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Construction and validation of a preliminary Chinese version of the Wake Forest Physician Trust Scale

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Background: The development, validation, and psychometric properties of the Wake Forest Physician Trust Scale (WFPTS)-equivalent instrument for Chinese patients were investigated.

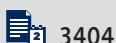
Material/Methods: We approached 3442 randomly selected outpatients at 3 Shanghai (China) general hospitals, treated ≥ 2 times per year by the same physician, for participation between November 2008 and December 2008. A Chinese version of the WFPTS (C-WFPTS) was prepared and administered to eligible and consenting patients, and subjected to validity assessment using 5 patient behaviors: (1) recommendation of the physician; (2) occurrence of dispute; (3) seeking a second opinion; (4) treatment adherence; and (5) consideration of switching physicians.

Results: A total of 352 (M: F, 149: 203; mean age, 40.67 ± 17.31 years; age range, 14–94 years) consenting and eligible patients were included in the analysis. The unidimensionality and internal consistency of C-WFPTS was confirmed (Cronbach's $\alpha=0.833$). Physician trust correlated significantly with physician satisfaction ($r=0.73$, $P<0.001$) and all 5 behaviors (1: $r=0.453$, 2: $r=0.209$, 3: $r=0.406$, 4: $r=0.444$, 5: $r=0.471$; $P<0.001$ for all), indicating validity and predictive validity, respectively. Patient trust increased significantly with increasing age and physician visits ($P>0.05$), but was not related to gender, birthplace, or insurance type.

Conclusions: C-WFPTS has good psychometric properties, reliability, and validity for the evaluation of patient trust in the patient-physician relationship, and thereby provides an essential tool for the characterization of patient-physician relationships in China, which is necessary for healthcare reform.

MeSH Keywords: Patient Education as Topic • Trust • Physician-Patient Relations

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Background

In medical practice, trust is a somewhat immature and ambiguous concept despite its critical role in the patient-physician relationship [1,2]. Trust has been considered synonymous with 'faith' or patient 'confidence' in English, yet trust has various meanings in virtually every language [1,3]. In Chinese, the character for 'trust' (信) is composed of the radical '人' in the altered form of '亻' (pronounced rén, meaning 'person') and '言' (yán, meaning 'to speak'), suggesting a link between speaking the truth and the development of trust. In clinical practice, patient trust requires open and honest communication, optimistic acceptance of vulnerability, and the perception that the physician is acting in the patient's best interests [4]. Trust is built gradually between a specific patient and physician over time [5,6]. Since the culture and language of Chinese-speaking patients are unique, customized instruments are required for assessment of the patient-physician relationship.

The first English-language instrument for the systematic assessment of patient trust was Anderson and Dedrick's *Patients' Trust in Physicians Scale* (1990); this was subsequently improved by Hall et al. [7] to become the widely used *Wake Forest Physician Trust Scale* (WFPTS). The WFPTS uses 10 items to assess 5 dimensions: honesty, competence, confidentiality, fidelity, and global trust [8–10]. In comparison to other available instruments, such as the *Kao Questionnaire* [11] and *Safran Questionnaire* [12], the WFPTS is consistent and reliable, with minimal skew [7]. However, no equivalent to the WFPTS exists in Chinese.

Patient satisfaction, along with the price and availability of care, has been used to estimate trust [13], which correlates positively with satisfaction [14] and patient loyalty [15]. Conventional non-medical consumer research suggests that customer loyalty increases with satisfaction [16], but some researchers, conversely, suggest that trust antecedes satisfaction [17,18]. Although potential outcomes of trust have been assessed quantitatively using both behavioral and attitudinal outcomes [7,19–22], it has not yet been conclusively determined whether trust correlates with patient characteristics and demographics such as age, health, and socioeconomic status, [8,9,23–25].

In China, trust may also be impacted by recent modifications to healthcare, which primarily consists of 3 insurance sub-systems: Urban Employee Basic Medical Insurance (UEBMI), New Rural Cooperative Medical Insurance Scheme (NCMS), and Urban Resident Basic Medical Insurance (URBMI) [26,27]. UEBMI, which is a mandatory enrollment in integrated social pooling and individual medical savings accounts for employees and retirees with regular employment in all institutions, has an effect on financing availability. Additionally, financing availability is influenced by voluntary enrollment in non-integrated and integrated social pooling accounts for unemployed and rural residents, respectively,

through URBMI and the voluntary New Rural Cooperative Medical Insurance Scheme (NCMS) [26,28]. Changes in healthcare availability and cost may impact physician-patient trust-building.

No comprehensive study of interpersonal patient trust with strong psychometric properties has been conducted in Chinese patients, due to a lack of instruments (such as WFPTS) available in Chinese that systematically measure trust. Thus, the current study undertook construction and validation of a modified WFPTS instrument designed specifically for Chinese patients (C-WFPTS), intended to be used as a reference for the measurement and indexing of patient trust in China.

Material and Methods

Study design

Between November 2008 and December 2008, outpatients ($n=3442$) at 3 general hospitals (Shanghai Sixth People's Hospital, Huadong Hospital affiliated to Fudan University, and Shanghai Ninth People's Hospital) in Shanghai (China) were approached randomly, while waiting to see a physician, for voluntary inclusion in a study of patient trust using a novel, modified C-WFPTS. The study was approved by the Local Institutional Review Board, and oral informed consent was obtained from each potentially eligible participant. Questionnaires were checked for omissions and duplications at the time of completion.

Patients

Patients were included who: (1) were aged ≥ 18 years; (2) were treated by the same physician ≥ 2 times in 1 year; and (3) had ≥ 1 referral to the treating physician. Exclusion criteria were: (1) the presence of cognitive, mental, or physical impairments to a degree that interfered with the study protocol or the patient's ability to provide consent; (2) non-fluency in the Chinese (Mandarin) language; or (3) other physical disabilities due to age, or other conditions that limited spoken or written communication.

Translation of the C-WFPTS questionnaire

The original version of the WFPTS was translated into Chinese by 2 independent, professional translators, according to an internationally recommended method [29]. The resultant translation was reviewed by a panel that included both translators and 2 bilingual PhD candidates to produce the initial draft of the C-WFPTS. This version was translated back into English (back-translation) by a third, independent, professional translator who was blinded to the original WFPTS. The back-translation was assessed for equivalence to WFPTS by a single researcher familiar with the original version of the WFPTS. Discrepancies between the original English-language WFPTS and the C-WFPTS

Appendix 1. The Chinese version of the WFPTS(C-WFPTS) with English back-translations in brackets.

维克森林人际信任评估量表中国版本

(the Chinese version of the “Wake Forest Physician Trust Scale”)

以下问题反映你对与你接触的医生的态度。请在空格内标明你对下列陈述的认同程度，每一行只能选择一项。

(the following eleven questions are about your interpersonal trust in a physician, please check your only one possible attitude for each statement)

你认同下列描述的程度为: (your possible attitudes)	非常认同 Strongly agree	认同 Agree	不认同 Disagree	很难认同 Strongly disagree	没感觉 Uncertain
1 为了保证我的健康，我的医生会做所有可能做的事 (For sake of my health, [my doctor] will do whatever I need).					
2 我的医生总是以他自己是否方便作为选择治疗手段的依据， 而不是这些治疗是否适合我的情况 ([My doctor] always cares more about what is convenient for [him/her] than about my medical needs)					
3 医生的水平没有达到我认为医生应该达到的程度 ([My doctor] 's competence level does not achieve the degree I expected)					
4 我的医生很细致、很体贴 ([My doctor] is extremely thorough and careful)					
5 我觉得医生选择的治疗方案对我而言是最合适的 (I think [my doctor]'s treatment decisions are best for me)					
6 我的医生会向我解释所有可能采取的治疗方案之间有何不同 ([My doctor] will explain honestly to me about the different treatment options available for me currently)					
7 我感觉医生没有认真的倾听我向他反映的情况 (Sometimes[my doctor]does not pay full attention to what I am trying to tell [him/her])					
8 我感觉医生会向无关的人泄漏我的私人信息 (I feel [my doctor] will release my personal information to unauthorized persons)					
9 我的医生把我的利益放在第一位，而不是他自己或医院的 利益 ([My doctor] will act in my interests, not in his/her or the hospital's interests)					
10 我可以毫不犹豫的将我的生命安全交给我的医生 (I don't hesitate to put my life to [my doctor]'s hands)					
11 总之，我信任我的医生 (All in all, I have complete trust in [my doctor])					

back-translation were reviewed, and revisions were made by the panel to produce the second draft of the C-WFPTS (Appendix 1). Semantic (conceptual and idiomatic consistency) and content (consistent cultural relevance) equivalence was also established by the panel, using methods described previously [30]. Cognitive debriefing on the second draft of the C-WFPTS was performed with 10 Chinese patients to assess the clarity and interpretation of each item and response option.

Revision and finalization of the C-WFPTS questionnaire

The second draft of the C-WFPTS was modified by the deletion of 1 item (“[Your doctor] only thinks about what is best for you”),

and the addition of 2 equivalent Chinese-specific items (item 8: “I feel [my doctor] will release my personal information to unauthorized persons”; and item 9: “[My doctor] will act in my interests, not in his/her or the hospital's interests”). These changes were made based on parameters describing the current state of the doctor-patient relationship in China, as previously documented [31, 32]. The final version of the C-WFPTS (Appendix 1), consisting of 11 items, was then used for data collection.

Data collection by questionnaire

Patients were given 18 minutes to self-administer the questionnaire in a clinical setting. Demographic, satisfaction, trust,

and behavior data were collected. Some socio-demographic questions regarding gender, age, educational level, insurance type, prior visits to the physician and birthplace were included in the questionnaire.

Assessment of trust and satisfaction

Patient trust was assessed using the final 11-item C-WFPTS scale. Patient satisfaction was measured using an 11-item scale, described previously [33], which was modified for Chinese patients. Briefly, a 5-point Likert scale was used for the assessment of both patient trust and satisfaction ("1 = *strongly disagree*; 2 = *disagree*; 3 = *uncertain*; 4 = *agree*; and 5 = *strongly agree*"), with negatively-worded items scored in reverse order ("5 = *strongly disagree*; 4 = *disagree*; 3 = *uncertain*; 2 = *agree*; and 1 = *strongly agree*"). Each overall score was computed by summation of the individual item scores (which gave a total from 11 to 55 points), and transformation onto a scale ranging from 0 to 100 (higher scores = higher trust/satisfaction).

Assessment of behavior

Five potential behavioral consequences of trust were assessed by self-reporting, based on previous methods [20]: Behavior 1: recommendation of the physician or willingness to recommend the physician (1 = *no*, 2 = *have considered it*, 3 = *don't know*, 4 = *yes*); Behavior 2: occurrence of dispute between the patient and physician (1 = *yes*, 2 = *feel like doing*, 3 = *no*); Behavior 3: seeking of a second opinion by the patient after a consultation with the physician (1 = *yes*, 2 = *have considered it*, 3 = *don't know*, 4 = *no*); Behavior 4: adherence to the treatment schedule prescribed by the physician (0 = *no*, 1 = *yes*); and Behavior 5: consideration of switching physicians or willingness to change physicians (1 = *yes*, 2 = *haven't considered it*, 3 = *don't know*, 4 = *no*). These behavioral outcomes of the patient-physician relationship are based on attitudes toward the medical service, and are often selected as the criteria used for validating measurements of trust in a physician [20].

Statistical analysis

Data were recorded as means \pm standard deviations (S.D.). Exploratory factor analysis, using SPSS version 15.0 software (SPSS, Inc., Chicago, IL, USA), was carried out to identify the underlying relationships between the measured variables and extract factors containing sets of variables; direct oblimin rotation ($\delta=0$) was employed to establish the dimensionality of the scale based on assumed factor dependencies. A theoretical 5-factor model was determined by confirmatory factor analysis using LISREL 8.7 software (Sci Int., USA), and the quality of fit was assessed using the following methods: χ^2 with degrees of freedom (DF) and *P*-values, the Comparative Fit Index (CFI) [34], the Root Mean Square Error of Approximation (RMSEA) [35], and

both the consistent and non-consistent Akaike's Information Criterion (CAIC and AIC, respectively). $P>0.05$ for c^2 , CFI >0.95 , RMSEA <0.06 , and lower AIC and CAIC values were taken to indicate a good fit [36,37]. The reliability of the scale was evaluated using Cronbach's α (a minimum of 0.80 was taken to indicate good consistency) [38]. Mean inter-item correlation values ranging 0.20–0.40 or 0.10–0.50 and >0.40 were considered acceptable. Validation of the trust and satisfaction scales was conducted using Spearman correlations between trust and satisfaction, and the validity of the criteria was assessed using Spearman correlations between trust and each of the 5 behaviors [22]. *P*-values lower than 0.05 were considered statistically significant ($P<0.05$).

Results

Demographic and clinical characteristics of the included patients

Of 3442 potentially eligible patients, 924 (26.84%) agreed to participate in the study; of these, 284 (8.25%) had not seen a physician ≥ 2 times in 1 year, and 130 (3.78%) had no referrals. Thus, the questionnaire was completed by 510 (14.82%) patients; 108 (3.14%) of these were excluded because $>5\%$ of the questions had not been answered, and a further 50 (1.45%) patients were either unable to complete the questionnaire or retracted consent. Overall, 352 (10.23%) patients (M: F, 149: 203; mean age, 40.67 ± 17.31 years; age range, 18–94 years) submitted valid questionnaires, consented to participation, and met all inclusion criteria. These 352 patients included 253 (71.9%) that were native, 226 (64.2%) with medical insurance, 277 (78.7%) that had visited the same physician ≥ 12 times, and 203 (57.7%) that had received ≥ 10 years of education (Table 1).

Patient outcomes in the study group

Assessments of patient trust and satisfaction indicated that both were at medium levels, with the latter displaying slightly higher values (53.83 ± 19.62 vs. 54.17 ± 20.81). The scale distribution was skewed to the right (normality was rejected at $P<0.001$, skew = 0.061) and displayed negative kurtosis (-0.53) (fatter shape).

Validation of C-WFPTS

Construct validity was supported by the finding that physician trust correlated positively with physician satisfaction ($r=0.73$, $P<0.001$). The more the patients trusted their physicians, the higher their satisfaction levels. C-WFPTS exhibited good internal consistency (Cronbach's $\alpha=0.833$), meeting the minimum value criterion of 0.8. All C-WFPTS item-scale correlations ranged from 0.41 to 0.69, except for item 2 (0.33) and item 8 (0.24). An optimal range (0.2–0.4) mean inter-item correlation of 0.38 was found

Table 1. Demographic characteristics of the included patients (N=352).

Variable		n	%
Gender	Female	203	57.7%
	Male	149	42.3%
Native residence	Non-Shanghai	99	28.1%
	Shanghai	253	71.9%
Insurance type	Insurance	226	64.2%
	Self-insured	81	23.0%
	Other	45	12.8%
Prior visits to physician*	6.63±6.53	277	78.7%
Age*	40.67±17.31	200	56.9%
Educational level *	13.43±3.33	203	57.7%

* Data are reported as the mean ±S.D.

Table 2. Item-scale correlation analysis.

Items	Item-scale correlation	Cronbach's α
Item 1	0.60	0.812
Item 2	0.33	0.834
Item 3	0.41	0.828
Item 4	0.68	0.804
Item 5	0.60	0.812
Item 6	0.53	0.818
Item 7	0.42	0.827
Item 8*	0.24	0.841
Item 9**	0.55	0.816
Item 10	0.54	0.817
Item 11	0.69	0.803

* The added item, "I feel [my doctor] will release my personal information to unauthorized persons."; ** the added item, "[My doctor] will act in my interests, not in his/her or the hospital's interests."

(Table 2). Predictive validity was also supported by significant correlations between physician trust and all 5 measured behaviors.

Negatively worded items correlated with the overall scale

Overall, the findings supported the unidimensionality of patient trust, with the first extracted factor containing all the positive-phrased items, and the second containing all the negative-phrased items. Exploratory factor analysis identified 2 factors, based on Eigen values above 1, which explained 55.19% of the total variance (Table 3). The first factor contained only

positive items, while the second factor contained only negative items, with a correlation of 0.28. The 4 negatively worded items for trust (C-WFPTS 2, 3, 7, and 8) correlated with the overall scale ($r=0.43$, $r=0.51$, $r=0.54$, and $r=0.38$, respectively).

Confirmatory factor analysis indicated a poor model fit

Confirmatory factor analysis indicated a poor model fit ($\chi^2=265.63$, $P<0.0001$, $DF=35$; $RMSEA=0.137$; $CFI=0.92$; $AIC=327.63$; $CAIC=478.40$). Notably, the 4 dimensions of honesty, competence, fidelity, and global trust correlated highly with each other ($r=0.52$ to 0.97), with the correlation between competence and fidelity being particularly strong ($r=0.97$). However, confidentiality was poorly linked to trust.

Correlations between C-WFPTS and other variables

Correlations between the C-WFPTS scale and other variables, including patient demographics, are described in Tables 4 and 5. Notably, greater trust indicated a greater likelihood to recommend the physician (Behavior 1), less likelihood to dispute (Behavior 2), less likelihood to seek another physician's opinion (Behavior 3), greater treatment adherence (Behavior 4), and less likelihood to switch physicians (Behavior 5). In addition, patient trust significantly increased with certain other variables, including increasing age and increasing number of prior physician visits ($P<0.05$). No significant variations in patient trust by gender, birthplace, or insurance type were observed ($r=-0.01$, $P=0.91$; $r=0.04$, $P=0.42$; $r=-0.00$, $P=0.94$, respectively).

Discussion

Good psychometric properties, strong internal consistency, and good reliability were achieved in a Chinese patient population

Table 3. Eleven factors of the Chinese WFPTS, identified by exploratory factor analysis, with an Eigen value >0.2 (N=352).

	Eigen value	Percentage of the variance (%)	Percentage of the total variance (%)
Factor 1	4.35	39.54	39.54
Factor 2	1.72	15.65	55.19
Factor 3	0.89	8.05	63.24
Factor 4	0.69	6.24	69.48
Factor 5	0.63	5.72	75.20
Factor 6	0.59	5.33	80.52
Factor 7	0.54	4.87	85.40
Factor 8	0.52	4.73	90.13
Factor 9	0.47	4.29	94.42
Factor 10	0.38	3.47	97.89
Factor 11	0.23	2.11	100.00

Table 4. Physician trust, satisfaction, and the 5 behavior outcomes (N=352).

	n	Value*
Physician trust	352	53.83±19.62
Satisfaction	352	54.17±20.81
Behavior 1 ^a	352	2.59±1.11
Behavior 2 ^b	352	2.68±0.58
Behavior 3 ^c	352	2.45±1.08
Behavior 4 ^d	352	0.77±0.42
Behavior 5 ^e	352	2.64±0.97

* Data are reported as the mean ± S.D. ^a physician recommendation; ^b dispute occurrence; ^c seeking second opinion; ^d treatment adherence; ^e willingness to change physicians.

using the modified C-WFPTS constructed by the authors, which is a variation of the conventional English-language WFPTS. Overall, our findings indicate that patient trust correlates highly with physician satisfaction in the validated model. Furthermore, patient trust also correlates with the 5 examined behavioral outcomes with good predictive validity, a finding that may be useful in healthcare management and policymaking in China by approximating patient behaviors based on trust and satisfaction surveys. Thus, we recommend that the C-WFPTS tool be widely employed in hospitals and clinical care facilities in China for the assessment of patient trust, which is a critical indicator of the overall health of the physician-patient relationship and patient behavior.

Overall, the findings of the current study using the C-WFPTS are in close agreement with those reported by Hall et al. utilizing the original English-language WFPTS [7], and high

reliability was indicated by a Cronbach's α value of 0.833. In addition, comparable findings to those of others, using the conventional WFPTS, were reported for the structure of the C-WFPTS scale, with failure to show close agreement with the 5 theoretically assumed dimensions of honesty, competence, fidelity, confidentiality, and global trust [7,22]. Like these other studies, the differences between the conceptual model and the collected data in the present study indicate that patients often rely on their own subjective assessments of competence, commonly influenced by the communication skills of the physician rather than his/her technical skills. This discrepancy between benevolence and competence has been explored previously, but the relationship between these 2 factors is not fully understood [13]. Because of the subjective nature of patient trust and its critical role in the physician-patient relationship, it is important that patient trust is measured quantitatively using specialized instruments targeted to the specific patient population, such as C-WFPTS for Chinese patients.

Some of the discrepancies observed between the results of using C-WFPTS and those of using the conventional English-language WFPTS may also be due to cultural variations in patient perceptions rather than variations in the applied models. While most contemporary medical practitioners in China are trained in the Western style, many patients retain values that are distinctly non-Western, such as the theory of yin and yang and the 5 phases, as well as philosophies related to the concepts of personhood described in Taoism, Confucianism, and Buddhism [39]. However, these patient values have very real and measurable effects on patient outcomes and treatment adherence [21,39–42]. For instance, patients in emergency care have been reported to be concerned about the sharing of their medical information [43]. Lui et al. [44] reported that Chinese patients with stroke were more passive in seeking

Table 5. Spearman's correlation analysis of the association between trust and satisfaction, the 5 behaviors, age, gender, native residence, prior visits to physician, educational level and insurance type (N=352).

Variable	Physician trust		
	Spearman's correlation	P-value	n
Satisfaction	0.73**	<0.001	352
Gender	-0.01	0.909	352
Native residence	0.04	0.419	352
Prior visits to the physician	0.13*	0.013	352
Age	0.13*	0.015	352
Educational level	-0.24**	<0.001	352
Insurance type	-0.004	0.94	352
Behavior 1 ^a	0.45**	<0.001	352
Behavior 2 ^b	0.21**	<0.001	352
Behavior 3 ^c	0.41**	<0.001	352
Behavior 4 ^d	0.44**	<0.001	352
Behavior 5 ^e	0.47**	<0.001	352

* $P < 0.05$, ** $P < 0.001$. ^a physician recommendation; ^b dispute occurrence; ^c seeking second opinion; ^d treatment adherence; ^e willingness to change physicians.

help and information during rehabilitation therapy, and hypothesized that this trend may be common in other Chinese patient populations as well. Furthermore, Chinese patients, particularly older patients, are more fearful of sharing personal information and require greater assurance of confidentiality and anonymity [44]; the association between age and physician trust observed in the present study may indicate that older patients require more trust to utilize medical services. These findings suggest that many Chinese patients are not aware of the protections in place to maintain the confidentiality of their personal medical information, and hence ignore the dimension of confidentiality included in the trust content of C-WFPTS. This may explain the relatively high portion of incomplete questionnaires and the abnormal results for question 8, which addresses the patient's fear that the physician might disclose personal information.

The strong correlation between patient trust and satisfaction indicates that these 2 factors are interrelated. Similarly, the strong correlation between physician trust and the 5 behaviors that were assessed indicates that these parameters, measurable in clinical settings, potentially provide important data for both physicians and regulatory policy makers interested in healthcare reform [20]. While these techniques have been widely employed in Western countries, Chinese healthcare reforms have been made largely without the use of such qualitative measures. Thus, the wider application of C-WFPTS measurements in China could provide considerable benefits to

the improvement of patient trust; this, in turn, might be able to enhance the technical aspects of treatment, such as treatment adherence, as well as the emotional support and information provided by physicians and nurses in modern Chinese clinical care facilities [45,46].

The relationship between demographic parameters and patient trust is a source of great controversy in recent scientific literature [14,22,47]. In the current study, the positive association between increasing age and patient trust may stem from a need for greater trust in older patients, potentially suggesting that these patients are more likely to visit the same physician for many years [9,24,25]. Alternatively, younger patients may simply not have had time to develop trust, and thus for administrative purposes the findings in young patients may not directly and accurately represent physician competence [24,25]. The current study also determined that better-educated patients may be less likely to trust their physician; this may be associated with more physician changes and more frequent seeking of a second opinion. Thus, further examination of extensive longitudinal data will be required to determine the regulatory and policy implications of patient trust assessments.

Like its English-language predecessor, the C-WFPTS is likely to be limited by social desirability bias, or the tendency to skew responses toward the socially accepted response in surveys [48]. This may be particularly apparent for sensitive topics, such as personal medical care. In the current study, the

investigators stressed the confidentiality and anonymity of the questionnaire results, and reassured patients that no details would be released to third parties, including the treating physician. Although these observations were not formally documented, we did experience notable hesitation from many patients. Additionally, the generalizability of the current findings may be limited based on the demographics of the questionnaire respondents, which may have excluded large elements of the patient population with the lowest trust, who were afraid to express negative responses.

In considering these results, limitations imposed by the relatively small study sample size should be noted. Furthermore, the entire population consisted of urban patients from Shanghai (China); the results may vary in other care settings and patient populations, such as minority groups, patients with sexually transmitted diseases or genetic conditions, treatment dropouts, or rural patients [7]. All validation measures were self-reported attitudes, events, and predicted behaviors. Supervised and objective measurements in a longitudinal study design would provide more rigorous validation, and should be undertaken before C-WFPTS is widely implemented in China. Although the additional item 9 in the current version of C-WFPTS performed well and should be retained, the poor performance of additional item 8 indicates that patient confidentiality attitudes were not effectively measured, requiring further revision.

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Conclusions

The initial development and validation of the C-WFPTS provides a method for the quantitative assessment of patient trust in China, which is similar to that already used widely in Western countries. Despite its preliminary character, this study clearly indicates that the C-WFPTS instrument displays strong psychometric properties and replicates the results of its original English-language predecessor. Additionally, the modifications made to the Chinese version were largely determined to be culturally relevant in Chinese populations, although confidentiality assessments require further revision and validation before broader implementation in Chinese clinical care facilities. Implementation of the C-WFPTS tool may allow for improvement in patient behaviors, such as treatment adherence, that would contribute to better overall therapeutic outcomes and improvements in medical and nursing care. Additionally, the C-WFPTS should be further optimized based on the specific needs of individual care settings and patient populations, which necessitates further study.

Conflict of interest statement

All authors have completed the Conflict of Interest form, available on request from the corresponding author, and declare that there is no conflict of interest with regard to this work.

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