Artículo / Investigación
Article / Research

Quality of Nursing Care Questionnaire (CUCACE): Validity and reliability in Colombia

Cuestionario de calidad del cuidado de enfermería (CUCACE): Validez y fiabilidad en Colombia

Fred G. Manrique-Abril, María L. Maciá-Soler, Giomar M. Herrera-Amaya, Johana E. Cifuentes-Rodríguez y Victor M. González-Chorda

Received 25th March 2021 / Send for modification 10th June 2021 / Accepted 22th June 2021

ABSTRACT

Objetive To determine the validity and reliability of the CUCACE (Quality of Nursing Care Questionnaire) in Colombia. Every day there is a growing interest in measuring the quality of care received from nursing personnel as a tangible element of care; however, not having reliable and valid instruments is an obstacle, especially in Colombia.
Method A psychometric and evaluative instrumental study was conducted. Data of interest from CUCACE filled out in Spanish were extracted together with demographic information of the participants.
Results Confirmed the validity of the content and construct validity of the scales of care, attention to nursing care and the perception of care in a Colombian hospital. Cronbach's alpha was higher than 0.7, and its reliability is accepted in the context.
Conclusion The CUCACE is adequate to measure the satisfaction and experience of patients with nursing care in the Colombian context. The questionnaire with its two scales is useful, clear, precise, valid and reliable to evaluate the quality of nursing care.

Key Words: Patient satisfaction; nursing care; quality of health care (*source: MeSH, NLM*).

ABSTRACT

Objetivo Determinar la validez y confiabilidad del CUCACE (Cuestionario de Calidad de la Atención de Enfermería) en Colombia. Cada día hay un interés creciente en medir la calidad de la atención recibida por parte del personal de enfermería como elemento tangible de la atención; sin embargo, un obstáculo para medir la satisfacción del paciente es la no tenencia de instrumentos confiables y válidos, especialmente en Colombia.
Método Se realizó un estudio instrumental psicométrico y evaluativo. Se extrajeron datos de interés del CUCACE cumplimentados en español, junto con la información demográfica de los participantes.
Resultados Se confirmó la validez del contenido y construcción de las escalas de atención, atención al cuidado de enfermería y percepción del cuidado en un hospital colombiano. El alfa de Cronbach fue superior a 0,7; por lo tanto su fiabilidad se acepta en el contexto.
Conclusión El CUCACE es adecuado para medir la satisfacción y experiencia de los pacientes con los cuidados de enfermería en el contexto colombiano. El cuestionario con sus dos escalas es útil, claro, preciso, válido y confiable para evaluar la calidad de la atención de enfermería.

Palabras Clave: Satisfacción del paciente; atención de enfermería; calidad de la atención de salud (*fuente: DeCS, BIREME*).

FM: RN (Nurse). AB (Law) M. Sc. Public Health Ph. D. Public Healh, Associated Professor, Nursing Departmentm, Universidad Nacional de Colombia, Bogotá. Colombia. Universidad Pedagógica y Tecnológica de Colombia UPTC. Tunja, Colombia.
fgmanriquea@unal.edu.co
MM: RN (Nurse). Ph. D. Nursing Sciences. Assistant Professor. Universidad de Alicante. Alicante. Spain.
loreto.macia@ua.es
GH: RN (Nurse). Ph. D. Nursing Sciences (c). Assistant Professor. Researcher, Universidad Pedagógica y Tecnológica de Colombia (UPTC). Tunja, Colombia.
giomar.herrera@uptc.edu.co
JC: RN (Nurse). Ph. D.(c). Nursing Sciences. Becaria, Asistente, Docente. Research Group Management in Health and Nursing. Nursing Department. Universidad Nacional de Colombia. Bogotá, Colombia.
jecifientesr@unal.edu.co
VG: RN (Nurse). Ph. D. Nursing Sciences Assistant Professor. Nursing Department. Univesitat Jaume I. Castellón. Spain.
vchorda@uji.es

DOI: https://doi.org/10.15446/rsap.V23n4.94715

It is said that quality on health care is a difficult concept to define and measure (1). Although, as an object of study it has been developed and studied in the last decades, interesting researchers to measure it and use it in health policy evaluation scenarios.(2). The definition of quality applied to nursing care is multidimensional and complex (3). Research approaches the concept but without delving into it, limit its meaning to value judgments of the authors. Quality is then conceived as a degree of conformity with current standards (4), which ends in multiple ways of seeing it from each of the forms presented by the measurement instruments used to evaluate it. A professional and comprehensive nursing approach to its study defines quality as part of the characteristics of the environment in which nursing care is provided, and the provision of the service; These include the types of processes and activities that nursing staff perform in providing care to patients (5).

The interest in quality measurement is supported by technological and scientific advances to achieve better measurements including robust data analysis software, standardized methods and techniques (6).

The perception of the satisfaction of individuals and their value judgment on quality has been taken to the hospital context, allowing the health care provided by nurses to be evaluated, with the aim of improving both the service provided and the professional nursing practice (7-9). The Latin root “sat is”, which means "sufficient", gives us the etymology of "satisfaction", deriving the adequate fulfilment that satisfies expectations, needs or desires and, making it a priority to give what is required, leaves no room for complaint (6). A patient satisfied with the care offered improves the effectiveness of the care, allows better results with the medication, the advice to maintain their health and reduces the probability of readmission (10). Measuring patient satisfaction with nursing care is important to assess and meet patient needs and to determine appropriate nursing interventions. The nursing staffs, being the largest payroll in hospital care, give a higher percentage to the perception of the global quality of care.

Evaluating the satisfaction of patients with the care received and with health care allows correcting interventions that will not only directly improve medical care and the patient's condition, but, at the same time, increase patient satisfaction, which will lead to a positive response to treatment. This becomes important to reward and boost staff morale. Patient experience is being widely considered in the evaluation of healthcare service quality (11). Thus this study aims to test the validity, reliability of the CUCASE (Quality of care questionnaire of nursing), in Colombia.

METHODS

Participants for the facial and content validity

The CUCACE was adapted from Castilian (Spain) to Spanish (Colombia), translated and adapted locally. The content validity was determined by a panel of experts. Each expert was given a spreadsheet, they reviewed and rated the relevance of the 26 Experiences Nursing Care Scale (ENCS) items and 19 Satisfaction with Nursing Care Scale (SNCS) items, using a four-point rating scale ranging from 1 (not important) to 4 (very important). The group of experts was made up of 14 nursing professionals, specialized in health administration, community nursing, public health, and auditing. The Content Validity Index (CVI) of each component was calculated based on the rating by experts.

Participants for the construct validity and exploratory factor analysis and Reliability

A sample of 261 patients in two public hospitals of Boyacá (Colombia) was recruited on the day of discharge, from June 2018 to May 2019. The criteria for selecting candidates consisted of being patients with more than 48 hours of stay. Patients who denied participating in the study were excluded. According to literature, this sample size met the criteria for an adequate validity and reliability analyses, considering at least 10 subjects per items (12-15).

Instrument

The CUCACE is a Spanish version of the Newcastle Questionnaire Satisfaction with Nursing Scales (NSNS) validated by (16). The instrument has a perceptible language, regardless of the cultural level of each surveyed; its application takes approximately 15 minutes. The NSNS was developed by Thomas *et al.* (17).

It measures the experiences and satisfaction of patients with the nursing care received, depending on their perspective. The questionnaire is self-completed by the patients and they judge the quality of care as good or bad. They evaluate the concepts of availability and the care of nurses, the individual treatment provided, the provision of security and information, the openness of the informality of nurses, the professionalism and knowledge capacity of the nurses, the organization and environment of the room (18).

The CUCACE is made up of three sections: (i) Nursing Care Experiences Scale, (ii) Satisfaction with Nursing Care and (iii) demographic information section (16,17,19).

The ENCS is made up of 26 statements that evaluate aspects of the nursing staff's experience, using a seven-point Likert scale (1=completely disagree; 7=completely agree).

There are 11 questions with negative statements that avoid statement bias. The items are recoded; add all the answers and we get an overall experience score, with a potential range of 0 to 100 (16,20,21).

The SNCS is built with 19 items. Each item is scored on a five-point Likert scale (1=not satisfied at all; 5 completely satisfied). The sum of the transnphromated responses is called general satisfaction score, which is also from 0 to 100 (16,20,21). In the study by Thomas et al., Cronbach's alpha was 0.89 for ENCS and 0.96 for SNCS. The correlations between the individual items and the total ranged from 0.53 to 0.82 (18,19,21).

The final section asks about patient demographic information and details of the hospital stay. This section also includes a one-item scale (seven-point response scale) on the overall satisfaction of patients with their recent hospital stay.

Data collection and ethical considerations

To collect the data, the manual for the use of CUCASE provided by the Spanish research group is followed verbatim, who also gave the permits and advice for its use (16). The study was approved by the hospital administration and ethical extern committee. The Researches Ethics Committee of UPTC Nursing Graduate Association (www.agenf.org) gave approval for the study (Act 01: 2018/01/10).

After explaining the objectives of the study, the safe and confidential handling of personal data; each of the patients was invited to participate in the study, they voluntarily accepted and signed a consent form.

Data analysis

Following Lawshe's model for the quantitative assessment of content validity modified by Tristan (22), each item was evaluated through the measurement of the Content Validity Ratio (RVC), that determines whether an item is essential to evaluate the construct. It is useful, but dispensable or unnecessary. This formula assigns a score between -1 and +1, where a value equal to or greater than 0.51 is sufficient to leave the item in the final version of the instrument. Finally, once those elements that have values higher than the minimums proposed by Lawshe have been defined, the average CVR is calculated to obtain the CVI of the entire test, whose value must be greater than 0.8.

The construct validity was made by exploratory factor analysis, previously an evaluation was made by means of sample adequacy (KMO), proposed by Kaiser, Meyer and Olkin; and Bartlett's test of sphericity. The Varimax method was used for the rotation of the components, which minimizes the number of variables with high loads by one factor, improving the interpretation capacity, accepting those with Pearson's R> 0.4. Factorial analysis that is a multivariate statistical technique that serves to study the dimensions that underlie the relationships between variables (13,15,23).

Reliability was carried out by evaluating the homogeneity of the different items of the scale by calculating the internal consistency for each item individually. For this purpose, Alfa of Cronbach and McDonald's W (13-15,23,24).

RESULTS

Table 1 shows the result of facial validity and the calculation of the Content Validity Index of the ENCS and the SNCS. The items on the scales obtained values greater than 0.80; which indicates that they should be included in the final version of the validated instrument. Similarly, a global CVI of the scale is found with a value of 0.88 for the ENCS and 0.94 for the SNCS, which confirms the essentiality of the instrument.

Table 1. Facial validity by expert and nurse professional

	Clear	Precision	Understanding	CVI
ENSC (nurse)	0.92	0.78	0.94	0.88
SNSC Nurse	0.88	0.92	0.96	0.94

The average of the score given to the properties mentioned above in the items was higher than 0.78 in the two scales (Table 1), considering the items as valid for facial assessment. The nurse professional expert considers that the subscales ENSC and SNSC were satisfactory in clear, precision and understanding.

Construct validity by subscales ENCS and SCNS

The mean age of participants was 54 ± 16 (with a range from 18 to 81) years. Half of the participants (52.5%) were women and most of them were married (81%). The statistics descriptive by two scales *ENCS* and SNCS (Table 2)

In the patient`s sample (n=261). By subscale ENCS, KMO was 0.72. Barlett's test of sphericity was significant ($X2=7211.040$. d.f=325. $p<0.001$).

Table 2. Dispersion measures by two scales (ENCS and SNCS)

	N	Min	Max	Mean	Sd	Variance
Total ENCS	261	55,13	97,44	88,07	9,86	97,19
Total SNCS	261	34,21	84,21	64,18	10,00	100

Seven factors had initial eigenvalue over one. Explaining 79.77% of the variance. The PCA with Varimax rotation resulted too in the seven factors extraction solution. Which is presented in the Table 2. The first factor explaining 17.77% of the total variance, include the items [4. 20. 5. 3. 24. 6] The second factor explaining 14.05% of the total variance, include the items [18. 11. 7. 1] The

three factor explaining 11.15% of the total variance, include the items [14. 23. 9. 8] The fourth factor explaining 10.91% of the total variance, include the items [2. 16. 10] The five explaining 9.16% of the total variance include the items [21. 15. 13] The six factor explaining 8.38% of the total variance, include the items [17. 26. 12] The seven factor explaining 8.34% of the total variance; include the items [25. 19. 22] unique with negative value.

In the patient`s sample (n=261). By subscale SNCS, KMO was 0.808 and Barlett's test of sphericity was significant (X^2=1749.176. d.f=171. p<0.01) (Table 3).

Table 3. Rotate Component Matrix of the ENCS sub-scale

Items	Components						
	1	2	3	4	5	6	7
4	0.96	-0.079	0.111	-0.09	0.036	0.027	-0.001
20	0.925	-0.048	0.263	-0.072	0.039	0.01	0.013
5	0.816	0.264	0.068	0.205	-0.047	-0.072	-0.061
3	0.641	0.451	-0.068	0.509	0.062	-0.124	0.006
24	0.587	0.328	-0.173	0.342	0.384	0.276	0.187
6	0.528	0.435	-0.086	0.422	0.161	0.335	-0.056
18	-0.002	0.902	-0.145	0.248	0.07	0.042	0.026
11	-0.043	0.739	0.048	0.039	0.102	0.329	0.214
7	0.49	0.704	0.176	0.143	0.011	-0.122	0.089
1	0.307	0.542	0.322	0.152	0.258	0.343	0.038
14	0.193	0.072	0.833	0.09	0.12	-0.029	0.068
23	-0.029	-0.095	0.711	-0.075	-0.102	0.271	-0.114
9	0.049	-0.004	0.699	0.035	0.101	-0.081	-0.005
8	0.61	0.124	0.62	0.075	0.086	0.013	0.168
2	0.063	-0.005	0.1	0.927	-0.008	0.231	0.065
16	0.032	0.377	-0.008	0.862	-0.064	-0.08	-0.005
10	0.108	0.437	0.384	0.493	0.112	0.367	0.215
21	-0.078	0.082	0.13	0.043	0.872	0.017	-0.038
15	0.01	0.365	0.162	-0.072	0.828	-0.016	0.007
13	0.444	-0.237	-0.054	-0.021	0.693	0.141	0.013
17	-0.069	0.084	0.011	0.086	0.011	0.912	0.069
26	0.084	0.289	0.498	0.043	0.166	0.509	0.232
12	0.129	0.447	0.101	0.389	0.04	0.487	0.267
25	-0.041	0.082	0.13	-0.091	-0.025	0.05	0.912
19	-0.077	0.246	0.015	0.124	-0.13	0.283	0.784
22	-0.374	0.089	0.246	-0.251	-0.294	0.142	-0.631

Six factors had initial eigenvalue over one explaining 65.11% of the variance. The PCA with Varimax rotation resulted in the six factors extraction solution. Which is presented in the Table 4. The first factor explaining 20.60% of the total variance, include the items [7. 13. 11. 10. 9. 14] The second factor explaining 10.40% of the total variance, include the items [17. 12. 1. 8] The three factor explaining 9.44% of the total variance, include the items [16. 19. 4] The fourth factor explaining 9.29% of the total variance, include the items [3. 15. 5] The five explaining 8.26% of the total variance include the items [18. 6] The six factor explaining 7.11% of the total variance, include the item [2].

Table 4. Rotate Component Matrix of the SNCS sub-scale

Item	Components					
	1	2	3	4	5	6
7	0.82	0.013	0.189	0.122	0.048	-0.029
13	0.763	0.223	0.159	0.069	0.206	0.127
11	0.71	0.044	0.008	0.257	0.247	0.007
10	0.701	0.26	0.052	0.312	-0.175	0.097
9	0.648	0.121	0.394	0.014	0.253	0.005
14	0.482	-0.003	0.435	-0.017	0.458	0.208
17	0.167	0.726	-0.073	0.465	-0.019	-0.072
12	0.012	0.69	0.108	0.019	0.132	0.226
1	0.419	0.6	0.206	-0.136	0.054	-0.175
8	0.398	0.493	-0.199	-0.131	-0.014	0.397
16	0.24	0.005	0.774	0.119	-0.078	-0.017
19	0.156	0.118	0.418	0.254	0.253	-0.118
4	-0.364	0.372	0.39	0.191	0.045	0.378
3	0.066	0.026	0.25	0.745	0.28	-0.062
15	0.481	0.051	-0.035	0.566	0.059	0.181
5	0.377	0.075	0.398	0.557	-0.095	0.267
18	0.219	-0.044	-0.193	0.122	0.791	0.043
6	0.014	0.259	0.319	0.101	0.589	0.003
2	0.1	0.074	-0.019	0.064	0.05	0.877

Reliability

A Cronbach's alpha was obtained that ranged from 0.844 to 0.867 for each item of the SNCS. The final scale alpha is 0.863 and McDonald's w 0.889.

The internal consistency of the ENCS. Using Cronbach's alpha, it ranged from 0.822 to 0.885 for the ENCS items. The Cronbach of the SNCS global satisfaction scale is 0.847 and the McDonald's w is 0.872.

DISCUSSION

Although the version of the CUCACE has only been partially validated in Spain and used in Colombia, due to its origin in the NSNS, we compare its psychometric properties with the validated versions in other countries.

The results of the present study reaffirm the internal consistency measured by the Cronbach alpha in the CUCACE of 0.851 and 0.863, for ENCS and 0.847 for SNCS, being very similar to those reported in Spain (16). and somewhat lower than the original English instrument (19).

The NSNS has been validated for different populations; it is common to find only the alphas internal consistency report between 0.75 to 0.95 for ENCS and from 0.93 to 0.98 for SNCS (25–28); and it has also been transla-

ted into different languages, using it in various countries such as Jordan (25), Italy (27,28), Canada (26), England (29), Poland (30,31), Ethiopia (32) or Brazil (33,34).

The NSNS has also been translated and validated into Turkish (Istanbul) in the context of medical and surgical patients (18) in a sample of 200 patients obtain an alpha of 0.96 for the total scale and for the items from 0.43 to 0.89. (35) in the same context, with a sample of 229 medical and surgical patients, reported an internal consistency of 0.95 for the full scale.

Torres used the CUACASE (36), the version translated and validated into Spain (16), in a sample of 180 patients hospitalized in surgical and maternity medical services in Colombia and obtained a Cronbach's alpha of 0.83 for the ENCS and a Cronbach alpha of 0.95 for the SNCS. Changing context, Torres and Buitrago (2011) used it in patients receiving oncological treatments in Colombia, with 75 patients showed a reliability of 0.91 for the experience dimension and 0.98 for the satisfaction dimension, with an alpha of Cronbach of 0.96 for the whole instrument (37).

The CUCASE in Spain version (castellan language) Cronbach's alpha was 0,8561 in the scale ENCS and 0,9744 by SNCS 0,9754 and (Gallego language) Cronbach's alpha was 0,9280 in the scale ENCS and 0,9744 by SNCS 0,9785 (16).

In original scale Cronbach's alpha was 0, 91 for the experience scale and 0-96 for the satisfaction scale (6,19) and correlations between single items and the total ranged from 0-31 to 0-69 for the experience scale (24 out of 26 exceeded 0-4) and from 0 53 to 0-82 for the satisfaction scale.

The CUCASE becomes the first reliable version in Spanish in Latin America that is added to the translations of the NSNS in the world Piredda *et al.* (2015), studied the psychometric properties of the Italian version of the NSNS, since to date no study of construct validity had explored the factorial analysis after its development (28). He used a sample of 659 medical and surgical patients, finding differences based on the factors found by the original authors of the scale (19). The confirmatory factor analysis collected a factor for the satisfaction scale and 4 factors for the scale of the experiences: a) the lack of care or the time dedicated to the patients to satisfy their needs, b) the emotional support, related to the care that provides them with the comfort and attention they need, c) the interpersonal relationship and information, and d) the environment of trust. These results reflect the multidimensional nature of the nursing care experience.

However, in the present study, the CUCACE in the exploratory analysis by main components of the ENCS showed 7 factors and the items do not correspond to those found by Piredda (28). Neither does it happen to the SNCS in which it throws 6 factors very different from that of a factor defined in the Italian context.

The CVI in this study was 96% low to of the Turkish (18) version of the SNCS was 98%, indicating an acceptable level of content validity. In Turkish study, correlations between single items range from 0,43 to 0,89 and the internal consistency of the SNCS assessed by Cronbach's alpha is 0,96, hi in relation with our study with CVI 0,863. The means of the SNCS for the Colombian sample were consistent with previously reported English (29) and Turkish (18) and Jordan (9,25) samples. In the previous studies, items correlations ranged from .53 to .82, Cronbach's alpha was .96 and .93.

The variance explained, the number of factors and the distribution of the items in the construct analysis of the Colombian version of the SNCS substantially coincide with the Italian version (27).

Factor analysis of the scale Experiences of nursing scale (ENCS) 4 factors were extracted, that explained about 42% in Italian version (28).

In Turkey, they measured satisfaction with nursing care (18) but the measurements were not valid or reliable from the patient's perspective. Although satisfaction with care had been evaluated in Colombia, the instrument had not been validated either.

Planning care, organizing teams, providing the best nursing care in hospital care services is a priority in the light of evaluating the satisfaction of patients with care. The SNCS version (19-item scale) is adequate to measure patient satisfaction with nursing care. Our study demonstrated its usefulness in clinical settings by measuring the satisfaction of Colombian medical and surgical patients with nursing care. The results emphasize in each of the concepts that comprise the construct such as the importance of providing patients with information about their medical condition. Support family members of patients and focus more closely on the needs of patients. Both the experience and the CUCASE (Nursing Care Quality Questionnaire) should be the subject of further research in larger studies ♣

Acknowledgements: This project was possible thank to patients, nurses and the hospital management. Thank for your help, suggestions and data's

Contributions: Study design: FGMA. GHA. JEC, ML, VG Analysis: FGMA, GHA, JEC and manuscript preparation: FGMA JEC, MLM, VG and GHA.

Funding information: For the development of this research there were no funding or economic contributions from agencies, public or private, commercial or non-profit.

Conflict of interest: None.

Ethical Approval Information: The scale had the permission of the owners for the validation process in Colombian culture. The Researches Ethics Committee of UPTC Nursing Graduate Association (www.agenf.org) gave approval for the study (Act 01: 2018/01/10). The confidentiality of the data of each questionnaire was guaranteed; the patients and experts signed consent and approved their voluntary participation in the study.

REFERENCES

1. Al-Abri R, Al-Balushi A. Patient Satisfaction Survey as a Tool Towards Quality Improvement. Oman Med J. 2014; 29 (1): 3-7. DOI:10.5001/omj.2014.02.
2. OECD. Patient-Reported Indicators Survey (PaRIS). Paris: Organisation for Economic Co-operation and Development; 2019.
3. Koy V, Yunibhand J, Angsuroch Y, Fisher ML. Relationship between nursing care quality, nurse staffing, nurse job satisfaction, nurse practice environment, and burnout: literature review. Int J Res Med Sci. 2017; 3(8):1825-31. DOI:10.18203/2320-6012.ijrms20150288.
4. Chance KS. The Quest for Quality: An exploration of attempts to define and measure quality nursing care. J Nurs Scholarsh. 1997; 29(4):326-9. DOI:10.1111/j.1547-5069.1980.tb01462.x.
5. Gunther M, Alligood MR. A discipline-specific determination of high quality nursing care. J Adv Nurs. 2002; 38(4):353-9. DOI:10.1046/j.1365-2648.2002.02201.x.
6. Crow H, Gage H, Hampson S, Hart J, Kimber A, Storey L, et al. Measurement of satisfaction with health care: Implications for practice from a systematic review of the literature. Health Technol Assess (Rockv). 2002; 6(32):1-244. DOI:10.3310/hta6320.
7. Albashayreh A, Al-Rawajfah OM, Al-Awaisi H, Karkada S, Al Sabei SD. Psychometric Properties of an Arabic Version of the Patient Satisfaction With Nursing Care Quality Questionnaire. J Nurs Res. 2019; 27(1):1-9. DOI:10.1097/jnr.0000000000000273.
8. Alasad J, Tabar NA, AbuRuz ME. Patient satisfaction with nursing care: measuring outcomes in an international setting. J Nurs Adm. 2015; 45(11):563-8. DOI:10.1097/NNA.0000000000000264.
9. Alasad JA, Ahmad MM. Patients' satisfaction with nursing care in Jordan. International Journal of Health care quality assurance. 2003; 16(6):279-285. DOI:10.1108/09526860310495660.
10. Castro EM, Van Regenmortel T, Vanhaecht K, Sermeus W, Van Hecke A. Patient empowerment, patient participation and patient-centeredness in hospital care: A concept analysis based on a literature review. Patient Educ Couns. 2016; 99(12):1923-39.
11. Min R, Li L, Zi C, Fang P, Wang B, Tang C. Evaluation of patient experience in county-level public hospitals in China: a multicentred, cross-sectional study. BMJ Open. 2019; 9(11):e034225. DOI:10.1136/bmjopen-2019-034225.
12. Manrique Abril FG, Ramirez Vanegas JC. Validez y confiabilidad de la Escala de Autonomía del Índice de Características del trabajo de Enfermería (SNJCI) en Bogotá-Colombia. Enfermería Glob. 2014; 13(35):184-96. https://bityl.co/8kM4.
13. Sánchez R, Echeverry J. Validación de escalas de medición en salud. Rev Salud Pública [Internet]. 2004 [cited 2019 Feb 4]; 6(3):302-18. https://bityl.co/8kM9.
14. Streiner DL. Starting at the beginning: an introduction to coefficient alpha and internal consistency. J Pers Assess. 2003; 80(1):99-103. DOI:10.1207/S15327752JPA8001_18.
15. Vogelzang JL. Health Measurement Scales: A Practical Guide to Their Development and Use. J Nutr Educ Behav. 2015; 47(5):484.e1. DOI:10.1016/j.jneb.2015.03.007.
16. Alonso R, Blanco-Ramos MÁ, Gayoso P. Validación de un cuestionario de calidad de cuidados de enfermería. Rev Calid Asist. 2005; 20(5):246-50.
17. Thomas LH, Bond S, McColl E, Milne E. The Newcastle Satisfaction with Nursing Scales (NSNS): user's manual. University of Newcastle upon Tyne, Centre for Health Services Research; 1996.
18. Akin S, Erdogan S. The Turkish version of the Newcastle Satisfaction with Nursing Care Scale used on medical and surgical patients. J Clin Nurs. 2007; 16(4):646-53. DOI:10.1111/j.1365-2702.2006.01583.x.
19. Thomas LH, McColl E, Priest J, Bond S, Boys RJ. Newcastle satisfaction with nursing scales: an instrument for quality assessments of nursing care. Qual Saf Heal Care. 1996; 5(2):67-72. DOI: 10.1136/qshc.5.2.67.
20. Kol E, Arıkan F, İlaslan E, Akıncı MA, Koçak MC. A quality indicator for the evaluation of nursing care: determination of patient satisfaction and related factors at a university hospital in the Mediterranean Region in Turkey. Collegian [Internet]. 2018; 25(1):51-6. DOI:10.1016/j.colegn.2017.03.006.
21. Lenis-Victoria CA, Manrique-Abril FG. Qualidade do cuidado de enfermagem percebida por pacientes hospitalizados. Aquichan. 2015; 15(3):413-25. DOI:10.5294/aqui.2015.15.3.9.
22. Tristán-López A. Modificación al modelo de Lawshe para el dictamen cuantitativo de la validez de contenido de un instrumento objetivo. Av en medición [Internet]. 2008; 6:37-48. https://bityl.co/8l27.
23. Manrique-Abril F, Herrera G MY. Validez y fiabilidad en Colombia del Font Roja. Hacia Prom Salud. 2019; 24(2):46-59. DOI:10.17151/hpsal.2019.24.2.5.
24. Luján-Tangarife JA, Cardona-Arias JA. Construcción y validación de escalas de medición en salud: revisión de propiedades psicométricas. Arch Med [Internet]. 2015; 11(3):1-10. https://bityl.co/8l29.
25. Alhusban MA, Abualrub RF. Patient satisfaction with nursing care in Jordan. J Nurs Manag. 2009; 17(6):749-58. DOI:10.1111/j.1365-2834.2008.00927.x.
26. Peterson WE, Charles C, DiCenso A, Sword W. The Newcastle Satisfaction with Nursing Scales: a valid measure of maternal satisfaction with inpatient postpartum nursing care. Journal of advanced nursing. 2005. DOI:10.1111/j.1365-2648.2005.03634.x.
27. Piredda M, Cossu L, Amato S, Alvaro R, Tartaglini D, Spiga F, et al. A measure of patient satisfaction with nursing care: The Italian version of "Newcastle Satisfaction with Nursing Scales". Int Nurs Perspect. 2007; 7:25-31.
28. Piredda M, Vellone E, Piras G, Fida R, Latour JM, Matarese M, et al. Psychometric evaluation of the newcastle satisfaction with nursing scales. J Nurs Care Qual [Internet]. 2015; 30(1):84-92. https://bityl.co/8l2E.
29. Walsh M, Walsh A. Measuring patient satisfaction with nursing care: experience of using the Newcastle Satisfaction with Nursing Scale. J Adv Nurs. 1999; 29(2):307-15. DOI:10.1046/j.1365-2648.1999.00890.x.
30. Dyk D, Gutysz-Wojnicka A, Cudak EK, Talarska D. Cultural adaptation and psychometric evaluation of the Polish version of the Newcastle Satisfaction with Nursing Scale. Arch Med Sci AMS. 2014; 10(4):782. DOI:10.5114/aoms.2014.44870.
31. Gutysz-Wojnicka A, Dyk D, Cudak E, Ozga D. Measuring patient satisfaction with the Polish version of the Newcastle Satisfaction with Nursing Scale. Scand J Caring Sci. 2013; 27(2):311-8. DOI:10.1111/j.1471-6712.2012.01034.x.
32. Molla M, Berhe A, Shumye A, Adama Y. Assessment of adult patients satisfaction and associated factors with nursing care in Black Lion Hospital, Ethiopia; institutional based cross sectional study, 2012. Int J Nurs Midwifery. 2014; 6(4):49-57. DOI:10.5897/IJNM2014.0133.
33. Dorigan GH, de Brito Guirardello E, da Silva D, McColl E. Validation of the Brazilian version of the Newcastle Satisfaction with Nursing Scales: a partial least squares path modeling approach. J Nurs Meas. 2014; 22(3):451-60.
34. Ahmed T, Assefa N, Demisie A, Kenay A. Levels of adult patients' satisfaction with nursing care in selected public hospitals in Ethiopia. Int J Health Sci (Qassim). 2014; 8(4):371.
35. Findik UY, Unsar S, Sut N. Patient satisfaction with nursing care and its relationship with patient characteristics. Nurs Health Sci. 2010; 12(2):162-9. DOI:10.1111/j.1442-2018.2009.00511.x.
36. Torres Contreras CC. Percepción de la calidad del cuidado de enfermería en pacientes hospitalizados. Av en enfermería [Internet]. 2010; 28(2):98-110. https://bityl.co/8l2N.