.

**Results**

**Enrollment**

A total of 220 patients were supposed to be recruited from each of the three medical settings. During the study period, 1269 patients were contacted, and 699 (55.1%) were enrolled. All 699 completed the questionnaires and clinical interviews. Among those who did not participate in the study, 68 (5.4%) met at least one exclusion criterion, and 502 (39.6%) refused to participate (no time for this for 53.0%, no interest for the study for 29.5%, lack of trust in the interviewers for 8.4%, not feeling well enough for 6.8%, and other reasons for 2.4%). Among them, 150 were from Peking Union Medical College Hospital, 50 were from Beijing Hospital of Traditional Chinese Medicine, Capital University, 158 were from West China
Hospital, Sichuan University, 53 were from Sichuan Provincial People's Hospital, 50 were from Tongji Hospital of Tongji University, 50 were from Dongfang Hospital of Tongji University, 55 were from Zhongshan Hospital Affiliated to Fudan University, 52 were from Renmin Hospital of Wuhan University, and 81 were from Jincheng People's Hospital. Two patients had incomplete data and were excluded, and 697 patients finally underwent the diagnostic interview.

**Diagnosis of SSD**

According to the SCID-5-RV results, 236 (33.8%) were diagnosed with SSD. Of these, 46 (19.5%) had mild SSD, 78 (33.1%) had moderate SSD, 100 (42.4%) had severe SSD, and 12 (5.1%) were excluded due to incomplete data (Figure 2).

**Sociodemographic characteristics**

When comparing the patients with and without SSD, there were no significant differences between the two groups in demographic variables. The patients with SSD were separated according to severity, and there were no differences among the three groups (all P>0.05) (Table 1).

**Table 1.** Socio-demographic characteristics of the patients
|                          | No SSD (n=473) | SSD(n=224) | P   | Mild (n=46) | Moderate (n=78) | Severe (n=100) | P   |
|--------------------------|----------------|------------|-----|-------------|-----------------|----------------|-----|
| Age (years)              | 43.1±14.7      | 43.0±14.0  | 0.957 | 43.5±14.7   | 40.2±14.2       | 45.4±13.1      | 0.052 |
| Sex, female (%)          | 284(61.6%)     | 143(60.6%) | 0.806 | 21 (45.7%)  | 50 (64.1%)      | 63 (63.0%)     | 0.088 |
| Health insurance, yes (%)| 400(87.7%)     | 200(85.5%) | 0.406 | 38 (82.6%)  | 66 (84.6%)      | 85 (86.7%)     | 0.800 |
| Residence, urban (%)     | 386(83.7%)     | 187(79.6%) | 0.174 | 35 (76.1%)  | 60 (76.9%)      | 84 (84.8%)     | 0.306 |
| Marital status, married (%) | 343(74.4%)   | 163(69.1%) | 0.194 | 31 (67.4%)  | 49 (62.8%)      | 77 (77.0%)     | 0.364 |
| Family income (monthly, Yuans) (%) |          |            | 0.196 |              |              |              | 0.850 |
| Profession, employed (%) | 237(51.4%)     | 105(44.5%) | 0.215 | 25 (54.3%)  | 34 (43.6%)      | 39 (39.0%)     | 0.699 |
| Education, university or higher (%) | 230(49.9%) | 105(44.5%) | 0.227 | 20 (43.5%)  | 41 (52.6%)      | 38 (38.0%)     | 0.239 |
| Exercise in winter, never (%) | 123(26.7%) | 70(29.7%) | 0.670 | 15 (32.6%)  | 20 (25.6%)      | 33 (33.0%)     | 0.680 |
| Exercise in summer, never (%) | 95(20.6%) | 54(22.9%) | 0.597 | 9 (19.6%)   | 14 (17.9%)      | 29 (29.0%)     | 0.113 |
| Smoking, never (%)       | 340(73.8%)     | 165(70.2%) | 0.473 | 31 (67.4%)  | 58 (74.4%)      | 67 (67.7%)     | 0.165 |
| Alcohol, never (%)       | 218(47.3%)     | 127(54%)   | 0.385 | 26 (56.5%)  | 39 (50.0%)      | 54 (54.5%)     | 0.908 |
SSD: somatic symptom disorders.

**Clinical characteristics**

When comparing the patients with and without SSD, the patients with SSD had lower treatment satisfaction (2.5±1.8 vs. 3.3±1.6, P<0.001) and worse self-evaluation of treatment effect (2.4±1.6 vs. 3.1±1.6, P<0.001). The scores of the questionnaires for symptom severity, emotional distress, and SSD B-criteria in the SSD group were higher than those in the non-SSD group, while the scores for quality of life in the SSD group were significantly lower than those in the non-SSD group (all P<0.05) (Table 2).

**Table 2.** Clinical characteristics of the patients

|                      | No SSD (n=473) | SSD (n=224) | P        | Mild SSD (n=46) | Moderate SSD (n=78) | Severe SSD (n=100) | P       |
|----------------------|----------------|-------------|----------|-----------------|---------------------|--------------------|---------|
| Satisfaction         | 3.3±1.6        | 2.5±1.8     | <0.001   | 2.7±1.8         | 2.2±1.7             | 2.5±1.9            | 0.344   |
| Effect               | 3.1±1.6        | 2.4±1.6     | <0.001   | 2.6±1.6         | 2.2±1.5             | 2.4±1.7            | 0.366   |
| PHQ-15               | 8.0±4.8        | 12.0±5.5    | <0.001   | 12.0±6.1        | 10.7±5.0            | 13.1±5.6           | 0.019c  |
| WHO DAS 2.0          | 17.3±5.8       | 22.7±8.5    | <0.001   | 21.3±8.0        | 21.1±6.8            | 24.8±9.8           | 0.006bc |
| PHQ-9                | 6.8±5.8        | 11.8±6.8    | <0.001   | 10.4±7.9        | 11.0±6.0            | 13.4±6.8           | 0.012bc |
| GAD-7                | 5.1±5.2        | 9.7±6.1     | <0.001   | 7.8±6.3         | 9.0±5.6             | 11.1±6.3           | 0.004bc |
| WI-7                 | 13.2±5.5       | 21.4±7.4    | <0.001   | 18.6±7.3        | 20.7±6.9            | 23.3±7.2           | 0.001bc |
| SSD-12               | 9.1±9.4        | 23.6±11.4   | <0.001   | 17.8±10.8       | 22.1±10.2           | 27.5±10.9          | <0.001abc|
| SSS-8                | 7.0±5.1        | 12.0±6.5    | <0.001   | 11.6±7.0        | 10.8±5.3            | 13.3±7.0           | 0.034c  |
| SF-12 (PCS)          | 45.1±8.6       | 39.1±9.0    | <0.001   | 41.0±8.2        | 40.0±9.0            | 37.4±9.0           | 0.038b  |
| SF-12 (MCS)          | 44.6±11.5      | 34.9±11.3   | <0.001   | 38.6±13.9       | 34.4±11.6           | 33.5±9.8           | 0.044b  |
| Number of visits     | 1.8±0.9        | 2.2±1.1     | <0.001   | 1.9±1.0         | 1.9±1.0             | 2.6±1.0            | <0.001abc|
Post-hoc analysis was adjusted by LSD. a: P<0.05 Mild vs. Moderate; b: P<0.05 Mild vs. Severe; c: P<0.05 Moderate vs. Severe.

PHQ-15: Patient Health Questionnaire 15; WHO-DAS 2.0: WHO Disability Assessment Schedule; PHQ-9: Patient Health Questionnaire 9; GAD-7: General Anxiety Disorder-7; WI-7: Whiteley-7 for health-related anxiety; SSD-12: Somatic Symptom Disorder B-criteria; SSS-8: Somatic Symptom Scale-8; SF-12: 12-item short-form health survey; PCS: physical component score; MCS: mental component score; SCID-5-RV: Structured clinical interview for DSM-5, research version.

When comparing the mild, moderate, and severe groups, the SSD-12 scores and numbers of visits to the doctors in the last 12 months were significantly different among the three groups. The scores of WHO DAS 2.0, PHQ-9, GAD-7, and WI-7 indicated that the mild and moderate groups had significantly lower scores than the severe group, but there was no significant difference between the mild and moderate groups (all P<0.05) (Table 2). The PHQ-15 and SSS-8 scores were significantly lower in the moderate group than in the severe group. The scores of SF-12 PCS and MCS indicated that the mild group was significantly lower than the severe group (all P<0.05) (Table 2).

**Spearman correlation**

The results of the SCID-5-RV for SSD diagnosis correlated high with somatic symptom severity, emotional distress, and quality of life, which were assessed by PHQ-15, SSS-8, PHQ-9, GAD-7, WI-7, SSD-12, WHO-DAS 2.0, SF-12 PCS, and SF-12 MCS (all P<0.001). SCID-5-RV for SSD severity correlated with PHQ-9, GAD-7, WI-7, SSD-12, WHO-DAS 2.0, SF-12 PCS, and SF-12 MCS (all P<0.05) (Table 3).

**Table 3.** Spearman correlation between SCID-5-RV and other assessment scales
|                      | Diagnostic (n=697) | Severity (n=224) |
|----------------------|--------------------|------------------|
|                      | r       | P     | r      | P     |
| PHQ-15               | 0.355  | <0.001 | 0.112 | 0.095 |
| SSS-8                | 0.385  | <0.001 | 0.130 | 0.053 |
| PHQ-9                | 0.366  | <0.001 | 0.189 | 0.005 |
| GAD-7                | 0.370  | <0.001 | 0.217 | 0.001 |
| WI-7                 | 0.530  | <0.001 | 0.254 | <0.001 |
| SSD-12               | 0.563  | <0.001 | 0.339 | <0.001 |
| WHO DAS 2.0          | 0.351  | <0.001 | 0.182 | 0.006 |
| SF-12 (PCS)          | -0.310 | <0.001 | -0.166 | 0.013 |
| SF-12 (MCS)          | -0.375 | <0.001 | -0.154 | 0.022 |

PHQ-15: Patient Health Questionnaire 15; SSS-8: Somatic Symptom Scale-8; PHQ-9: Patient Health Questionnaire 9; GAD-7: General Anxiety Disorder-7; WI-7: Whiteley-7 for health-related anxiety; SSD-12: Somatic Symptom Disorder B-criteria; WHO-DAS 2.0: WHO Disability Assessment Schedule; SF-12: the 12-items Short Form Health Survey; PCS: physical composite score; MCS: mental composite score.

**Discussion**

It is still unknown whether the “SSD and related disorders” module of SCID-5-RV is valid. Therefore, this study aimed to assess the SCID-5-RV for SSD in general hospital outpatient clinics in China. The results suggest that SCID-5-RV for SSD can distinguish SSD from non-SSD patients, and severe forms of SSD from non-severe forms. It has good discriminative validity with other tools and reflects the DSM-5 diagnostic approach that emphasizes excessive emotional, thinking, and behavioral responses related to symptoms.

There were no significant differences in sociodemographic and lifestyle variables between the SSD and non-SSD group, as well as among the severity groups. These results suggest that the sociodemographic factors did not affect the potential diagnostic value of the SCID-5-RV.
In the present study, the SCID-5-RV could identify patients with SSD. A study in China showed that using the SCID-5 lead to a frequency of 36.5% for SSD, but that there were differences in sociodemographic characteristics among SSD severity groups, with patients with mild SSD having better socioeconomic conditions than those with severe SSD [26]. A Turkish version of the SCID-5-CV showed a κ of 0.65 for SSD [27]. Many questionnaires can be used for the evaluation of SSD [4, 5], but it is considered that the PHQ-15, SSS-8, and SSD-12 provide good diagnostic potential [25]. In the present study, the Spearman correlation of the SCID-5-RV was the strongest with SSD-12 but was also correlated with PHQ-15 and SSS-8. Those results suggest that the SCID-5-RV Chinese version could be used for the diagnosis of SSD in Chinese patients. As a diagnostic tool, SCID-5-RV for SSD only has a moderate positive correlation with SSD-12 and WI-7 and a low correlation with other criterion tools such as PHQ-9 and GAD-7. This finding is plausible considering that SCID-5-RV for SSD could distinguish well somatic disorders from anxiety and depression disorders and is more influenced by thoughts, emotions, and behaviors related to symptoms. Similarly, there was a weak correlation between PHQ-15 and SSS-8. This result may reflect that, under the new diagnostic criteria, the number and load of somatic symptoms have less impact on the diagnostic results.

The PHQ-15, SSS-8, and SSD-12 have also been shown to be able to discriminate among SSD severity groups [25]. Among patients with mild, moderate, and severe SSD, there were significant differences in the scores of SSD-12 and the number of doctor visits in the past 12 months. It suggests that with the increase in the severity of SSD, patients have gradually aggravated emotional, thinking, and behavioral problems related to the symptoms, and gradually increase the use of medical resources. The scores of WHO-DAS 2.0, PHQ-9, GAD-7, and WI-7 indicated that the mild and moderate groups were significantly lower than the severe group. It indicates that patients in the severe group have a more severe functional impairment, disease belief, anxiety, and depression than those in the non-severe group. The PHQ-15 and SSS-8 scores indicated that the moderate group was significantly lower than the severe group. It indicates that the somatic symptom load of the severe group is heavier than that of the moderate group. The scores of PCS and MCS in SF-12 indicated that the mild group was significantly higher than the severe group. It indicates that the severe group has more severe functional impairment than the mild group.

The strength of this study was that the outpatient clinics of four departments in nine tertiary hospitals in five Chinese cities participated in this study, resulting in a large sample. Nevertheless, this study had limitations. This study used the convenient sampling method, and there may be selection bias. This study was cross-sectional, lacking follow-up observation of patients to understand the outcome of the disease. The diagnostic value of the SCID-5-RV was not verified. Future studies should formally validate the SCID-5-RV Chinese version.

**Conclusion**

In conclusion, this study showed that the SCID-5-RV for SSD could well distinguish SSD patients from non-SSD patients, and severe SSD patients from non-severe SSD patients. There was no significant difference between mild and moderate SSD patients in clinical characteristics. Both as a diagnostic tool
and severity assessment tool, the SSD module of SCID-5-RV Chinese version had good discriminative validity with other criterion tools, including PHQ-15, SSS-8, PHQ-9, GAD-7, WI-7, SSD-12, WHO DAS 2.0, and SF-12. Therefore, it is necessary to further explore an evaluation tool suitable for the clinical application of the SSD module of SCID-5-RV in the future.

**Declarations**

**Consent for publication**

Not Applicable.

**Availability of data and materials**

The dataset supporting the conclusions of this article is included within the article.

**Ethics approval and consent to participate**

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the 1975 Declaration of Helsinki, as revised in 2008. All procedures involving human participants/patients were approved by the institutional review board of the University of Freiburg registered under the number 494/17 and the institutional review board of Peking Union Medical College Hospital registered under the number S-K276.

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Not Applicable

**Authors’ Contributions**

YJ was the project leader; she was responsible for the organization of data collection and drafted the manuscript. JW made substantial contributions to the study conception and design. KF made substantial contributions to the study conception and design and to data analysis and interpretation and drafted the manuscript. AT made substantial contributions to the study conception and design, and helped to draft the manuscript and critically revising the text for important intellectual content. TL, JC, helped to organization of data collection and helped to draft the manuscript. LZ, YZ, HC, HW, XM, WL, JR, and WL participated in its design and coordination and helped to draft the manuscript. RL participated in the study design and performed the statistical analysis.

All authors read and improved the final manuscript.

**Competing interests**

All authors declare that they have no competing interests.

**Acknowledgments**
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Figures
The subjects were enrolled from the departments of psychological medicine, traditional Chinese medicine, and gastroenterology/neurology.

Signed the informed consent form.

Questionnaires:
- Demographics and lifestyle
- Treatment satisfaction (6 months)
  - PHQ-15
  - SSD-12
  - WHO-DAS 2.0
    - PHQ-9
    - GAD-7
    - WI-7
    - SF-12

Structured interview: SCID-5-RV

Data entry and analysis

Figure 1

Study design. PHQ-15: Patient Health Questionnaire 15; SSD-12: Somatic Symptom Disorder B-criteria; WHO-DAS 2.0: WHO Disability Assessment Schedule; PHQ-9: Patient Health Questionnaire 9; GAD-7: General Anxiety Disorder-7; WI-7: Whiteley-7 for health-related anxiety; SF-12: 12-item short-form health survey; SCID-5-RV: Structured clinical interview for DSM-5, research version.
Figure 2

Patient flowchart. SCID-5-RV: Structured clinical interview for DSM-5, research version; SSD: Somatic Symptom Disorder.

**Supplementary Files**

This is a list of supplementary files associated with this preprint. Click to download.

- ValidationQuestionnaireChinese.20160624.pdf
- KompletelInterview.Englisch.201903.pdf