Asian Nursing Research 13 (2019) 76–85

Contents lists available at ScienceDirect

Asian Nursing Research

journal homepage: www.asian-nursingresearch.com

Research Article

Development of the Inpatient Dignity Scale Through Studies in Japan, Singapore, and the United Kingdom

Katsumasa Ota,[1,*,☆] Jukai Maeda,[2] Ann Gallagher,[3] Michiko Yahiro,[4] Yukari Niimi,[5] Moon F. Chan,[6] Masami Matsuda[7]

[1] Fundamentals and Clinical Nursing, School of Health Sciences, Nagoya Graduate School of Medicine, Nagoya, Japan
[2] Faculty of Nursing, Tokyo Ariake University of Medical and Health Sciences, Tokyo, Japan
[3] International Care Ethics (ICE) Observatory, School of Health Sciences, Faculty of Health and Medical Sciences, University of Surrey, Guildford, England
[4] School of Nursing, Saku University, Nagano, Japan
[5] School of Nursing, Seirei Christopher University, Hamamatsu, Japan
[6] Department of Family Medicine and Public Health, Sultan Qaboos University, Muscat, Oman
[7] Department of Health and Nutrition, Faculty of Contemporary Human Life Science, Tokyo Kasei-gakuin University, Tokyo, Japan

ARTICLE INFO

Article history:
Received 24 April 2018
Received in revised form
7 January 2019
Accepted 15 January 2019

Keywords:
inpatients
nursing
psychometrics
respect

ABSTRACT

Purpose: The importance of human dignity in care is well-recognized. Care recipients' experiences with undignified care have been reported in many countries. However, few studies have measured these situations quantitatively, especially as there are no tools applicable to inpatients receiving ordinary daily care. This study aimed to develop a valid and reliable Inpatient Dignity Scale (IPDS) that can measure inpatients' expectations of and satisfaction with dignity in daily care.
Methods: We conducted a three-phase research project: item generation and a preliminary survey with 47 items related to patients' dignity in Japan, a main survey with 36 items with deliberate translation into English in Singapore, and a confirmatory survey with 35 items in England, with 442, 430, and 500 inpatients as participants in questionnaire surveys, respectively. Data from each survey were processed using factor analysis.
Results: Authors obtained a scale with a four-factor structure with acceptable reliability: (F1) respect as a human being, (F2) respect for personal feelings and time, (F3) respect for privacy, and (F4) respect for autonomy.
Conclusion: The Inpatient Dignity Scale can be periodically used by hospital administrators or nurses to preserve inpatients' dignity in daily care by monitoring inpatients' views regarding their expectations of and satisfaction with dignity.
© 2019 Korean Society of Nursing Science, Published by Elsevier Korea LLC. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Introduction

There has been significant research and media attention regarding the concept and practice of human dignity in care over the last two decades. In the United Kingdom (UK), dignity in care campaigns were initiated in the mid-1990s by the Department of Health [1], the Social Care Institute for Excellence [2], and the Royal College of Nursing [3].

Qualitative research provides much rich data regarding the experiences of patients, nurses, and families regarding dignity in care [4]. This dignity-related qualitative research shows that feeling valued, comfortable, and listened to are core consequences of dignifying care. However, such data have limited impact when the aim is to evaluate how nurses and other professionals are performing over time or in response to dignity initiatives; furthermore, there is currently no scale applicable to a broad spectrum of inpatients as well as across cultures.

In the nursing ethics literature, the beginning of dignity in care scholarship is traced to an article by Shotton and Seedhouse in 1998 [5]. Early concept analyses of dignity appeared in 1994 [6] and in 1996 [7]. Since then, there have been some studies relating to

* Correspondence to: Katsumasa Ota, Ph.D., School of Health Sciences, Nagoya Graduate School of Medicine, Nagoya 461-8673, Japan.
E-mail address: kota@met.nagoya-u.ac.jp
☆ ORCID: https://orcid.org/0000-0002-0362-3719

https://doi.org/10.1016/j.anr.2019.01.008
p1976-1317 e2093-7482/© 2019 Korean Society of Nursing Science, Published by Elsevier Korea LLC. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

dignity in care. Baillie [8] is one of the most cited articles because it systematically reviews a definition of dignity and shows detailed patients' perceptions of dignity despite being conducted in one hospital. There has also been engagement by philosophers [9–11] and academics who have debated the usefulness of the concept of dignity in bioethics more broadly [12,13].

Research on the development of standardized tools is in its infancy. Tools have been developed for older people [14] and terminally ill patients [15]. There is also a start to the development of more generic tools in Japan [16] and the United States [17]. The Picker Institute [14] review was commissioned by the UK charity Help the Aged. The review set out to identify the "best way to measure each of the Help the Aged domains of dignified care." The domains are "personal hygiene, eating and nutrition, privacy, communication, pain, autonomy, personal care, end-of-life care, and social inclusion" and "general respect" (Picker Institute [14], p. 5). The review identified four "cross-cutting themes" within the indicators: "choice, control, staff attitudes, and facilities."

Chochinov et al [15] published details of the Patient Dignity Inventory (PDI) in 2008. The Inventory measures "dignity-related distress in palliative care" (p. 559) and is derived from the Model of Dignity for the Terminally Ill. The PDI factor analysis conducted by Chochinov et al [15] revealed a five-factor solution: symptom distress; existential distress; dependency; peace of mind; and social support. However, the PDI is a specific tool to measure dignity-related distress at the end of life.

A more general dignity measurement tool was developed by Jacelon et al[17] in the United States. It consists of three dimensions: self-value, behavioral respect–self, and behavioral respect–others of community-dwelling older adults and was tested in terms of its psychometric properties [18]. There also is a Greek version [19]. These tools provide rich insights into aspects of dignity in specific cultural contexts. However, none of the tools were designed or validated to measure the expectations and satisfaction of patients regarding dignity during an inpatient hospital experience.

Therefore, the aim of this study was to develop a scale measuring inpatient dignity that would be applicable in a cross-cultural context.

Methods

Study design

This study proceeded according to an orthodox instrument development process [20]. As shown in Figure 1, it consisted of three phases. Phase 1 was for conceptualization of patient dignity and construction of a questionnaire. After three sub-processes, we obtained an English questionnaire consisting of 36 items with two axes: patient expectation and patient satisfaction regarding patient dignity. Phase 2 was the main survey in Singapore. It was conducted in a hospital using the questionnaire constructed in Phase 1, and the Inpatient Dignity Scale (IPDS) was developed. Phase 3 involved a re-test of the IPDS, which was conducted in England, to examine its reliability and validity.

Ethical considerations

This study was approved by the Bioethics Committee of Nagoya University Graduate School of Medicine, Japan (Approval no. 1136-2, 04 Aug 2011), the National Health Group Domain Specific Review

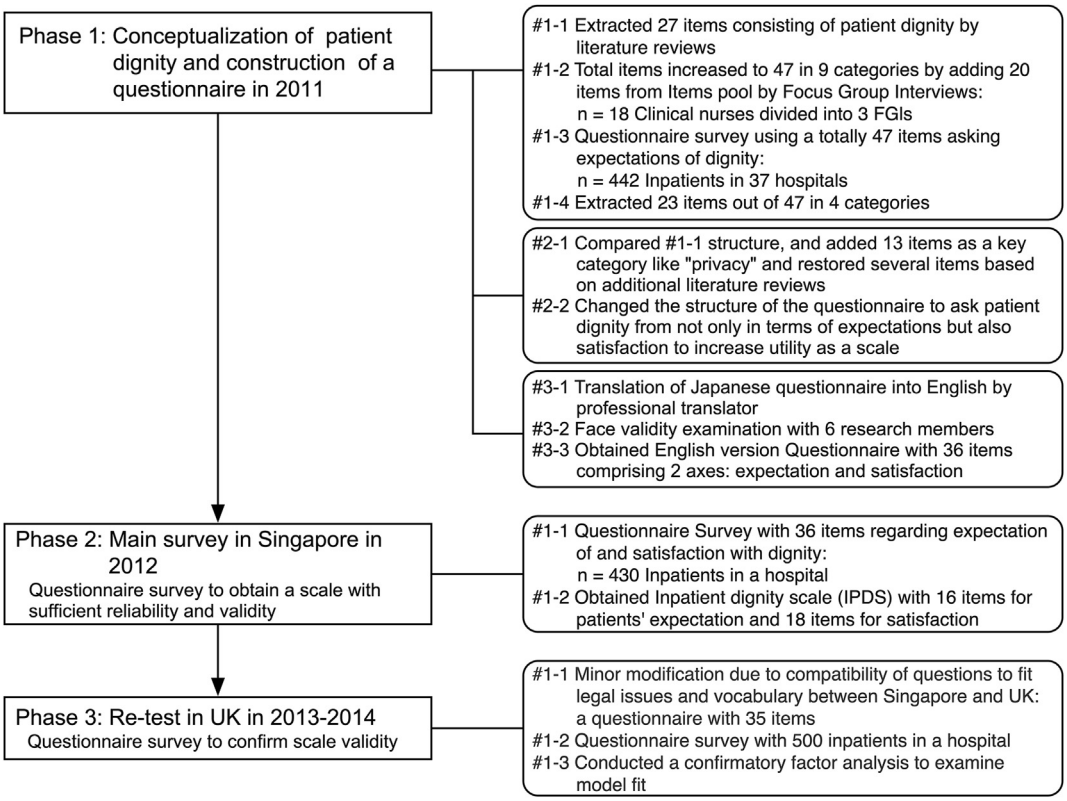

Figure 1. Research process.
Note. FGIs = focus group interviews.

Board, Singapore (Approval no. 2012/00457, 02 Aug 2012), and National Health Service Ethics Committee in the UK (Approval no. 13/SC/0497, 25 Sep 2013). Furthermore, one focus group interview (FGI) and three questionnaire surveys were conducted after obtaining consent from the ethics committees and have been conducted in accordance with accepted national and international standards. Consent was obtained from all patients prior to completion of the questionnaire. The data have been anonymized, and participants are not identifiable.

Phase 1: test survey

Conceptualization and item generation

Based on a literature review, authors collected concepts and items related to patients' dignity. 27 items were selected such as "being exposed," "having time," "patient as a person," "the body as object," and so on, mainly based on concepts by Griffin-Heslin [21] and Walsh and Kowanko [22] because they were elements of dignity from the patient's viewpoint. Furthermore, an additional 20 items were extracted from 15,000 words (as Japanese characters) through three FGIs with 18 nurses who had more than 5 years clinical experience each. FGIs were conducted based on an interview guide including questions such as "What do you usually keep in mind to preserve patients' dignity in care?" Seven Japanese research members, who had previous experience with FGIs, extracted another 20 items and examined their content validities according to an ordinary content analysis method. As a result, a total of 47 items that included categories related to patients' dignity were obtained. There were nine key categories as follows: "patient as a person," "respect for a patient," "safety and well-being," "having time," "giving control," "equality," "advocacy," "emotional consideration," and "privacy and confidentiality."

Because these items were collected from the literature and extracted from FGIs with nurses, we tested their face validity with real inpatients using this questionnaire in 2011. However, exploratory factor analysis (EFA) resulted in only 23 items in four categories (see "Phase 1: test survey" in Results), and it lacked the category of the traditional privacy, but not information privacy. Therefore, we needed to reconstruct the questionnaire to include comprehensive elements of patients' dignity.

Revision of a questionnaire

Because the results lacked a category like "patient privacy," which was shown in the literature and FGIs, we restored 12 items, for example, "Physicians/nurses ask for my permission before opening the curtain or door," "Physicians/nurses keep me protected with covering or clothing while providing medical treatment or nursing care," and "Physicians/nurses present many different choices when I choose my course of treatment" and added one item: "Physicians/nurses respect me as a human being," which was thought to be an important element consisting of dignity. Then, the total number of items increased to 36 from 23. Furthermore, this questionnaire survey showed necessity of the viewpoint of patients' satisfaction because we could not speculate on why scores regarding expectations were either high or low, without knowing whether patients' satisfaction levels were low or high (see Figure 1 #2-1 and #2-2).

Translation in English

Based on translation of a questionnaire from Japanese to English by a professional translator, six research members carefully examined its face validity. At last, we obtained the English version questionnaire with 36 items comprising two axes: expectation and satisfaction.

Phase 2: main survey

Participants and procedure

We conducted an anonymous survey with 430 inpatients, who were aged 21 years and older and physically and mentally healthy, except for those in intensive care unit, accident/emergency, and psychiatric wards in a middle-sized general hospital with about 300 beds located in the suburbs of Singapore City from August to October in 2012.

Sample size was determined by reference to Floyd and Widaman [23], who said that "5–10 participants per variable are commonly used in confirmatory factor analysis (CFA) as well, although Jöreskog and Sörbom [24] suggested that it is best to have 10 participants per parameter estimated." We aimed at the latter criterion in this survey.

Measures

An English version questionnaire consisted of two parts: (1) demographic data including several questions regarding self-control of information privacy [25] and (2) 36 items asking about patients' dignity from the viewpoint of expectations of dignity in daily care (e.g., "How strong are your expectations?") as well as from the viewpoint of satisfaction with dignity in care (e.g., "How satisfied are you with the present conditions?"), rated on a five-point Likert-type scale ranging from 1 (not at all/very dissatisfied) to 5 (very strongly/very satisfied), respectively.

Data analysis

Data were analyzed using IBM SPSS Statistics Base 23 and IBM SPSS Amos 24 (IBM Corp., Armonk, NY, USA). Q-Q plots were used to examine the normality of each item. Tests for reliability and validity were examined based on item analysis, Cronbach α reliability coefficient, EFA, and CFA. The structural models for CFA were built based on the hypothesis that there were several observable variables representing latent (unobservable) factors extracted by EFA. For CFA, the normed Chi-square (χ^2/df), standardized root mean square residual (SRMR) derived from the root mean square residual [24] as an absolute fit index, normed comparative fit index (CFI) as an incremental fit index, and root mean square error of approximation (RMSEA) as a parsimony fit index were chosen to evaluate the validity of the structural model. In this study, a value of CFI greater than .90, SRMR less than .09, RMSEA less than .10, and χ^2/df less than 3.00 were chosen to indicate acceptable levels, respectively.

Phase 3: confirmatory survey

Participants and procedure

Authors conducted an anonymous survey from 2013 to 2014 with 500 inpatients aged 18 years and older who were legal adults and physically and mentally healthy, except for those in intensive care units and accident/emergency and psychiatric wards in a National Health Service hospital, which had already established research collaboration relationship with one of the co-authors and was located in the southeast of London.

Measures

After the main survey in Singapore, we examined the face and content validity of the questionnaire through a seminar discussion with graduate students and faculty members whose specialties were nursing sciences at a university in England. It was found that one item relating to physical constraint had to be excluded because it would not be applicable in England. We also found that five of the items had to be revised for the meaning to be clear to English patients; for example, "a diaper" was replaced with "an incontinence

pad." However, most items had the same meaning as the Singapore survey. In this survey, to increase the likelihood of more accurate answers, we added the choice of "N/A" (not applicable) to the Likert scale. In addition, to examine the criterion-related validity, we added the Rosenberg Self-Esteem Scale (RSES) because self-esteem is one of the key concepts of dignity [6,7,18].

Data analysis

To confirm the model fit, CFA was conducted. The criterion-related validity was examined by co-relation between subtotal score comprising each factor and RSES score.

Results

Phase 1: test survey

We obtained 165 responses from 442 inpatients, who were 20 years and older in healthy physical and mental condition at 37 hospitals, excluding psychiatric hospitals in Aichi prefecture in Japan from August to October in 2011. Demographic data are shown in Table 1. Principal factor analysis with promax rotation extracted only 23 out of 47 items with four categories: (F1), respect as a human being (8 items); (F2), respect for patients' feelings (7 items); (F3), consideration of information privacy and handling (6 items); and (F4), giving first priority to the patients (2 items), with Cronbach α of .95. This result lacked a category for "patient privacy" and key elements of patients' dignity as described in the Design section.

Phase 2: main survey

We obtained 363 responses from 430 inpatients (response rate: 84.4%). Participants' demographic data are shown under the heading, "Singapore ($n = 363$)" in Table 1. Descriptive data for patient expectations and satisfaction are shown in Table 2. Expectations and satisfaction showed moderate significant correlations (r = .38–.61), and except for four items (items 13, 32, 34, and 36), mean scores for satisfaction were significantly larger than those for expectations ($p < .01$, $p < .05$).

Item analysis

Before conducting EFA, we refined the data by excluding responses with more than four missing values and less than three answers (scores) different from the mode of each answer because there were two problems in our data, which were slipping out of a normal distribution in 19 items for expectations and 26 items for satisfaction, as well as ceiling effects in 22 items for expectations and 30 items for satisfaction. As a result, the number of valid responses was 267 (72.7%) for patients' expectations and 248 (68.3%) for patients' satisfaction, respectively, out of 363 responses.

Exploratory and confirmatory factor analysis

Principal factor analysis with promax rotation was used because there was little deviation from normality. To determine the number of factors, an eigenvalue greater than or equal to 1.0 was used as the extraction criterion. We repeated EFA until there were no factors with double loadings of more than .50.

Both patients' expectations of dignity and satisfaction with dignity consisted of the same four common factors. Regarding patients' expectations, the factor structure was as follows: (F1), respect as a human being, consisting of six items; (F2), respect for personal feelings and time, consisting of five items; (F3), respect for privacy, consisting of three items; and (F4), respect for autonomy, consisting of two items. Regarding patients' satisfaction, the factor structure was as follows: (F1), respect for personal feelings and time, consisting of eight items; (F2), respect as a human being, consisting of six items; (F3), respect for autonomy, consisting of two items; and (F4) respect for privacy, consisting of two items, respectively (see Table 3). Cronbach α varied from .72 to .90. The Kaiser–Meyer–Olkin sampling adequacy criteria were .88 and .93 for expectation and satisfaction, respectively, showing meritorious adequacy. The results of Bartlett's sphericity test were $p < .001$ for both aspects of dignity, showing sufficient optimality for factor analysis.

Using these factor structures and refined data, we conducted CFA. The fit indices to a structure of latent factors and

Table 1 *Characteristics of Respondents.*

Characteristics of respondents	Japanese ($n = 165$)		Singapore ($n = 363$)		UK ($n = 499$)	
	n	%	*n*	%	*n*	%
Gender						
Men	106	64.3	241	66.4	193	38.7
Women	56	33.9	122	33.6	301	60.3
No response	3	1.8	0	0.0	5	1.0
Age (yrs)						
18-39	10	6.0	169	46.6	92	18.4
40-59	43	26.1	136	37.5	105	21.1
60 and over	111	67.3	58	15.9	298	59.7
No response	1	0.6	0	0.0	4	0.8
Marital status						
Single	17	10.3	52	14.3	59	11.8
Married	123	74.5	218	60.0	257	51.5
Other (divorced/widowed)	24	14.6	89	24.6	169	33.9
No response	1	0.6	4	1.1	14	2.8
Family composition						
Living alone	19	11.5	52	14.3	146	29.3
With family	138	83.6	273	75.2	295	59.1
Other	0	0.0	34	9.4	45	9.0
No response	8	4.9	4	1.1	13	2.6
Occupation						
Unemployed	101	61.2	80	22.0	160	32.1
Employed	36	21.8	155	42.7	212	42.5
Other	26	15.8	126	34.7	90	18.0
No response	2	1.2	2	0.6	37	7.4
Highest education attained						
Primary and secondary school	103	62.4	140	38.6	222	44.5
College/university/higher	55	33.3	139	38.3	228	45.7
Other	6	3.7	84	23.1	27	5.4
No response	1	0.6	0	0.0	22	4.4
Ethnic group						
White	-	-	-	-	457	91.6
Others	-	-	-	-	35	7.0
No response	-	-	-	-	7	1.4
Religion						
None	-	-	-	-	94	18.8
Christian	-	-	-	-	363	72.8
Others	-	-	-	-	29	5.8
No response			-	-	13	2.6
Number of hospitalizations						
The 1st time	35	21.2	105	28.9	74	14.8
The 2nd Time	35	21.2	112	30.9	118	23.7
More than three times	94	57.0	138	38.0	290	58.1
No response	1	0.6	8	2.2	17	3.4
Length of hospitalization at this time						
<6 days	25	15.2	289	79.6	249	49.9
6-10days	36	21.8	47	12.9	136	27.3
11 and over	95	57.6	16	4.4	83	16.6
No response	9	5.4	11	3.1	31	6.2
Department of the ward						
Surgical ward	63	38.2	168	46.3	223	44.7
Medical ward	70	42.4	131	36.1	124	24.9
Others	29	17.6	64	17.6	108	21.6
No response	3	1.8	0	0.0	44	8.8
Operation completed						
No	78	47.3	227	62.5	165	33.1
Incoming	-	-	21	5.8	41	8.2
Yes	85	51.5	111	30.6	228	45.7
No response	2	1.2	4	1.1	65	13.0

Note. UK = United Kingdom; yrs = years.

Table 2 *Patient Expectations and Satisfaction in Phase 2.*

Items		Expectations		Satisfaction		p[a]	Correlation	
		n	M ± SD	n	M ± SD			
Exp-1/Sat-1	(P/N) treat and care for me as a living human being rather than an object.	363	4.33 ± 0.81	363	4.48 ± 0.70	.001	.40	<.001
Exp-2/Sat-2	(P/N) maintain eye contact with me while talking.	363	4.26 ± 0.82	363	4.46 ± 0.73	.001	.50	<.001
Exp-3/Sat-3	(P/N) explain the procedure to me before starting medical treatment or nursing care.	363	4.35 ± 0.82	362	4.46 ± 0.75	.013	.43	<.001
Exp-4/Sat-4	(N) care for me as well as possible so that I can avoid using a diaper.	326	4.17 ± 0.93	317	4.34 ± 0.81	<.001	.49	<.001
Exp-5/Sat-5	(P/N) respect me as a human being.	363	4.49 ± 0.77	363	4.62 ± 0.74	.001	.53	<.001
Exp-6/Sat-6	(P/N) listen to me attentively.	363	4.43 ± 0.75	361	4.57 ± 0.72	<.001	.56	<.001
Exp-7/Sat-7	(P/N) always use polite language.	363	4.49 ± 0.75	362	4.63 ± 0.70	<.001	.47	<.001
Exp-8/Sat-8	(P/N) are polite to my family as well as to me.	360	4.40 ± 0.77	357	4.53 ± 0.76	.001	.61	<.001
Exp-9/Sat-9	(P/N) talk to me at my eye level by sitting on a chair or bending.	363	4.02 ± 0.96	361	4.33 ± 0.80	<.001	.47	<.001
Exp-10/Sat-10	(P/N) give my needs or expectations priority in their everyday practice.	363	4.19 ± 0.77	362	4.33 ± 0.78	.001	.47	<.001
Exp-11/Sat-11	(P/N) greet me first when they see me in the hospital.	363	4.09 ± 0.97	362	4.41 ± 0.79	<.001	.48	<.001
Exp-12/Sat-12	(P/N) restrain me by tying up my arms or legs if there are no alternatives for ensuring my safety.	310	3.65 ± 1.16	301	3.87 ± 1.03	<.001	.42	<.001
Exp-13/Sat-13	(P/N) treat my pain promptly.	354	4.30 ± 0.83	352	4.34 ± 0.86	.398	.45	<.001
Exp-14/Sat-14	(P/N) respect the time my family spends visiting me in the hospital.	359	4.33 ± 0.78	355	4.48 ± 0.79	.002	.49	<.001
Exp-15/Sat-15	(P/N) treat me patiently and unhurriedly even if they are busy.	360	4.27 ± 0.77	360	4.48 ± 0.75	<.001	.38	<.001
Exp-16/Sat-16	(P/N) work with me at my own pace.	360	4.27 ± 0.76	358	4.48 ± 0.72	<.001	.44	<.001
Exp-17/Sat-17	(P/N) take the time to listen to me.	363	4.35 ± 0.76	363	4.50 ± 0.75	<.001	.52	<.001
Exp-18/Sat-18	(P/N) let me participate in the decision-making processes regarding my own treatment choices.	355	4.14 ± 0.90	353	4.28 ± 0.84	.004	.48	<.001
Exp-19/Sat-19	(P/N) present many different choices when I decide my course of treatment.	353	4.10 ± 0.89	349	4.18 ± 0.87	.038	.51	<.001
Exp-20/Sat-20	(P/N) inform me first of the state of my illness before notifying my family members.	345	4.27 ± 0.76	340	4.40 ± 0.74	.001	.48	<.001
Exp-21/Sat-21	(P/N) do not discriminate patients based on race or nationality.	363	4.47 ± 0.77	361	4.61 ± 0.67	<.001	.57	<.001
Exp-22/Sat-22	(P/N) treat every patient equally.	358	4.51 ± 0.76	358	4.60 ± 0.76	.017	.51	<.001
Exp-23/Sat-23	(N) forward my questions to the physicians on my behalf.	356	4.37 ± 0.77	353	4.44 ± 0.76	.033	.55	<.001
Exp-24/Sat-24	(P/N) give priority to my personal needs or expectations rather than treating my illness if I so decide.	355	4.06 ± 0.92	354	4.26 ± 0.82	<.001	.50	<.001
Exp-25/Sat-25	(N) of my gender give me care.	357	4.06 ± 1.09	354	4.44 ± 0.83	<.001	.43	<.001
Exp-26/Sat-26	(P/N) understand my suffering and sympathize with me.	357	4.27 ± 0.86	358	4.43 ± 0.75	<.001	.48	<.001
Exp-27/Sat-27	(P/N) are always cheerful to me.	361	4.39 ± 0.79	361	4.55 ± 0.73	<.001	.53	<.001
Exp-28/Sat-28	(P/N) talk to me privately about my issues without allowing others to hear.	360	4.18 ± 0.88	356	4.32 ± 0.86	.002	.48	<.001
Exp-29/Sat-29	(P/N) keep me protected with covering or clothing while providing medical treatment or nursing care.	358	4.45 ± 0.69	358	4.57 ± 0.71	.005	.40	<.001
Exp-30/Sat-30	(P/N) draw the bedside curtain or shut the door to maintain privacy during medical treatment or nursing care.	361	4.54 ± 0.69	360	4.64 ± 0.65	.009	.45	<.001
Exp-31/Sat-31	(P/N) ask for my permission before opening the curtain or door.	359	4.07 ± 0.95	358	4.30 ± 0.91	<.001	.46	<.001
Exp-32/Sat-32	(P/N) protect my personal information.	359	4.42 ± 0.76	356	4.47 ± 0.73	.102	.58	<.001
Exp-33/Sat-33	(P/N) share my information with other members of the health-care team if necessary.	356	4.22 ± 0.84	352	4.32 ± 0.83	.022	.55	<.001
Exp-34/Sat-34	(P/N) do not disclose my sensitive information, such as family issues, to health-care workers other than my own doctors and nurses.	356	4.39 ± 0.74	356	4.38 ± 0.79	.883	.55	<.001
Exp-35/Sat-35	(P/N) do not collect information that is unnecessary for my medical treatment or nursing care.	355	4.29 ± 0.86	356	4.39 ± 0.86	.005	.61	<.001
Exp-36/Sat-36	(P/N) inform me of my examination results properly and promptly during my hospital stay.	359	4.43 ± 0.76	359	4.38 ± 0.89	.32	.41	<.001

Note. Exp = expectation; M = mean; N = nurses; P/N = physicians/nurses; Sat = satisfaction; SD = standard deviation.
[a] p relates to t values between mean scores of expectation and satisfaction.

questionnaire items for expectations of dignity yielded a χ^2/df = 2.85, SRMR = .05, CFI = .94, RMSEA = .08 (90% confidence interval [0.07–0.09]). The fit indices to a structure of latent factors and questionnaire items for satisfaction of dignity yielded a χ^2/df = 2.23, SRMR = .03, CFI = .96, and RMSEA = .06 [0.05–0.07]. Those parameters were within acceptance level using predetermined criteria.

Differences between expectations and satisfaction in each factor

Mean scores of each of the four factors showed moderate significant correlations (r = .43–.59) between expectations and satisfaction ($p < .01$). Mean scores of the factor of "respect as a human being" (F1 of expectations and F2 of satisfaction), "respect for personal feelings and time" (F2 of expectations and F1 of satisfaction), and "respect for autonomy" (F4 of expectations and F3 of satisfaction) showed significant differences among each corresponding factor with higher scores for satisfaction than expectations ($p < 0.05$), respectively, whereas there was no significant difference in "respect for privacy" (F3 of expectations and F4 of satisfaction) ($p > .05$).

Differences in patients' characteristics

When checking the differences of each mean score among patients' demographic data in Table 1, we found significant differences as follows: regarding age group, the mean score of F1 of satisfaction of those aged 40 years and older was higher than that of those aged less than 40 years (4.45 vs. 4.21), despite no significant difference between those aged 60 years and older and that of those aged less than 60 years; regarding gender, the mean score of F2 of expectations of females was higher than that of males (4.16 vs. 3.92); regarding family structure, the mean score of F2 of expectations and F4 of satisfaction for living alone or nuclear family were higher than extended family (4.02 vs. 3.72, 4.20 vs. 3.89, respectively); regarding educational background, the mean score of F4 of expectations for those with a bachelor's degree or higher was higher than that of those with junior college or less (4.17 vs. 3.89)

Table 3 *Exploratory Factor Analysis of Expectations and Satisfaction in Phase 2.*

Expectations			
		Factor loading	Cronbach α
F1: Respect as a human being			
1	(P/N) treat and care for me as a living human being rather than an object.	.84	.88
2	(P/N) maintain eye contact with me while talking.	.62	
5	(P/N) respect me as a human being.	.86	
6	(P/N) listen to me attentively.	.74	
7	(P/N) always use polite language.	.74	
8	(P/N) are polite to my family as well as to me.	.66	
F2: Respect for personal feeling and time			
9	(P/N) talk to me at my eye level by sitting on a chair or bending.	.55	.81
10	(P/N) give my needs or expectations priority in their everyday practice.	.58	
11	(P/N) greet me first when they see me in the hospital.	.83	
25	(N) of my gender give me care.	.70	
26	(P/N) understand my suffering and sympathize with me.	.68	
F3: Respect for privacy			
33	(P/N) share my information with other members of the health-care team if necessary.	.76	.72
34	(P/N) do not disclose my sensitive information, such as family issues, to health-care workers other than my own physicians and nurses.	.62	
35	(P/N) do not collect information that is unnecessary for my medical treatment or nursing care.	.67	
F4: Respect for autonomy			
18	(P/N) let me participate in the decision-making processes regarding my own treatment choices.	.81	.81
19	(P/N) offer different choices so I can decide on my treatment.	.84	
	Cumulative contribution ratio	54.5%	
Satisfaction			
		Factor loading	Cronbach α
F1: Respect for personal feeling and time			
10	(P/N) give my needs or expectations priority in their everyday practice.	.56	.89
11	(P/N) greet me first when they see me in the hospital.	.60	
13	(P/N) treat my pain promptly.	.71	
26	(P/N) understand my suffering and sympathize with me.	.73	
27	(P/N) are always cheerful to me.	.70	
28	(P/N) talk to me privately about my issues without allowing others to hear.	.60	
29	(P/N) keep me protected with covering or clothing while providing medical treatment or nursing care.	.87	
30	(P/N) draw the bedside curtain or shut the door to maintain privacy during medical treatment or nursing care.	.61	
F2: Respect as a human being			
1	(P/N) treat and care for me as a living human being rather than an object.	.78	.90
2	(P/N) maintain eye contact with me while talking.	.54	
5	(P/N) respect me as a human being.	.79	
6	(P/N) listen to me attentively.	.88	
7	(P/N) always use polite language.	.67	
8	(P/N) are polite to my family as well as to me.	.78	
F3: Respect for autonomy			
18	(P/N) let me participate in the decision-making processes regarding my own treatment choices.	.82	.82
19	(P/N) offer different choices so I can decide on my treatment.	.73	
F4: Respect for privacy			
33	(P/N) share my information with other members of the healthcare team if necessary.	.62	.72
35	(P/N) do not collect information that is unnecessary for my medical treatment or nursing care.	.82	
	cumulative contribution ratio	58.5%	

Note. N = nurses; P/N = physician/nurses.
No cross factor loading with more than .50.

($p < .05$, $p < .01$). However, there were no significant differences among the number of hospitalizations, duration of hospitalization, and ward types where hospitalized ($p > .05$).

Phase 3: confirmatory survey

We obtained 499 responses from 500 inpatients (response rate 99.8%) through a confirmatory survey in the UK. The characteristics are shown under the heading, "UK ($n = 499$)" in Table 1. The data with answers of N/A (not applicable) were treated as missing values.

Model fit

After refining the data using the same rule for EFA of the main survey, we obtained 167 responses for expectations and 157 responses for satisfaction from the original 499 valid responses. One of the reasons why the number of valid responses became so small was because we added "N/A (not applicable)" as a choice to the Likert scale to avoid irresponsible answers.

To examine the model fit, the four-factor structure constructed based on the Singapore data in Phase 2 was applied to the UK data. As shown in Table 4, regarding expectations of patient dignity and satisfaction with dignity, model fit indices showed acceptance level except CFI for patient satisfaction.

Criterion validity

The criterion validity was examined based on correlations between the RSES score and the mean scores of each factor. There were very weak but significant correlations between RSES scores and scores of all factors of expectation and satisfaction from .11 to .22, with Cronbach α of .85, which somewhat supported the criterion validity of this factor structure ($p < .05$, $p < .01$).

Table 4 *Model Fit Indices for Confirmatory Factor Analysis.*

Indices	Expectation	Satisfaction
χ^2/df	2.32	2.60
χ^2	227.45	335.41
df	98	129
SRMR	.06	.07
CFI	.92	.86
RMSEA	.09	.10
95%CI	0.007–0.10	0.009–0.11

Note. CI = confidence interval; CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual.

Discussion

This study aimed to develop a valid and reliable scale to measure inpatients' expectations of and satisfaction with dignity in daily care. We obtained a scale with a four-factor structure: (F1), respect as a human being; (F2), respect for personal feelings and time; (F3), respect for privacy; and (F4), respect for autonomy, with acceptable validity and reliability. From these perspectives, the discussion is mainly focused on the validity and reliability of the scale and its attributes.

Validity and reliability as a scale

A scale that measures an attitude or psychological perception should be developed through a certain standard process to preserve its reliability and validity. The COSMIN checklist, that is COnsensus-based Standards for the selection of health status Measurement INstruments, can also be used as guidance for designing or reporting a study on measurement properties [26]. Our scale development processes fulfilled most properties on the checklist: Box A, internal consistency; Box B, reliability; a part of Box C, measurement error; Box D, content validity; Box E, structural validity; a part of Box G, cross-cultural validity; Box H, criterion validity; and a part of Box J, interpretability.

In terms of the results, it was shown that internal consistency, reliability, content validity, structural validity, and criterion validity were sufficiently or to some extent fulfilled according to the requirements in the COSMIN checklist. Thus, this scale can be used to validly and reliably measure patient expectations of and satisfaction with dignity to some extent.

Structures of dignity

Our scale was composed of four common factors: respect as a human being, respect for personal feelings and time, respect for privacy, and respect for autonomy. There were 16 items for patient expectations of dignity and 18 items for patient satisfaction with dignity. These factors reflect the original concepts drawn from the literature review that were mainly based on Griffin-Heslin [21] and Walsh and Kowanko [22], and FGI in Phase 1, except for the factor and items regarding “equality”. Walsh and Kowanko [22] refer to the importance of equality from a patient interview. Similarly, a survey conducted in parallel with this study using a questionnaire that was translated into Japanese from the questionnaire used in Phase 3 showed that fairness, a similar concept to equality, was extracted in patient expectations of dignity, and an item asking about equality was retained in a factor for “respect for a human being” in patient satisfaction [27]. However, our main survey in Singapore showed a structure that did not include equality, when factor loadings were increased to .40 from .35. Equality surely exists in the concept of dignity; however, it might be a weak concept that could not be extracted as an independent factor.

A similar factor structure of dignity was shown by Lin et al. [28]. Based on interviews with Taiwanese inpatients, six perspectives were identified: sense of control and autonomy, being respected as a person, avoidance of body exposure, caring from the nursing staff, confidentiality of disease information, and prompt response to needs. However, as Tuvesson and Lützén [29] mentioned, instruments do not lend themselves to a sound comparison with those that are based on different conceptions. Therefore, our structures differed from some of the scales or themes arising from various concepts or study subjects. For example, the Attributed Dignity Scale, developed for older people, comprises three dimensions (self-value, behavioral respect-self, and behavioral respect-others) and four cross-cutting themes (choice, control, staff attitudes, and facilities) [14]. Furthermore, the PDI comprises symptom distress, existential distress, dependency peace of mind, and social support and was developed with terminally ill patients [15].

Relationship between patient expectation and satisfaction

As shown in Table 2, mean scores of patient satisfaction showed significant correlations with those of expectations. However, the levels of correlation were only moderate. When discriminating scores of each item by the mean value of the total score, we can point out the items where scores were higher than the total mean for expectations but lower than the total mean for satisfaction. Items 13, 34, 35, and 36 were allocated in this discrimination. Items 34, 35, and 36 relate to information privacy, and item 13 relates to pain. Privacy is one of the key concepts of dignity, and concerns about privacy by the public are steeply increasing [25]. Similarly, the needs for patients' information is increasing as well for the purpose of safe and quality care. These situations may mean that hospital staff are not always able to answer patients' demands, potentially leading to a discrepancy between patients' expectations and satisfaction. Regarding pain, human dignity requires and demands that unnecessary, treatable pain be relieved [30]. However, it is difficult to relieve some kinds of pain. Our result may reflect such a difficulty. On the other hand, items 2 and 25 that were lower in expectation but higher in satisfaction may be related to religious considerations. A hospital that took part in the main survey in Singapore was assigned a number of Islamic nurses to care for Muslim inpatients to meet their religious demands. Because of such a nursing system with consideration for religion, patients might be satisfied with the care and not have very strong expectations of dignity regarding these items.

Limitations

It took a long time to develop this scale because the study was conducted in three different countries, and revisions of questionnaires themselves and their structures were needed. Therefore, it was difficult to compare each result for each item (question). Furthermore, we were unable to clarify the reason why there were significant differences between patient expectation and satisfaction. However, as a scale development study, necessary examinations of validity and reliability were conducted and proved to some extent. Because the concept of the dignity may change over time, we expect follow-up studies using this IPDS to be conducted internationally.

The main survey in Phase 2 and confirmatory survey in Phase 3 were conducted in only one hospital, respectively in Singapore and the UK. These two hospitals were strongly interested in preserving patient dignity. Therefore, results might be biased by this relatively better patient care.

Implications

Our scale showed there were only a few differences in characteristics (age, gender, family structure, and educational background) that affected the level of expectations of dignity and

satisfaction with dignity. The number of hospitalizations and their duration did not affect the level of expectations and satisfaction. This might mean patient dignity is the thing that is unchangeable for patients. If this is true, the hospitality offered by each hospital may be an important factor that increases patients' satisfaction.

When we conducted surveys in only one hospital in both Singapore and the UK, each score was very high in terms of levels of satisfaction with patients' dignity. Professional values of nurses could be facilitated by sharing these evaluations by patients with them. Our scale may be used to measure inpatients' expectations of and satisfaction with dignity to improve professional values and self-efficacy of clinical nursing.

Conclusion

We conducted a long-term study to develop a scale that could measure both inpatients' expectations of dignity and satisfaction with dignity. It consisted of four common factors: respect as a human being, respect for personal feelings and time, respect for privacy, and respect for autonomy. A factor structure identified in the survey in Singapore showed moderately good fit with the survey in the UK and showed weak but significant correlations between RSES scores and the mean scores of each factor. The scale was named the Inpatient Dignity Scale and demonstrated acceptable reliability, construct validity, and criterion validity. Further studies using this scale are expected to know and compare the levels of inpatients' expectations of dignity and satisfaction with dignity across countries and culture.

Conflicts of Interest

None declared.

Funding

A part of this study was supported by a JSPS KAKENHI Grant-in-Aid for Scientific Research (B), Grant Numbers JP 22390407 and JP26293445 in Japan. The funding source had no role in study design; in the collection, analysis, and interpretation of data; in the writing of the report; or in the decision to submit the article for publication.

Acknowledgments

The authors are grateful to patients in Singapore and England who gave so generously their time to complete the IPDS questionnaire. Without the support of hospital staff and academic colleagues in the participating regions, the project would not have been possible. Prof. S. Yamada, Assoc. Prof. A. Eguchi, and Lecturer T. Yamaguchi took part in content validity examinations. The authors are particularly grateful to Dr. Isaac John, Dr. Martha Wrigley, and the Research and Development team who enabled patient access and data collection in England.

Appendix. Table. IPDS Questionnaire.

Directions: Below are statements that describe patient's expectations toward physicians' and nurses' attitudes in the hospital. Based on your experience, please indicate the degree by checking on a 5-point Likert scale: 1 (not at all/very dissatisfied) to 5 (very strongly/very satisfied) concerning: 1) How strong are your expectations? and 2) How satisfied are you with the present conditions?

Items		How strong are your expectations?					How satisfied are you with the present conditions?				
		Not at all	Not very strong	More or less strong	Somewhat strong	Very strong	Very dis-satisfied	Somewhat dissatisfied	More or less satisfied	Somewhat satisfied	Very satisfied
1	(P/N) treat and care for me as a living human being rather than an object.	1	2	3	4	5	1	2	3	4	5
2	(P/N) maintain eye contact with me while talking.	1	2	3	4	5	1	2	3	4	5
3	(P/N) respect me as a human being.	1	2	3	4	5	1	2	3	4	5
4	(P/N) listen to me attentively.	1	2	3	4	5	1	2	3	4	5
5	(P/N) always use polite language.	1	2	3	4	5	1	2	3	4	5
6	(P/N) are polite to my family as well as to me.	1	2	3	4	5	1	2	3	4	5
7	(P/N) talk to me at my eye level by sitting on a chair or bending.	1	2	3	4	5	1	2	3	4	5
8	(P/N) give my needs or expectations priority in their everyday practice.	1	2	3	4	5	1	2	3	4	5
9	(P/N) greet me first when they see me in the hospital.	1	2	3	4	5	1	2	3	4	5
10	(P/N) treat my pain promptly.	1	2	3	4	5	1	2	3	4	5
11	(P/N) let me participate in the decision-making processes regarding my own treatment choices.	1	2	3	4	5	1	2	3	4	5
12	(P/N) offer different choices so I can decide on my treatment.	1	2	3	4	5	1	2	3	4	5
13	(N) of my gender give me care.	1	2	3	4	5	1	2	3	4	5

(*continued on next page*)

(*continued*)

Items		How strong are your expectations?					How satisfied are you with the present conditions?				
		Not at all	Not very strong	More or less strong	Somewhat strong	Very strong	Very dis-satisfied	Somewhat dissatisfied	More or less satisfied	Somewhat satisfied	Very satisfied
14	(P/N) understand my suffering and sympathize with me.	1	2	3	4	5	1	2	3	4	5
15	(P/N) are always cheerful to me.	1	2	3	4	5	1	2	3	4	5
16	(P/N) talk to me privately about my issues without allowing others to hear.	1	2	3	4	5	1	2	3	4	5
17	(P/N) keep me protected with covering or clothing while providing medical treatment or nursing care.	1	2	3	4	5	1	2	3	4	5
18	(P/N) draw the bedside curtain or shut the door to maintain privacy during medical treatment or nursing care.	1	2	3	4	5	1	2	3	4	5
19	(P/N) share my information with other members of the health-care team if necessary.	1	2	3	4	5	1	2	3	4	5
20	(P/N) do not disclose my sensitive information, such as family issues, to health-care workers other than my own physicians and nurses.	1	2	3	4	5	1	2	3	4	5
21	(P/N) do not collect information that is unnecessary for my medical treatment or nursing care.	1	2	3	4	5	1	2	3	4	5

Note. IPDS = Inpatient Dignity Scale; N = nurses; P/N = physicians/nurses.
Note 1. For expectation of dignity, items 10, 15, 16, 17, and 18 should be excluded; and for satisfaction with dignity, items 7, 13, and 20 should be excluded.
Note 2. As long as an appropriate citation is provided, you can use this questionnaire without our permission.

References

1. Department of Health. Final report on the review of the Department of Health Dignity in Care Campaign [Internet]. 2009 [cited 2018 Apr 1]. Available from: http://www.dignityincare.org.uk/_library/Opinion_Leader_Final_Report_to_DH.doc.pdf
2. Social Care Institute for Excellence. Dignity in Care: SCIE Guide 15 [Internet]. London: Social Care Institute for Excellence; 2013 [cited 2018 Apr 1]. Available from: http://www.scie.org.uk/publications/guides/guide15/
3. Baillie L, Gallagher A, Wainwright P. Defending dignity – challenges and opportunities for nursing [Internet]. London, UK: Royal College of Nursing; 2008 [cited 2018 Apr 1]. Available from https://my.rcn.org.uk/__data/assets/pdf_file/0011/166655/003257.pdf
4. Transvåg O, Synnes O, McSherry W. Stories of dignity within healthcare: research, narratives and theories. Keswick, UK: M & K Update; 2016. p. 84–93.
5. Shotton L, Seedhouse D. Practical dignity in caring. Nurs Ethics. 1998;5(3):246–55. https://doi.org/10.1177/096973309800500308
6. Mains ED. Concept clarification in professional practice: dignity. J Adv Nurs. 1994;19(5):947–53. https://doi.org/10.1111/j.1365-2648.1994.tb01173.x
7. Haddock J. Towards further clarification of the concept of 'dignity'. J Adv Nurs. 1996;24(5):924–31. https://doi.org/10.1111/j.1365-2648.1996.tb02927.x
8. Baillie L. Patient dignity in an acute hospital setting: a case study. Int J Nurs Stud. 2009;46(1):22–36. https://doi.org/10.1016/j.ijnurstu.2008.08.003
9. President's Council on Bioethics. Human Dignity and Bioethics: Essays Commissioned by the President's Council on Bioethics [Internet]. Washington DC: Government Printing Office; 2008 [cited 2018 Apr 10]. Available from: http://www.thenewatlantis.com/docLib/20091130_human_dignity.pdf
10. Foster C. Human dignity in bioethics and law. Oxford, UK, and Portland, OR: Hart Publishing; 2011. p. 1.
11. Macklin R. Editorial: dignity is a useless concept. BMJ. 2003;327:1419. https://doi.org/10.1136/bmj.327.7429.1419
12. Rosen M. Dignity: its history and meaning. Cambridge, MA: Harvard University Press; 2012. p. 54, 40–41.
13. Pinker S. The stupidity of dignity. New York:The New Republic [Internet]. 2008 [cited 2018 Apr 1]. Available from https://newrepublic.com/article/64674/the-stupidity-dignity
14. Magee H, Parsons S, Askham J. Measuring dignity in care for older people: a research report for help the aged [Internet]. Oxford, UK: Picker Institute; 2008 [cited 2018 Apr 1]. Available from http://www.ageuk.org.uk/documents/en-gb/for-professionals/research/measuring%20dignity%20in%20care%20(2008)_pro.pdf?.dtrk=true
15. Chochinov HM, Hassard T, McClement S, Hack T, Kristjanson LJ, Harlos M, et al. The Patient Dignity Inventory: a novel way of measuring dignity-related distress in palliative care. J Pain Symptom Manag. 2008;36(6):559–71. https://doi.org/10.1016/j.jpainsymman.2007.12.018
16. Ota K, Yahiro M, Eguchi A, Yamaguchi T, Niimi Y, Maeda J, et al. Towards creating an International Patient Dignity Scale: the development of a Japanese version as the first step. In: The 13th International Nursing Ethics Conference; 4th – 6th October, 2012. International Conference of Nursing Ethics, Izmir (Turkey). 2012.
17. Jacelon CS, Dixon J, Knafl KA. Development of the attributed dignity scale. Res Gerontol Nurs. 2009;2(3):202–13. https://doi.org/10.3928/19404921-20090421-03
18. Jacelon CS, Choi J. Evaluating the psychometric properties of the Jacelon attributed dignity scale. J Adv Nurs. 2014;70(9):2149–61. https://doi.org/10.1111/jan.12372
19. Papastavrou E, Charitou P, Kouta C. Psychometric properties of the Greek version of Jacelon attributed dignity scale. Nurs Ethics. 2017;24(5):612–25. https://doi.org/10.1177/0969733015617341
20. Gaskin CJ, Happell B. On exploratory factor analysis: a review of recent evidence, an assessment of current practice, and recommendations for future use. Int J Nurs Stud. 2014;51(3):511–21. https://doi.org/10.1016/j.ijnurstu.2013.10.005
21. Griffin-Heslin VL. An analysis of the concept dignity. Accid Emerg Nurs. 2005;13(4):251–7. https://doi.org/10.1016/j.aaen.2005.09.003
22. Walsh K, Kowanko I. Nurses' and patients' perceptions of dignity. Int J Nurs Pract. 2002;8(3):143–51. https://doi.org/10.1046/j.1440-172X.2002.00355.x
23. Floyd FJ, Widaman KF. Factor analysis in the development and refinement of clinical assessment instruments. Psychol Assess. 1995;7(3):286–99. https://doi.org/10.1037/1040-3590.7.3.286
24. Jöreskog KG, Sörbom D. LISREL-8 user's reference guide. Lincolnwood, IL: Scientific International; 1996. p. 30.

25. Iguchi H, Ota K. Development of an instrument to measure patient perception of information privacy: patients' information privacy scale (PIPS) and convenient privacy checklist (CPC). Jpn J Med Inf. 2006;26(6):367–75. https://doi.org/10.14948/jami.26.367
26. Mokkink LB, Terwee CB, Knol DL, Stratford PW, Alonso J, Patrick DL, et al. The COSMIN checklist for evaluating the methodological quality of studies on measurement properties: a clarification of its content. BMC Med Res Methodol. 2010;10:22. https://doi.org/10.1186/1471-2288-10-22
27. Hasegawa N, Ota K. Development and evaluation of a Japanese patient dignity scale. J Jpn Nurs Ethics. 2017;9(1):12–21. Japanese.
28. Lin YP, Tsai YF, Chen HF. Dignity in care in the hospital setting from patients' perspectives in Taiwan: a descriptive qualitative study. J Clin Nurs. 2011;20(5/6):794–801. https://doi.org/10.1111/j.1365-2702.2010.03499.x
29. Tuvesson H, Lützén K. Demographic factors associated with moral sensitivity among nursing students. Nurs Ethics. 2017;24(7):847–55. https://doi.org/10.1177/0969733015626602
30. Johnson SH. Relieving unnecessary, treatable pain for the sake of human dignity. J Law Med Ethics. 2001;28(4_suppl):11–2. https://doi.org/10.1111/j.1748-720X.2001.tb00036.x