RESEARCH ARTICLE

Inpatient Dignity Scale: Mandarin translation and psychometric characteristics evaluation

Yao Huang[1] 🆔 | Ying Zhou[1] | Thomas Kwok Shing Wong[1] | Dongyi Luo[1] |
Gangna Zhang[1] | Jiani Chen[1] | Graeme D. Smith[2]

[1]School of Nursing, Guangzhou Medical University, Guangzhou, China

[2]School of Health Sciences, Caritas Institute of Higher Education, Hong Kong SAR, China

Correspondence
Ying Zhou, School of Nursing, Guangzhou Medical University, 195, Dongfengxi Road, Yuexiu District, Guangzhou, Guangdong Province 510182, China.
Email: zhouying0610@163.com

Abstract

Aim: The aim of this paper was to translate the English version of the Inpatient Dignity Scale into Mandarin and to test the psychometric properties of the Mandarin version of the Inpatient Dignity Scale.

Design: This research is a cross-sectional survey, using convenience sampling.

Methods: The English version of the Inpatient Dignity Scale was translated into Mandarin Chinese. From June–August 2020, 736 inpatients from 50 tertiary hospitals in Guangzhou were recruited to assess the psychometric attributes of the Inpatient Dignity Scale.

Results: The Mandarin version of the Inpatient Dignity Scale consists of expectation and satisfaction subscales. It differs from the English language version, as the expectation subscale includes three dimensions and the satisfaction subscale includes two dimensions. The total Cronbach alpha coefficient of the expectation subscale and the satisfaction subscale were .820 and .965, respectively, and the split-half reliability of the expectation subscale and the satisfaction subscale were 0.740 and 0.928, respectively, indicating good internal consistency and effectiveness. Known-groups validity was established, as 70% of the hypotheses were supported.

KEYWORDS
dignity, inpatient, nursing, psychometric evaluation, translation

1 | INTRODUCTION

Within the development of humanistic care, nursing staff are required to attend to the psychological condition of the patient when providing care, as the patient's psychological condition may influence the recovery from disease. One aspect of the delivery of humanistic care is the importance of patient dignity in the field of health care has been widely recognized internationally. The Code of Ethics for Nurses adopted in 2012 by the International Council of Nurses (ICN, 2012) states that "Inherent in nursing is a respect for human rights, including cultural rights, the right to life and choice, to dignity and to be treated with respect." This code covers aspects associated with dignity and it is used as a guide for nursing associations in many countries/regions in the world. For example, the Australian Nursing and Midwifery Federation (ANMF), Nursing and Midwifery Board of Australia (NMBA), and Australian College of Nursing (ACN) all agreed to adopt this ICN Code (Blackwood & Chiarella, 2020). In the United Kingdom, the Nursing and Midwifery Council's Code

(NMC, 2018) states that nurses, midwives and nursing associates must "treat people as individuals and uphold their dignity". In 1948, United Nations General Assembly already adopted the Universal Declaration of Human Rights and emphasized that "All human beings are born free and equal in dignity and rights." (United Nations, 1948). In medical care policies and practices, treating patients with dignity is increasingly valued, and patient dignity has become a global concern (Barclay, 2016; Matiti & Trorey, 2004). Stievano and Tschudin (2019) state that maintaining patients' dignity and respect is an intrinsic value demonstrated by health professionals, especially nurses in their daily activities.

However, in different research fields, the focus of the concept of dignity is different. In the field of nursing, scholars often use qualitative interviews to describe the definition of dignity. Walsh and Kowanko (2002) used phenomenological research methods and through interviews with patients and nurses, concluding that the concept of dignity includes respect, privacy, control, advocacy, time, choice, humour and matter-of-factness. Through conceptual analysis, Griffin-Heslin (2005) concluded that the definition of patient dignity covers the four attributes of respect, autonomy, empowerment and communication. Guo and Jacelon (2014) clarified the themes of dying with dignity about: Human right, autonomy and independence, relieving symptom distress, respect, being human and being self, meaningful relationships, dignified treatment and care, existential satisfaction, privacy and a calm environment. Although the concept of dignity is a complex, vague and highly abstract concept with rich connotations (2005), an important theme or keyword is respected.

Although relevant studies in the field of patient dignity research have been carried out internationally, most of these studies focus on the relevant factors affecting the dignity of the patients with advanced cancer, the dignity related tools have been specifically aimed at patients with advanced cancer or palliative care patients (Huang et al., 2020; Liu et al., 2021). As such, several measurement scales have been developed to capture patient dignity, most of these have been developed within the oncology setting. The patient dignity scale (PDI) developed by Chochinov et al. (2008) is currently the most widely used patient dignity assessment tool around the world, including China, but its main focus is on the dignity of patients with advanced cancer and the scale does not place focus on items that might relate to other aspects of nursing practice (Albers et al., 2011). Some studies have pointed out that the communication attitude and behaviour of clinical staff may affect the dignity of patients (Guo & Jacelon, 2014; Wu et al., 2015). The dignity card-sort tool (DCT) (Periyakoil et al., 2009) was developed by Periyakoil et al. to determine the factors affecting the loss of dignity in patients towards the end of life, from the perspective of patients and multidisciplinary health professionals. Periyakoil et al. (2010) also developed the preservation of dignity card-sort tool (p-DCT) (Periyakoil et al., 2010), which can help the medical staff determine the key factors that affect the maintenance of patient dignity. Both DCT and p-DCT scales, which have been developed for end-of-life patients, are easy to use and can personally evaluate the key factors that affect the loss of dignity or

maintain the dignity of the end-of-life patients. The measurement instrument for dignity Amsterdam (MIDAM) was developed by Vlug et al. (2011). It has been mainly used to measure the factors that affect the self-perceived dignity of patients, exploring the existence of factors that affect self-perceived dignity and the influence of this factor on overall dignity. Compared with PDI, the MIDAM adds items specifically related to nursing and communication skills. On the basis of MIDAM, Vlug et al. compiled a dignity perception assessment tool (the measurement instrument for dignity Amsterdam for long-term care facilities, MIDAM-LTC) suitable for long-term care institutions (Oosterveld-Vlug et al., 2014). The MIDAM allows for entries that can help caregivers working in long-term care institutions discover factors that may be affected by dignity. Currently, in China, the most widely used tool for assessing patient dignity is the Chinese version of the PDI, mainly applied target to issues in end of life and advanced patients. Jiao (2012), Liu and Xu (2015), Ge et al. (2016), Cao (2015) and Wu (2016) have conducted reliability and validity tests and revision of the Chinese version of the PDI. In summary, most existing dignity assessment tools are aimed towards patients with advanced cancer, tools for measuring patient dignity from the general nursing perspective are lacking, particularly in the Chinese context.

At present, the number of inpatients within Chinese hospitals continues to rise. According to the results of the "Statistical Bulletin of my country's Health Development in 2019" issued by the National Health Commission of the People's Republic of China (National Health Commission, 2020), as of 2019, the number of hospitalizations in medical and health institutions nationally had reached 265.96 million, an increase of 11.43 million over the previous year. The total number of hospitalizations nationwide has increased by 4.5% over the previous year, and the number of hospitalizations appears to be increasing year on year. Due to health-related impairments, patients can easily lose their dignity during a period of hospitalization (Baillie, 2009; Matiti & Trorey, 2004). The results of a cross-sectional survey by Chinese academics Liu et al. (2021) demonstrated that the hospitalization of patients has a negative impact on their sense of dignity. Therefore, in the face of the continuous increase in the number of hospitalized patients and considering the possible loss of dignity of patients during hospitalization, we urgently need to pay attention to the dignity of the inpatient population. van Gennip et al. (2015) reported that low levels of patient dignity may have a serious impact upon a patient's mood and quality of life, easily lead to depression and even accelerate the death process. When the dignity of a patient is not fully respected whilst in hospital, it can easily directly lead to disputes between healthcare professional-patient and aggravate the tension between other healthcare professionals and patients. All these factors affect the normal medical treatment, reduce the patient's satisfaction with the medical treatment and affect social harmony (Sui et al., 2016). Hence, addressing and accurately assessing patient dignity in hospitals may be particularly important for patient's physical and mental health. Timely and effective assessment of patients' dignity, early confirmation of dignity-related problems, such as physical or psychological aspects, can prevent patients from suffering greater distress, and improved nursing staff's

awareness of personal supportive care needs help to improve the quality of care (Blomberg et al., 2019; Sautier et al., 2014).

Considering that patients' level of dignity may cause vulnerable damage during periods of hospitalization, it is necessary and important to assess the dignity of inpatients. In China, in the face of the increasing numbers of inpatients, the problem of impaired dignity of patients and negative tensions between clinical staff and patients give rise to the need to deal with this situation urgently. Indeed, the lack of validated dignity assessment instruments for inpatients hinders the scientific evaluation of the dignity status of general hospital inpatients and its influencing factors, which in turn is not conducive to constructing strategies to enhance their dignity. Therefore, it is our belief that there is a need to introduce dignity assessment instruments suitable for all hospitalized patients in China. In this study, the focus will be given to the recently developed Inpatient Dignity Scale (IPDS), developed by Ota et al. (2019), using literature review in combination with focus group interviews. As a universal scale, the IPDS is applicable to all types of patients who are in receipt of ordinary daily care, it places no restrictions on the diseases of patients. Furthermore, the IPDS focuses on the expectations and satisfaction of patients' dignity in the process of receiving medical and nursing care, meaning it can simultaneously measure the expectations and satisfaction of patients' dignity. Nowadays, nursing staff not only need to pay attention to the patient's dignity but also need to understand how the patient views their dignity, what kind of dignity they want in their treatment and with the awareness of satisfaction with dignity received during hospitalization. It may be beneficial to provide targeted nursing care in relation to the level of dignity reported by inpatients, to make sure that it is conducive to maintain not only the dignity of patients but improving their own levels of dignity.

This research paper mainly introduces and translates the English version of the IPDS into Mandarin, conducting a process of psychometric evaluation. We aim to demonstrate and provide a reliable assessment tool for the measurement of dignity in Chinese hospital patients, in order to better serve these patients and to promote their physical and mental recovery.

2 | METHODS

2.1 | Design

This research is a cross-sectional survey, using convenience sampling.

2.2 | Ethical considerations

This study was reviewed and approved by the Ethics Committee of Guangzhou Medical University (2020-01-20) and the Second Affiliated Hospital of Guangzhou Medical University (Acceptance number: 2020-YJS-ks-03). The investigation was conducted with the consent of the heads of institutions and departments of each hospital. All participants were informed both verbally and through a

written information form of their right to withdraw their participation at any time, providing an informed consent paper to participate in the study.

2.3 | Settings and participants

Convenience sampling is used in this study to obtain a sufficient sample size for analysis. When performing factor analysis, the sample size should not be too small, preferably five times the number of items on the scale. If it reaches 10 times, it will have more stability (Wu, 2010). There are 34 items in IPDS. In order to ensure that the sample is sufficient, consider increasing the loss to follow-up rate by 20%. The sample size is best in the range of 204–408 cases. This study recruited inpatients who met the inclusion and exclusion criteria in five tertiary hospitals in Guangzhou, China, from June–August 2020. Inpatients were recruited if they meet the length of hospitalization for 3 days or more, were 18 years or older, with clear consciousness and certain expression skills, language communication is barrier-free, signed informed consent and were voluntarily willing to participate in this study. Inpatients were excluded if they had a severe mental illness or cognitive impairment, had difficulty in language communication or those who refused to complete the questionnaires or did not cooperate with the survey. After obtaining the consent of the hospital, the investigators of the research team entered the department and screened the eligible inpatients on the patient information system. A face-to-face questionnaire survey has been conducted by the uniformly trained investigators, who were all nursing postgraduate students, to explain the purpose and significance of the study to the inpatients, obtain the patient's consent and sign an informed consent form, and fill out the questionnaire by the patient. If the patient has a low education level or is inconvenient to fill in (for example, when their arm is undergoing an infusion), the investigators will fill in the answers based on the patient's answers.

2.4 | Instruments

2.4.1 | Demographic Information Questionnaire

On the basis of a literature review, the research team compiled a questionnaire to collect demographic characteristics (age, gender, ethnicity, marital status, religious belief, education level, occupation, household registration type, current residence, family monthly income, economic burden, medical expenses payment methods) and clinical characteristics (inpatient departments, hospitalization days, hospitalization experience, surgical experience).

2.4.2 | Inpatient Dignity Scale

Inpatient Dignity Scale consists of 34 items with two subscales of expectations and satisfaction, each of which has four dimensions.

The four dimensions of the expectation scale are as follows: (F1), respect as a person (6 items, the number of items are 1, 2, 3, 4, 5, 6); (F2), respect for personal feelings and time (5 items, the number of items are 7, 8, 9, 13, 14); (F3), respect for privacy (3 items, the number of items are 19, 20, 21); (F4), respect for autonomy (2 items, the number of items are11 and 12). The four dimensions of the satisfaction subscale are as follows: (F1), respect for personal feelings and time (8 items, the number of items are 8, 9, 10, 14, 15, 16, 17, 18); (F2), respect as a human being (6 items, the number of items are 1, 2, 3, 4, 5, 6); (F3), respect for autonomy (2 items, the number of items are 11 and 12); (F4), respect for privacy (2 items, the number of items are 19 and 21). IPDS adopts a fivepoint Likert scale ranging from 1 (not at all/very dissatisfied) to 5 (very strongly/very satisfied), respectively. The total score range of the expectation subscale is 16–80 points, and the total score range of the satisfaction subscale is 18–90 points. The Cronbach alpha coefficients of each dimension of the expectation subscale range from .72–.88, and the Cronbach alpha coefficients of each dimension of the satisfaction subscale range from .72–.90, which has good reliability and validity (Ota et al., 2019).

2.4.3 | Patient Dignity Inventory

The Patient Dignity Inventory (PDI) was established by Chochinov et al. (2008) in Canada. This study uses the Chinese version of the PDI, introduced and revised by Cao (2015). There are 25 items and 5 dimensions, namely symptom pressure, survival dilemma, independence, peace of mind and social support. The scale rates on a five-point Likert, the total score range is 25–125, the higher the score, the higher the loss of dignity. The Cronbach alpha coefficient of the PDI is .924, with good reliability and validity.

2.5 | Translation and cultural adaptation of Inpatient Dignity Scale

The research team made contact with Professor Ota and obtained authorization to translate the English version of IPDS, following the principles of Brislin's back-translation model (Cha et al., 2007). Two master graduate students majoring in nursing independently translated the English version of IPDS into Mandarin Chinese and then handed it over to an expert in nursing psychology with experience in scale introduction for comparative analysis. The translators and experts discussed the ambiguities and modified the Mandarin version. The Mandarin version of the Inpatient Dignity Scale (IPDS-MV) was then sent to two nursing experts who had never previously used this scale. Both experts had an experience of overseas academic study and life, as such, they were very familiar with the English language. The research team then compared the two back-translated versions with the original scale, discussed the items with differences, and modified them through forward-back translation to form a comprehensive back-translated version. Five experts with doctorates

in nursing were then invited to form an expert committee to make cultural adaptations to the IPDS-MV. These experts have rich and varied research experience including nursing psychology, nursing education, care of older people nursing, internal medicine nursing and surgical nursing, all have experience in scale instrument development. Before the formal survey, the prefinal IPDS-MV was tested in a pilot survey. Forty-eight inpatients who provided informed consent voluntarily participated in the survey and were recruited to the pilot questionnaire survey. These inpatients were asked about their understanding of the scale's descriptions, items and answering methods and the time for patients to fill out the questionnaire and feedback results were recorded. According to the patient's responses in the pilot questionnaire survey in combination with the expert opinions, cultural adjustments were made to the expressions in some items on the scale. For example, item 12 "(P/N) offers different choices, so I can decide on my treatment" is adjusted to suit the Chinese medical context and more detailed "(P/N) will provide me with different treatment options so I can decide on my treatment". At the same time, the research plan was adjusted according to the findings of the pre-survey.

2.6 | Statistical methods

Epi Data version 3.1 was used to independently input and verify the data for two persons and use SPSS v 21.0 for statistical analysis. Measurement data are described by mean ± standard deviation (*SD*) as well as median and inter-quartile range (median, 25th–75th percentile), count data are described by frequency (percentage) and all statistical tests were two-tailed, with an alpha level of 5% ($p < .05$) considered statistically significant. If the content of the questionnaire is missing, the questionnaire will not be included in the valid questionnaire, that is, no statistics will be performed.

2.6.1 | Item analysis

The item analysis methods, which are used in this study, mainly examine the discrimination and homogeneity of items and are as follows: (a) Answer distribution analysis method: If the answer of the item's option has a central tendency over 80%, it means that the item is poorly distinguishable and needs to be deleted. (b) Critical ratio method (Critical ratio, CR): Also called the extreme value method, which calculates the total score of the scale and sorts the total score from high to low. The first 27% of the total score of the scale is set as the high group, and the last 27% is set for the low group, then the independent sample *t* test was used to test the significance of the difference in the average number of subjects in the high and low groups, and the items with no statistical significance ($p < .05$) or CR <3 were deleted; (c) The question total correlation method: Calculate the correlation coefficient between the score of each item and the total score of the scale, delete the items that have not reached the significant level ($p < .05$), the total correlation coefficient of the question

or the corrected correlation coefficient <.4; (d) Cronbach alpha coefficient method: It is based on the principle of internal consistency of the scale to screen each item of the scale. After deleting an item, if the Cronbach alpha coefficient is higher than the Cronbach alpha coefficient before deleting the item, the item is deleted; conversely, if the Cronbach alpha coefficient is lower than the Cronbach alpha coefficient before deleting the item, keep the item.

2.6.2 | Construct validity

Given cultural differences, exploratory factor analysis (EFA) attempts to reduce a large number of projects to more manageable dimensions that can be used to determine the factor structures. According to the Kaiser-Meyer-Olkin measure (KMO) and the results of Bartlett's sphere test, judge whether the item is suitable for factor analysis. If KMO value >0.70, Bartlett's sphere test chi-square value reaches a significant level ($p < .05$), indicating that the item is suitable for factor analysis. EFA of the principal component analysis was used to test the construct validity, and the principal component analysis was a better extraction method. Varimax rotation is a commonly used orthogonal method for simplifying and clarifying data structures. If the item has the following criteria, it needs to be deleted: (a) Factor-item loading <0.5. (b) The factor-item loading on both factors at the same time >0.5. (c) The measures of sampling adequacy (MSA) of the item <0.50. (d) Commonness of items <0.2.

2.6.3 | Known-groups validity

A known-group test was conducted to further support the construct validity of the instrument. We use two independent sample non-parametric tests to evaluate the differences in the hypothesis of the IPDS-MV. We hypothesised that in patients who are younger than 40 years old, female, first time hospitalized, has a college degree and above and income is > 5,000 CNY, will have higher scores on the expectation subscale, and higher expectations of dignity during the hospital stay, whilst the satisfaction scores will be lower.

2.6.4 | Criterion validity

The criterion validity was assessed by examining Spearman's rank correlations between the satisfaction subscale and the PDI. Based on an earlier research study (Walsh & Kowanko, 2002), it was hypothesised that there would be a weak-to-moderate negative correlation between the satisfaction subscale and the PDI.

2.6.5 | Internal consistency

Calculate the Cronbach alpha coefficient and split-half reliability to evaluate the internal consistency of the IPDS. The value

of Cronbach alpha coefficient and split-half reliability >.7, is considered to be acceptable.

3 | RESULTS

3.1 | Sample characteristics

A total of 810 questionnaires were distributed and 736 questionnaires were returned, giving a valid response rate of 90.9%. After the investigators explained the purpose of the study and the content of the questionnaire, 736 patients voluntarily participated and signed the informed consent form. During the completion of the questionnaire, some patients refused to fully complete the questionnaire, due mainly to physical discomfort and receiving treatment, making the questionnaire invalid. The average age of participants is 51 (36, 63) years old and 55.2% were female. The average hospitalization days are 6 (4, 9) days, and 56.8% of patients were hospitalized for the first time (Table 1).

3.2 | Item analysis

In the answer distribution analysis method, the items 1, 3 and 4 in the expectation subscale of the "not at all/5 point" options all show a central tendency >80%, which are 84.4%, 87.0% and 81.5%, respectively, according to the item analysis standard deleted. In the question total correlation method, the correlation coefficient of item 1 in the expectation subscale is .26, the corrected correlation coefficient is .29, the correlation coefficient of item 3 is .31 and the corrected correlation coefficient is .37, both of which are less than .4, as such they were deleted. The results of the critical ratio method showed that all items in the expectation subscale and the satisfaction subscale were statistically different in the high and low groups ($p < .01$). The results of the Cronbach coefficient method showed that the Cronbach alpha coefficient did not increase after the entries were deleted. Therefore, in the item analysis, items 1, 3 and 4 are deleted from the expectation subscale, and the remaining 13 items are retained for the EFA, and the satisfaction subscale retains 18 items for the EFA.

3.3 | Construct validity

3.3.1 | Exploratory factor analysis

The results of EFA of the expectation subscale showed that the KMO value was 0.828, and the Bartlett sphere test reached a significant level ($\chi^2 = 3,432.781$, $p < .001$), which is suitable for the factor analysis. The Principal component analysis method and maximum variation method are used to select the factors with eigenvalues >1, and 4 common factors are obtained. The cumulative variance contribution rate is 64.947%. According to the factor-item loading <0.5,

TABLE 1 Sample characteristics

Characteristics	Categories	N (%)
Mean age in years	Years (Median, 25th–75th percentile)	51 (36, 63)
Hospitalization days	Days (Median, 25th–75th percentile)	6 (4, 9)
Gender	Male	330 (44.8)
	Female	406 (55.2)
Ethnicity	The Han nationality	715 (97.1)
	Other	21 (2.9)
Marital status	Unmarried	70 (9.5)
	Married	637 (86.5)
	Divorced/Widowed	29 (3.9)
Religious belief	No	686 (93.2)
	Yes	50 (6.8)
Education level	Elementary school and below	120 (16.3)
	Junior high school	205 (27.9)
	High School/Specialized Secondary Schools	207 (28.1)
	College degree and above	204 (27.8)
Residence	City/town	543 (73.8)
	Rural	193 (26.2)
Departments	Internal Medicine	255 (34.6)
	Surgical	306 (41.6)
	Obstetrics and Gynecology	119 (16.2)
	Other	56 (7.6)
Hospitalization experience	1st time	418 (56.8)
	2nd time and above	318 (43.2)
Surgical experience	0–1st time	686 (93.2)
	2nd time and above	50 (6.8)
Family monthly income	3,000 CNY and below	259 (35.2)
	3,001–7,000 CNY	318 (43.2)
	7,001 CNY and above	159 (21.6)
Economic burden	High	266 (36.1)
	General	308 (41.8)
	Light	49 (6.7)
	None	113 (15.4)

the loading of item 19 on each factor is less than 0.50; so, it is deleted. The remaining 12 items were subjected to EFA again, the KMO value was 0.812, and the Bartlett sphere test reached a significant level ($\chi^2 = 3,249.577$, $p < .001$), suitable for the factor analysis, using the principal component analysis and maximum variation method to select the features for factors with a value >1, 3 common factors are obtained (Figure 1), and the cumulative variance contribution rate is 59.816%. Dimension 1 is composed of items 2, 5, 6, 9 and 14, and is named "Treated with respect". Items 11, 12, 7, 8 and 13 form dimension 2, which is named "Respect and autonomy" according to the meaning of the items; the dimensions of items 20 and 21 have not changed, so the naming is still "Respect for privacy" (Table 2).

The results of EFA of the satisfaction subscale showed that the KMO value was 0.954, and the Bartlett sphere test reached a significant level ($\chi^2 = 14,743.398$, $p < .001$), which is suitable for the factor analysis. The principal component analysis method and maximum variation method are used to select factors with eigenvalues >1, and 2 common factors are obtained and the cumulative variance contribution rate is 74.328%. According to the "The factor-item loading on both factors at the same time >0.5," Items 14, 15 and 19 have load values >0.50 on each factor, so they are deleted. The remaining 15 items underwent EFA again, the KMO value was 0.945, and the Bartlett sphere test reached a significant level ($\chi^2 = 12,009.213$, $p < .001$), suitable for the factor analysis, using the principal component analysis and maximum variation method to select feature factors with a value >1, get 2 common factors (Figure 2) and the cumulative variance contribution rate is 75.544%. The first dimension includes items 1–6 and 8–12, which are named "Respect and autonomy" according to the meaning of the items included in the dimension. The second dimension consists of items 16, 17, 18 and 21, named "Respect for Privacy" (Table 2).

3.4 | Known-groups validity

This study conclusively proves the hypothesis of expected difference and most partially demonstrated the construct validity. Inpatients who are younger than 40 years, female, have a college degree and above and income >5,000 CNY, have higher scores on the expectation subscale, and higher expectations of dignity during the hospital stay ($p < .05$). In addition to gender, inpatients who are younger than 40 years old, have a college degree and above, and income >5,000 CNY will have lower scores on the satisfaction subscale, related to less satisfaction during hospitalization. However, there were no significant differences among the number of hospitalizations ($p > .05$), which is consistent with the results of the original scale.

3.5 | Criterion validity

The Mandarin version of IPDS and PDI were tested for criterion validity. The results showed that the total scores and dimensions of the satisfaction subscale were weakly, but significantly negatively correlated with the total scores and dimensions of the PDI. This would suggest that when patients are highly satisfied with their level of dignity during hospitalization, their perceived loss of dignity is low (Table 3).

3.6 | Internal consistency

The total Cronbach alpha coefficient of the expectation subscale is .820, and the Cronbach alpha coefficient of each dimension ranges from .756–.783; the split-half reliability of the expectation subscale is 0.740, and the split-half reliability of each dimension
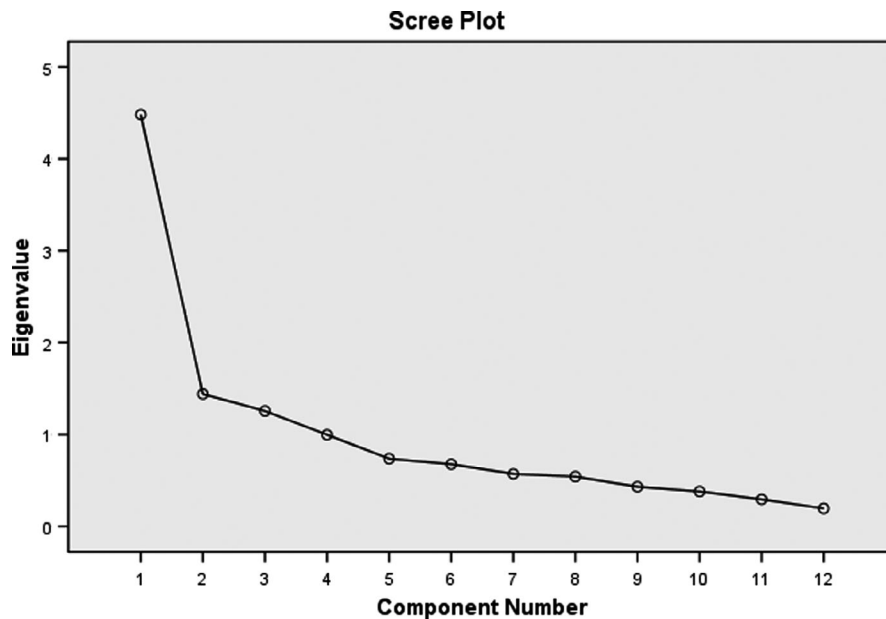
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ranges from 0.721–0.796. The total Cronbach alpha coefficient of the satisfaction subscale is .965, the Cronbach alpha coefficient of each dimension ranges from .960–.926; the split-half reliability of the satisfaction subscale is 0.928, and the split-half reliability of each dimension ranges from 0.921–0.938 (Table 2).

4 | DISCUSSION

The concept of healthy development has changed from emphasizing "treatment-centred" to "people-centred" care. Increasingly, nurses pay more and more attention to the diverse health needs of patients and the physical and psychological feelings of patients, highlighting the importance of addressing dignity-related issues during hospitalization. With a large number of patients in Chinese hospitals, we believe it is of great importance to address the issues of patient dignity, as such this study is the first Chinese validation study of the IPDS. Through translation, reverse translation and cultural adaptation, our research has conducted reliability and validity tests to form the Mandarin version of the IPDS suitable for use within Chinese culture. In terms of the known-groups validity, the majority (70%) of our hypotheses was supported, meaning that the IPDS-MV is capable of distinguishing amongst the groups known to be low and high in inpatients' characteristics which affect the expectation and satisfaction with dignity. In our findings, the expected hypothesis was not supported on the basis of the time of hospitalization. This issue needs to be addressed in the follow-up study. We used Cronbach alpha coefficient and split-half reliability to evaluate the internal consistency of the IPDS-MV and the results show that the three-dimensional expectation subscale and the two-dimensional satisfaction subscale of the IPDS-MV have good internal consistency. Besides, the IPDS-MV has appropriate reliability and structural validity, highlighting its potential use to assess the dignity and satisfaction of inpatients.

Baillie (2009) used the method of qualitative interviews to obtain a model of how the dignity of patients in a hospital is improved or threatened, mainly discussing the dignity of patients in the context of the hospital, this study showed that patients are prone to lose their sense of dignity during hospitalization. As highlighted earlier, the number of hospitalized patients in China is still on the rise, and their dignity status urgently needs the attention of clinical nurses. Items in the IPDS focus on the impact of attitude and behaviour of healthcare staff on the dignity of patients. Based upon the patient factors of the model developed by Baillie (2009), the behaviour of healthcare staff and the hospital environment are the main factors that enhance or threaten the dignity of patients. And during periods of impaired health, patients can easily lose their dignity, and any infringement of their personal privacy or the lack of privacy in the hospital environment can exacerbate the loss of dignity. The final satisfaction subscale includes 2 dimensions and 15 items, items 16, 17 and 18 are transferred to the "Respect for privacy" dimension, where item 21 is located. Walsh and Kowanko (2002) conducted a qualitative study on 12 nurses, asking them to describe their experiences of maintaining or damaging the dignity of patients they cared for. They found that the subjects related to dignity mentioned privacy of the body, private space and the UK-based NMC code (NMC, 2018) also state that respect a person's right to privacy in all aspects of their care. These are consistent with some of the aspects of our findings, respecting patient privacy including body and space. Similarly, through communication with the original author of the scale, we learned that these items emphasized that respecting and protecting patient's privacy, at last, we concluded that privacy includes information privacy, illness privacy body privacy and space privacy. Therefore, we feel that it was justified to combine items 16, 17, 18 and 21 into a dimension of "respect for privacy." Item 20 of the expectation subscale is about: (P/N) do not disclose sensitive information, such as family issues, to healthcare workers other than their physicians and nurses. In China, as elsewhere in the world, there are

TABLE 2 Exploratory factor analysis and reliability results of IPDS-MV

		Factor loadings				
		Expectation subscale			Satisfaction subscale	
		Treated with respect	Respect and autonomy	Respect for privacy	Respect and autonomy	Respect for privacy
Item no. 5	(P/N) always use polite language[a]	0.855	0.104	0.144		
Item no. 6	(P/N) are polite to my family as well as to me[a]	0.848	0.038	0.157		
Item no. 2	(P/N) maintain eye contact with me while talking[a]	0.622	0.253	0.220		
Item no. 9	(P/N) greet me first when they see me in the hospital[b]	0.600	0.361	0.007		
Item no. 14	(P/N) understand my suffering and sympathize with me[b]	0.591	0.238	0.076		
Item no. 12	(P/N) offer different choices so I can decide on my treatment[c]	0.022	0.744	0.236		
Item no. 11	(P/N) let me participate in the decision-making processes regarding my own treatment choices[c]	0.146	0.737	0.109		
Item no. 8	(P/N) give my needs or expectations priority in their everyday practice[b]	0.268	0.690	0.058		
Item no. 7	(P/N) talk to me at my eye level by sitting on a chair or bending[b]	0.338	0.672	−0.061		
Item no. 13	(N) of my gender give me care[b]	0.144	0.578	0.194		
Item no. 20	(P/N) do not disclose my sensitive information, such as family issues, to healthcare workers other than my own physicians and nurses[c]	0.162	0.136	0.860		
Item no. 21	(P/N) do not collect information that is unnecessary for my medical treatment or nursing care[c]	0.187	0.185	0.846		
Item no. 4	(P/N) listen to me attentively[d]				0.833	0.275
Item no. 3	(P/N) respect me as a human being[d]				0.801	0.334
Item no. 11	(P/N) let me participate in the decision-making processes regarding my own treatment choices[e]				0.794	0.263
Item no. 8	(P/N) give my needs or expectations priority in their everyday practice[f]				0.791	0.387
Item no. 1	(P/N) treat and care for me as a living human being rather than an object[d]				0.787	0.373
Item no. 5	(P/N) always use polite language[d]				0.779	0.422
Item no. 2	(P/N) maintain eye contact with me whilst talking[d]				0.772	0.365
Item no. 6	(P/N) are polite to my family as well as to me[d]				0.765	0.430
Item no. 12	(P/N) offer different choices so I can decide on my treatment[e]				0.765	0.309
Item no. 10	(P/N) treat my pain promptly[f]				0.740	0.386
Item no. 9	(P/N) greet me first when they see me in the hospital[f]				0.673	0.387
Item no. 17	(P/N) keep me protected with covering or clothing whilst providing medical treatment or nursing care[f]				0.327	0.894

TABLE 2 (Continued)

		Factor loadings				
		Expectation subscale			**Satisfaction subscale**	
		Treated with respect	**Respect and autonomy**	**Respect for privacy**	**Respect and autonomy**	**Respect for privacy**
Item no. 18	(P/N) draw the bedside curtain or shut the door to maintain privacy during medical treatment or nursing care[f]				0.302	0.893
Item no. 21	(P/N) do not collect information that is unnecessary for my medical treatment or nursing care[g]				0.420	0.760
Item no. 16	(P/N) talk to me privately about my issues without allowing others to hear[f]				0.459	0.743
Cronbach alpha coefficient		.783	.767	.756	.960	.926
Split-half reliability		0.721	0.796	0.758	0.921	0.938

[a]Respect as a human being.

[b]Respect for personal feelings and time.

[c]Respect for autonomy, which are the dimensions of the expectation subscale of the IPDS.

[d]Respect as a human being.

[e]Respect for autonomy.

[f]Respect for personal feelings and time.

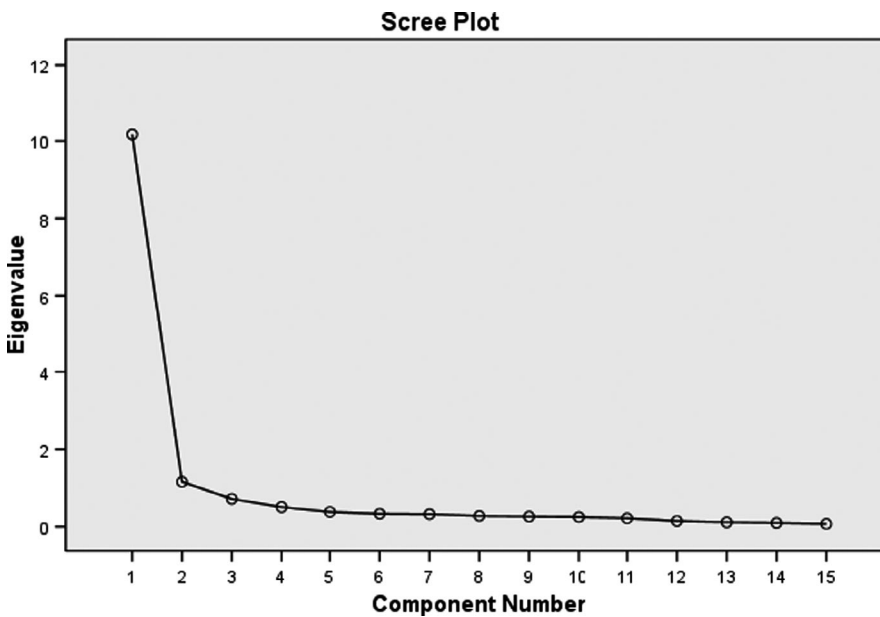[g]Respect for privacy, which are the dimensions of the satisfaction subscale the IPDS.

FIGURE 2 Scree plot for the eigenvalues of factors (satisfaction subscale)

TABLE 3 Correlation analysis between the satisfaction subscale and the PDI (r, $N = 736$)

	Symptom pressure	Survival dilemma	Independence	Peace of mind	Social support	PDI
Respect and autonomy	−.249**	−.169**	−.101**	−.184**	−.243**	−.274**
Respect for privacy	−.161**	−.100**	−.073*	−.140**	−.205**	−.188**
Satisfaction subscale	−.256**	−.172**	−.092*	−.193**	−.236**	−.281**

**$p < .01$, *$p < .05$.

doctor rounds, nurse rounds and case discussions, all of which require the use and sharing of patient information. During the investigation of this study, patients mentioned that they found it hard to understand some medical terminology knowledge. In order to speed up the recovery process and promote the improvement of their condition, most patients are willing to share and discuss very personal information with healthcare staff. As stated in the ICN Code of ethics (ICN, 2012), in terms of information privacy, nursing staff should keep the patient's personal information confidential and need to judge under what circumstances it is possible to share this information, to avoid violating patient's right to privacy. This is clearly an ethical consideration, as an aspect of respecting patient privacy and maintaining patient dignity.

The ICN Code of ethics (ICN, 2012) states that, in the elements of nursing and people, whether it is practitioners and managers, educators and researchers or national nurses associations, informed consent, privacy and confidentiality are some of the important points (Page 6, ICN, 2012). Our research shows that items 11 and 12 of the "Respect for autonomy" dimension of the expectation subscale and satisfaction subscale are all included in other dimensions. The reason is that despite informed consent, autonomy and medical decision-making power remains as the right of patients. However, in China, due to the influence of traditional Chinese culture and the protection of patients and concerns about their psychological endurance, the patient's family members usually conceal disease information from the patient and usually exercise the above rights on behalf of the patient (Liu et al., 2018; Zhang & Min, 2020). Therefore, the patient's disease treatment plans and choices are mostly communicated by the patient's family members and health professionals (Wu et al., 2015; Zhang & Min, 2020) The dimension of "Respect for autonomy" is not independent in the IPDS-MV; however, it is important to state that these two items are not inconsequential in China. Therefore, in this study, we tried to retain the items by combining this dimension with other dimensions. This also reminds us that we need to explore the connotation of patient dignity in the healthcare cultural environment of China.

China is mainly a family-centred relationship society, and family members play a certain role in patient medical decision-making (Wang et al., 2019). Affected by the traditional Chinese culture of filial piety, most family members are reluctant to give up on treatment when dealing with the illness of their relatives; so, they will spend money to maintain the patient's life, but this may be contrary to the patient's own wishes (Yu et al., 2018). Patients with advanced cancer in our country sometimes lose the right to participate in medical decision-making in the name of "love" or "filial piety," and their families never give up treatment easily, although this is of little use to patients (Liu et al., 2014). Because most of the family members will start from the perspective of their own cognition of the disease, or social customs and concepts, which may not fully meet the needs of patients. When patients cannot be cured or relieved, their quality of life may gradually decline with the development of the disease, but their life dignity does not necessarily need to decrease with this (Zhang et al., 2018). At the same time, what is different from Western

countries is the distinctive content of traditional Chinese culture. For example, the dignity of Chinese patients' needs to consider the classic Chinese Confucian dignity theory, Taoist dignity theory and the unique way of thinking and behaviour of Chinese people, such as the concept of "saving face," and fully consider the relationship between Chinese culture and dignity can better improve the assessment tools related to patient dignity.

The autonomy of patients is related to concepts, such as, having informed consent and being able to make autonomous medical decisions (Zhang & Min, 2020). According to Pang et al. (2018), the degree of disease progression knowledge is the influencing factor of patients' loss of dignity. This is consistent with the research findings of Song et al. (2018). Namely, that there is a close negative correlation between patients' loss of dignity and the degree of disease progression knowledge, that is, the more fully patients know about their disease progression, the lower the rate of loss of personal dignity. In this context, informed consent includes the provision of sufficient information, which can influence the patient's decision-making. Nursing staff should provide enough accurate information, and should pay attention to the amount of information provided, grasp the degree of notification and should also carefully consider the disclosure of medical information. The provision of information and the disclosure of medical information will affect the autonomy of patients (Cranmer & Nhemachena, 2013). Likewise, the ICN Code of ethics for nurses (ICN, 2012) states that "The nurse ensures that the individual receives accurate, sufficient and timely information in a culturally appropriate manner on which to base consent for care and related treatment." (Page 2). Therefore, we must attach relevance to the disclosure of patient's medical information, provide patients with sufficient information about their condition, pay attention to the time and content of the statement (Zhang & Min, 2020), and fully consider the patient's physical and psychological state to support reasonable decision-making.

In some cases, the patient's family joined in the clinical treatment and decision-making of the patient, and some adult children of the patient's family strive to balance the responsibilities of patient autonomy and dignity (Fjose et al., 2018). As clinical nurses, we attach importance to family members being involved in the patient's decision-making, with the patient's consent, and it does not mean that they could make choices on behalf of their relatives. When it comes to informing patients about their clinical treatment and medical decisions, patients' psychological enduring capacity should be taken into account, and patients' own wishes should be asked first, rather than concealed. It is undeniable that in the process of medical decision-making and within the scope of the law, nursing staff should not ignore the autonomy and dignity of patients, but they still need to pay attention to traditional culture and ethics and balance the communication between patients and their families (Zhang & Min, 2020).

It should be noted that, compared with the original IPDS, the dimensions and items contained in the two subscales of the Mandarin version of the IPDS are different. The reasons may be as follows: (a) In the item analysis, some items of the scale were not applicable in

the context of Chinese medical culture, so they were deleted, resulting in a certain change in the structure of the IPDS. (b) Due to the different social, cultural and medical backgrounds of different countries, patient's understanding of scale items also differs. As Mairis (1994) pointed out in seminal work, dignity is acquired through life experiences, at the same time, culture, education, social background and family networks all influence attitudes, values and standards. When we use the IPDS, we need to consider the cultural differences between different countries, to ensure we address cross-cultural adjustment so as to better use the scale to assess the dignity of patients. (c) So far, in the field of nursing research, academics have struggled to clearly define the concept of patient dignity. It may also be that the connotation of the dignity of inpatients in China is not clear, and there is an overlap between some concepts. (d) As stated by Matiti and Trorey (2004), depending on the patient's cultural background, only some or all of the concept categories of dignity may exist. For example, Chochinov et al. (2002) constructed a dignity model, and Chinese academics Wu et al. (2015) discussed the applicability of the dignity model in China. The results show that although the dignity model is applicable within the Chinese context, some new dignity influencing factors and themes have emerged, which to a certain extent reflect the differences between domestic and foreign national conditions, society and medical culture. This suggests that qualitative research could be of value, to follow-up research to explore the conceptual framework of patient dignity in the context of Chinese medical culture, so as to better revise and improve the IPDS-MV.

In China, tensions between healthcare staff and patients occur from time-to-time and are well-documented (Li, 2018), as the IPDS directly asks patients "How strong are your expectations?" and "How satisfied are you with the present conditions?", which involves issues related to the behaviour and attitude of medical staff, we need to remind those who want to use the IPDS-MV to conduct research to fully explain the contents of the scale to patients and ensure that patient's medical rights are not impaired, so as to obtain the most effective questionnaires. Only when the patient fully understands the research information, such as the purpose of the research and the content of the measurement scale, can the patient's worries be better alleviated. Awareness should be given to the burden of participating in the study so that the patient can complete the questionnaire according to their true ideas.

As mentioned above, we strongly believe that it is very important to further explore the connotation of patient dignity using qualitative research approaches, however, simultaneously, we also need to use psychometrically tested assessment scales to accurately assess patient dignity, and conduct quantitative research to explore the current status of patient dignity, because quantitative research has the added advantage of being measurable, accurate and reproducible. It is perhaps a little aspirational to develop a worldwide universal inpatient dignity assessment tool and use it to carry out research and compare multiple countries to understand the dignity of patients worldwide. Therefore, the findings of IPDS-MV presented in this study can act as a measurement tool, displaying patient dignity expectations and satisfaction in the form of scores, enriching Chinese

patient dignity assessment tools. However, we need to be mindful that this scale causes and source scales and there may be certain dimensional discrepancies. Our original intention was to introduce the IDS to promote the integration of inpatient dignity assessment tools and to further promote the development of domestic- and foreign-controlled studies. Through communication with professor Ota's research team, the IPDS-MV perhaps still needs further improvement, before we can really think about whether it is appropriate to compare the IPDS-MV with the results of other international (English language) versions of the IPDS.

4.1 | Limitation

In view of the limitations of time and manpower, sampling took place in only five tertiary hospitals in Guangzhou City, this may affect the representativeness of the sample to a certain extent; however, this impact has been partly reduced by expanding our sample size. This study merged the dimensions of the scale, which is different from the original scale structure. Although the research team modified and discussed through the literature review, the expert consultation and statistical results, the possibility of bias cannot be fully ruled out. After the author's research team communicated, although this is the first time that China has introduced the Inpatient Dignity Scale, the Mandarin version of the IPDS is still an exploratory scale. Therefore, a multicentre and large-sample survey is required in subsequent studies. The items of the scale need to be further evaluated, adjusted and revised again, to test and improve the applicability of the Mandarin version of the IPDS. At the same time, to explore and find the division points of the scale scores, to establish a domestic norm, which also provides follow-up patient dignity care-related interventional studies provide more effective evaluation instruments.

5 | CONCLUSIONS

The Mandarin version of the IPDS developed in this study has passed rigorous forward-back translation and cultural adaptation. After psychological measurement and evaluation, it has shown good reliability and validity, and all indicators meet the instrument's measurement standards. These research findings can potentially enrich the current status of patient dignity assessment tools in China. The original IPDS scale, mainly explores the concept of dignity, including "as a human being, personal feelings and time, autonomy and privacy," but due to the different national conditions, social and medical cultural backgrounds internationally, the understanding of "dignity" remains unclear, some concepts of dignity overlap. Although the IPDS-MV developed in this study meets the psychological measurement standards of the instrument, it is only an exploratory scale, and in future research, a combination of quantitative and qualitative research methods should be used to explore the connotation of patient dignity under the background of Chinese medical culture and to make further revisions to the scale.

CONFLICT OF INTEREST

No conflict of interest has been declared by the authors.

AUTHOR CONTRIBUTIONS

Study design: YH, YZ. Data collection: YH, DL, GZ, JC. Data analysis: YH. Study supervision: YZ, TKSW. Manuscript writing: YH. Critical revisions for important intellectual content: YZ, GDS.

DATA AVAILABILITY STATEMENT

The raw/processed data required to reproduce these findings cannot be shared at this time as the data also forms part of an ongoing study.

ORCID

Yao Huang iD https://orcid.org/0000-0001-5832-5340

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