



CROATIAN ADAPTATION AND VALIDATION OF THE PERCEIVED IMPLICIT RATIONING OF NURSING CARE (PIRNCA) QUESTIONNAIRE: A CROSS-SECTIONAL STUDY

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SUMMARY – The aim was to perform adaptation and validation of the Perceived Implicit Rationing of Nursing Care. Implicit delaying of nursing care is an intermediate step, linking nurses with the quality of outcomes for patients and nurses, and it is the result of prioritization of health care measures within the assigned group of patients cared for by nurses. The Perceived Implicit Rationing of Nursing Care instrument is a tool used to assess the rationing of care in nursing practice. Study participants were nurses working at hospital wards in 4 university hospitals in the Republic of Croatia. The questionnaire was filled-in by 438 nurses. Data were collected between April and November 2018. After principal axis factoring, a single factor solution based on the correlation matrix was adopted. The measured construct is one-dimensional, and the extracted factor explains 47.2% of its variance. Additionally, the reliability of the whole questionnaire was determined by using the internal consistency coefficient Cronbach alpha on the Perceived Implicit Rationing of Nursing Care with 31 of 0.96 particles, which is extremely high internal consistency reliability. In conclusion, the study found a high level of reliability and validity of the translated Perceived Implicit Rationing of Nursing Care questionnaire, fully comparable to that of the original. The questionnaire can be used to assess the phenomenon of implicit care rationing in Croatian hospitals.

Key words: *PIRNCA; Validation; Missed care; Patient safety; Nursing*

Introduction

In recent decades, cost reduction strategies, as well as an increase in the scope of health care services deliv-

ered have been a trend in health systems around the world^{1,2}. Despite the benefits of such a trend in terms of increasing access to health care for all, there is a significant negative impact on the nurses' work environment. There is growing evidence linking a reduced number of employed nurses to patient mortality, complications related to inappropriate care, reduced job satisfaction, and burnout at the workplace³. The mechanism through which a nurse's work environment con-

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tributes to adverse outcomes for both patients and nurses has not been adequately researched. Implicit delaying of nursing care is an intermediate step, linking nurses with the quality of outcomes for patients and nurses, and it is the result of prioritization of health care measures within the assigned group of patients cared for by nurses. These measures are related to assessment of the need for health care, identification of problems, planning of health care, implementation of interventions and evaluation of what has been implemented, as well as the condition of patients in accordance with the above. Thus, nursing consists of providing all kinds of nursing interventions in the health care system required by the individual, either sick or healthy, to an extent depending on the condition of the individual⁴. Unfortunately, an increasing number of studies in the field of nursing conducted in recent years has shown the presence of the phenomenon of missed or delayed nursing care, especially when it comes to hospitalized patients⁵⁻¹⁰. In the literature, this phenomenon has different names such as uneven care¹¹, unfinished nursing care¹², missed nursing care interventions¹³, implicitly rationed nursing care¹⁴, unfinished task of nursing care¹⁵, or unmet nursing care needs¹⁶. All these designations describe a situation where patients were not provided with enough care and attention needed, which consequently means that the whole nursing care process had negative outcomes for the patient¹⁷. The authors of this text have chosen the designation implicitly rationed nursing care as the term best suited for the Croatian language and the research instrument. The Perceived Implicit Rationing of Nursing Care (PIRNCA) instrument is a tool used to assess the rationing of care in nursing practice.

Schubert *et al.* were the first to address the phenomenon of implicit rationing of care in a study conducted in Switzerland in 2007, aiming at mapping the level of care in Swiss acute care facilities¹⁸. They also explained the concept of care rationing and created a new tool (Basel Extent Rationing of Nursing Care, BERNCA) for measurement of this phenomenon in practice¹⁸. In 2014, Jones adopted this instrument in the USA and presented the new PIRNCA questionnaire validated by surgical nurses¹⁹. Nursing care rationing occurs when resources are insufficient (usually due to the lack of staff or lack of necessary materials), or when not all conditions for the provision of safe nursing care to patients are available^{9,13,15}. The alloca-

tion of resources relates to general resources that have implications for work and the material resources needed to provide care to patients. As far as the resource allocation is concerned, there are two types of care rationing, explicit (external) or implicit (tacit). Explicit rationing is usually connected with the economy of health care systems and deals with cost reduction. It is measured as the number of omitted or delayed interventions which should have been performed. Jones describes delaying of care in the context of decision-making processes at certain levels in the health care system¹⁹⁻²¹. Numerous factors related to the employer (hospital characteristics: financial limits, number of patient beds), employees (skills, expertise, level of education) and patients (type of disease, severity, comorbidities) contribute to delay or incompleteness of health care interventions^{5,6,8,13,22}. As the first aspect, Jones identified macro level decisions that are political in nature and fall within the competence of the government and health care authorities in a particular country¹⁹. Decisions made at the middle level are the responsibility of health care institutions as part of the organizational aspects of the system, including allocation of financial resources. Lastly, decisions that are made at the micro level usually involve actual health care professionals who are responsible for their provision. Decisions made at the macro and middle levels are administrative and political in nature and are therefore considered explicit. In contrast, decisions made at the micro level are directly related to patients and depend on the experiences and considerations of the specific situation assessed by individually responsible health care professionals and are therefore considered a form of implicit rationing of care^{19,20}. As a result of such decisions, nurses are forced to give priority to tasks that may result in adverse patient outcomes or reduced quality of care provided¹⁴. In their study, Kalankova *et al.* mention areas of care that nurses are rationing most often, such as emotional support, patient or family training, keeping nursing records, communication with the patient, and basic activities such as turning or feeding patients¹⁷.

Worryingly, studies to date have shown a detrimental impact of rationed nursing care on treatment and health care outcomes, including higher mortality rates, increase in falls, pressure ulcers during hospitalization, and more reported nosocomial infections, as well as lower patient and nurse satisfaction^{10,14,23}. As-

Table 1. General data on study participants

		n	(%)
Age (yrs):	≤30	189	(43.2)
	31-40	101	(23.1)
	41-50	74	(16.9)
	51-60	67	(15.3)
	61-65	7	(1.6)
	Total	438	(100.0)
Gender:	Female	368	(84.0)
	Male	70	(16.0)
	Total	438	(100.0)
Education:	Secondary vocational education	144	(32.9)
	Registered nurse	93	(21.2)
	Bachelor's degree in nursing	174	(39.7)
	Master's degree in nursing	27	(6.2)
	Total	438	(100.0)

assessment of nursing care also affects staff satisfaction. Kalisch *et al.* found that nurses who reported more rationed health care were less satisfied with their job²⁴. Also, Bekker *et al.* report that the highest degree of job dissatisfaction was recorded in jobs with delayed nursing tasks²⁶. Zeleniková *et al.* showed that rationed care was linked to the overall level of job satisfaction and the intention of nurses to leave their actual job²⁷. In nursing, several instruments have been developed to measure rationed nursing care in different countries and contexts but none of them was available in Croatian and therefore could not be used to reliably assess this problem in Croatian hospitals^{14,19,27}. The purpose of this study was therefore development of the Croatian version of the PIRNCA questionnaire.

Subjects and Methods

Participants

The participants were nurses working on hospital wards at four university hospitals in the Republic of Croatia. Nurses were asked to participate voluntarily. The questionnaire was filled-in by 438 nurses who signed informed consent forms. The study was approved by Ethics Committees of all four institutions. Research group followed all ethical principles of Hel-

Table 2. Participant employment characteristics

		n	(%)
Department:	Surgery	257	(58.7)
	Intensive care unit	133	(30.4)
	Others	48	(11.0)
	Total	438	(100.0)
Working hours:	Day shift (8 or 12 hours)	147	(33.6)
	rotations: day, afternoon, night shift	291	(66.4)
	Total	438	(100.0)
Nursing experience (yrs):	≤0	198	(45.2)
	11-20	87	(19.9)
	21-30	85	(19.4)
	31-40	59	(13.5)
	41-45	9	(2.1)
	Total	438	(100.0)
Experience at current post (yrs):	≤10	264	(60.3)
	11-20	59	(13.5)
	21-30	73	(16.7)
	31-40	37	(8.4)
	41-45	5	(1.1)
	Total	438	(100.0)
Overtime:	None	83	(18.9)
	1-12 hours	194	(44.3)
	>12 hours	161	(36.8)
	Total	438	(100.0)
Shift missed:	None	327	(74.7)
	1 day or single shift	34	(7.8)
	2-3 days or shifts	18	(4.1)
	4-6 days or shifts	21	(4.8)
	Over 6 days or shifts	38	(8.7)
	Total	438	(100.0)
Intent to abandon post:	Within 6 months	23	(5.3)
	Within a year	78	(17.8)
	I don't plan to leave my current post	337	(76.9)
	Total	438	(100.0)
Perception of staff adequacy:	100% of the time	71	(16.2)
	75% of the time	146	(33.3)
	50% of the time	146	(33.3)
	25% of the time	54	(12.3)
	0% of the time	21	(4.8)
	Total	438	(100.0)
How many patients did you care for in your last shift:	≤10	208	(47.5)
	11-20	81	(18.5)
	21-30	101	(23.1)
	31-40	32	(7.3)
	>41	16	(3.7)
	Total	438	(100.0)

Table 3. Factor structure and factor loadings for Perceived Implicit Rationing of Nursing Care (PIRNCA) items in Croatian sample

Item	Factor loading
You were unable to monitor the patient's physical safety as prescribed by the doctor/according to standards, or as you considered appropriate.	0.782
You were unable to monitor the patient's reactions and behavior as prescribed by the doctor/according to standards, or as you considered appropriate (e.g., compliance, eating habits, social interaction, mood).	0.768
You were unable to document initiation or revision of the patient's care plan.	0.767
You could not move or change the position of a patient with impaired mobility nor you could delegate the task.	0.740
You were unable to monitor the patient's physiological status as prescribed by the doctor/according to standards or as you considered appropriate (vital signs, laboratory values).	0.738
You could not assist a patient in urinating or defecating in a timely manner (e.g., bed pan, wheelchair with bed pan, trip to the restroom) nor you could delegate the task.	0.736
You were unable to perform further follow up on changes in the patient's status, take note of unanswered requests for intervention (including assessment and referrals) or unclear orders.	0.734
You were unable to help a patient achieve physical comfort (e.g., timely application of pain relief medication, adjusting room temperature, back rub) nor you could delegate the task.	0.724
You were unable to educate the patient or his/her family when you deemed it necessary.	0.721
You were unable to document all the assessment and monitoring activities.	0.720
You were unable to adequately prepare the patient for therapy, tests, or procedures.	0.720
You were unable to adequately evaluate the plan of care (applying critical thinking) in order to establish appropriateness and/or effectiveness of interventions and to enter the necessary changes as noted.	0.711
You were unable to provide adequate assistance during food or fluid intake to patients who are incapable of eating or drinking independently, nor you could delegate the task.	0.708
You were unable to change the entry point for intravenous therapy, tubing and/or dressings in the time frame as prescribed by the doctor/according to standards or as you considered appropriate.	0.702
You were unable to adequately supervise or perform follow up on delegated activities.	0.701
You were unable to adequately review the patient's multidisciplinary documentation in order to inform yourself on the patient.	0.697

sinski Declaration. Data were collected between April 2018 and November 2018. The inclusion criteria were as follows: nurses with at least one year of service, and nurses working in direct patient care. Exclusion criteria were as follows: nurses on leading positions, and nurses working for less than a year.

Instrument

The PIRNCA questionnaire consists of 31 statements related to nursing procedures (assessment, problem identification, care planning, implementation of procedures, and evaluation of care) necessary to achieve the desired outcomes in nursing. The answers are based on the respondents' last 7 shifts. Answers are marked on

the following scale: „never“, „rarely“, „sometimes“ and „often“, with the option of answering „not needed“ if a certain procedure was not needed during their shift.

Translation of the questionnaire

The PIRNCA questionnaire was translated into Croatian. Then it was back translated into English by a translator who is a native English speaker. The translations were then compared to the original questionnaire. The translations were assessed by two experts in the field of nursing care. Three adjustments were made and approved by the author of the questionnaire: the words “error” and “mistake” were translated into Croatian as “greška”, and the term “non-surgical” was trans-

Table 3. Continued

Item	Factor loading
You could not assist in patient mobility nor you could delegate the task.	0.696
You were unable to follow recommended guidelines for safe patient relocation (e.g., using equipment to lift and/or assistance from other staff).	0.695
You were unable to document in a detailed manner all the nursing care you provided.	0.676
You were unable to provide the level of emotional or psychological support to the patient (or their family) that you deemed necessary.	0.673
You were unable to adhere to guidelines for infection control (e.g., hand hygiene, aseptic technique, isolation).	0.672
You were unable to apply enteral or parenteral nutrition as prescribed or according to safe practice.	0.671
You were unable to have an important conversation regarding the patient with another member of the patient's interdisciplinary team or this conversation was postponed.	0.669
You were unable to perform wound care (including wound dressing) as prescribed by the doctor/according to standards or as you considered appropriate.	0.654
You were unable to apply medication (including) intravenous therapy as prescribed, or according to safe medication practice.	0.644
You were unable to have an important conversation with the patient or member of their family about questions or instructions regarding discharge or the conversation was postponed.	0.640
The patient or a family member had to wait over 5 minutes after initiating a request (e.g., over the nurse button/call light).	0.599
You could not perform routine skin care for your patient nor you could delegate the task.	0.593
You were unable to perform routine patient hygiene (e.g., washing, oral health care, dental care) nor you could delegate the task.	0.585
You did not have enough time to change sheets soiled either with blood or bodily fluids nor you could delegate the task.	0.580
You were unable to have an important conversation regarding the patient's care with an external agency or this conversation was postponed.	0.476
Extraction method: Principal Axis Factoring	

KMO measure of sampling adequacy: 0.953; Bartlett's test of sphericity: $\chi^2=10595.266$; $df=465$; $p<0.001$

lated as "interni" (ward). The term "care" was translated as "skrb".

Data analysis

The analysis was performed using IBM SPSS 25.0 (IBM Statistics for Windows, Version 25.0., IBM Corp., Armonk, NY, USA). The exploratory factor analysis was conducted using the principal axis factoring method to determine the factor structure of the questionnaire. The reliability of the questionnaire was calculated on the basis of the internal consistency coefficient, Cronbach alpha, and the competitive validity of the PIRNCA questionnaire was verified by Pearson's two-measure correlation coefficient, assessment

of the level of quality of nursing care, and overall job satisfaction.

Results

The study was conducted on 438 nurses at four university hospitals in the Republic of Croatia. Table 1 shows participant characteristics, and Table 2 shows characteristics of the participant workplace.

Principal axis factoring was used to check the factoring structure of the instrument. The Bartlett sphericity test ($\chi^2=10595.266$, $df=465$, $p<0.001$) and Kaiser-Meyer-Olkin indicator (KMO measure of sampling adequacy: 0.953) are measures that show that

Table 4. Item-total correlations and change in Cronbach alpha if item was deleted

	Corrected item-total correlation	Cronbach alpha if item deleted
You were not able to perform routine patient hygiene (e.g., washing, oral health care, dental care) nor you could delegate the task.	0.576	0.963
You could not perform routine skin care for your patient nor you could delegate the task.	0.587	0.963
You did not have enough time to change sheets soiled either with blood or bodily fluids nor you could delegate the task.	0.569	0.963
You could not assist in patient mobility nor you could delegate the task.	0.683	0.962
You could not move or change the position of a patient with impaired mobility nor you could delegate the task.	0.726	0.962
You could not assist a patient in urinating or defecating in a timely manner (e.g., bed pan, wheelchair with bed pan, trip to the restroom) nor you could delegate the task.	0.718	0.962
You were not able to provide adequate assistance during food or fluid intake to patients who are incapable of eating or drinking independently nor you could delegate the task.	0.690	0.962
You were not able to help a patient achieve physical comfort (e.g., timely application of pain relief medication, adjusting room temperature, back rub) nor you could delegate the task.	0.704	0.962
You were not able to apply medication (including) intravenous therapy as prescribed, or according to safe medication practice.	0.625	0.963
You were not able to apply enteral or parenteral nutrition as prescribed or according to safe practice.	0.651	0.963
You were not able to perform wound care (including wound dressing) as prescribed by the doctor/according to standards or as considered appropriate.	0.634	0.963
You were not able to change the entry point for intravenous therapy, tubing and/or dressings in the time frame as prescribed by the doctor/according to standards or as considered appropriate.	0.682	0.962
You were not able to follow recommended guidelines for safe patient relocation (e.g., using equipment to lift and/or assistance from other staff).	0.678	0.962
You were not able to adhere to guidelines for infection control (e.g., hand hygiene, aseptic technique, isolation).	0.653	0.962
You were unable to educate the patient or his/her family when you deemed it necessary.	0.707	0.962
You were unable to adequately prepare the patient for therapy, tests, or procedures.	0.703	0.962

data are adequate for factor extraction. Results are shown in Table 3.

In the first step of factor analysis, 5 factors were extracted, of which 4 factors had values of characteristic roots above 1 (eigenvalues >1), but with only 1 factor with a remarkably high eigenvalue of 14.772, and the next factor with an eigenvalue of 2.005, which means that all subsequent factors except for the first

factor explain little additional variance of the latent factor (all four factors together explain 61% of the factor variance). Also, according to the scattering diagram (so-called scree test), it could be concluded that only 1 factor explains most of the variance, so a single factor solution was finally adopted for the final Principal Axis Factoring analysis without rotation, with a forced number of factors.

Table 4. *Continued*

	Corrected item-total correlation	Cronbach alpha if item deleted
You were unable to provide the level of emotional or psychological support to the patient (or their family) that you deemed necessary.	0.660	0.962
You were unable to monitor the patient's physiological status as prescribed by the doctor/according to standards or as you considered appropriate (vital signs, laboratory values).	0.719	0.962
You were unable to monitor the patient's reactions and behavior as prescribed by the doctor/according to standards or as you considered appropriate (e.g., compliance, eating habits, social interaction, mood).	0.749	0.962
You were unable to monitor the patient's physical safety as prescribed by the doctor/according to standards or as you considered appropriate.	0.764	0.962
You were unable to perform further follow up on changes in the patient's status, take note of unanswered requests for intervention (including assessment and referrals), or unclear orders.	0.718	0.962
The patient or a family member had to wait over 5 minutes after initiating a request (e.g., over the nurse button/call light).	0.593	0.963
You were unable to have an important conversation regarding the patient with another member of the patient's interdisciplinary team or this conversation was postponed.	0.667	0.962
You were unable to have an important conversation regarding the patient's care with an external agency or this conversation was postponed.	0.471	0.964
You were unable to have an important conversation with the patient or member of their family about questions or instructions regarding discharge or the conversation was postponed.	0.639	0.963
You were unable to adequately supervise or perform follow up on delegated activities.	0.696	0.962
You were unable to adequately review the patient's multidisciplinary documentation in order to inform yourself on the patient.	0.691	0.962
You were unable to document initiation or revision of the patient's care plan.	0.760	0.962
You were unable to document all the assessment and monitoring activities.	0.709	0.962
You were unable to document in a detailed manner all the nursing care you provided.	0.666	0.962
You were unable to adequately evaluate the plan of care (applying critical thinking) in order to establish appropriateness and/or effectiveness of interventions and to enter the necessary changes as noted.	0.701	0.962

A single factor solution based on the correlation matrix shows that the factor explains 47.2% of the variance. All factor saturations of individual questionnaire particles are above the minimum limit value of 0.30 and are ordered according to their size. Factor saturations range from 0.48 to 0.78, and there are no particles with a saturation less than 0.30. The particle with the lowest saturation is "You could not have an

important conversation with an external agency about the care of a patient or the conversation was delayed" (0.48) and the extracted factor explains the smallest part of the variance of this particle.

Table 4 shows correlations of individual particles with the total result, as well as changes in the Cronbach alpha coefficient in case a particle is omitted from the questionnaire. The correlations of particles with the to-

tal score are relatively high, i.e., 12 of them are above 0.70, and the added 14 are above 0.60. The total correlation range is between 0.47 and 0.76. The same particle linked to the lowest factor saturation has the lowest correlation with the total result, and by removing it from the questionnaire, the reliability of Cronbach alpha would be 0.96, i.e., the value of the currently determined coefficient. Namely, the reliability of the entire questionnaire was determined using the Cronbach alpha internal consistency coefficient on PIRNCA with 31 particles of 0.96, which is an extremely high reliability of the internal consistency type.

The correlation of the total score on the PIRNCA questionnaire with the assessment of the quality level is $r=-0.38$, $p<0.001$, which means that there is a negative relationship between the perceived implicit rationing of nursing care, with a low measure of association. Regarding total job satisfaction, $r=-0.43$, $p<0.001$, lower perceived satisfaction was associated with a higher score on the PIRNCA questionnaire, with a low measure of association.

Discussion

The aim of this study was to validate the Croatian version of the PIRNCA questionnaire. Compared to the original version, the Croatian version of the PIRNCA questionnaire was adjusted in such a way that the terms “error” and “mistake” were both translated as “greška”, and the term “care” was translated as “skrb”. Also, the names of the nurses’ wards were adjusted to match the names in our health care system.

Factor analysis determined that all preconditions for factor extraction were met and based on exploratory analysis using the principal axis factoring, a single factor solution was accepted, which explains 47.2% of the factor variance.

Jones also had 3 extracted factors in the first factorizing solution, but the author decided to opt for a single factor solution that explained 55% of the variance^{19,20}.

In our study, Cronbach alpha was 0.96, showing high reliability. This refers to the reliability of internal consistency, so it can be concluded that the particles that make up the questionnaire are very homogeneous according to their object of measurement. This can be compared with Jones^{19,20}, whose Cronbach alpha was 0.97, as well as with Uchmanowicz and Gotlib²², whose Cronbach alpha was 0.95. It can be concluded

that the reliability of the adapted questionnaire is satisfactorily high and comparable to the original version. However, it should be noted that there is one “problematic” particle, i.e., “You could not have an important conversation with an external agency about the care of a patient or the conversation was delayed”. It is problematic because it has exceptionally low correlation with the questionnaire in total and also has the smallest factor saturation, but the results show that its omission would not achieve greater result homogeneity and the Cronbach alpha coefficient would remain unchanged, so the particle was retained. Thus, the entire questionnaire becomes comparable to the applications of the questionnaire in other countries.

Jones cites the timeliness of response to a request, emotional and psychological support and talking to the patient as the nursing procedures that are most often missed¹⁹. Uchmanowicz and Gotlib²² report that the most common missed nursing procedures were patient/family training and emotional support. Friganović *et al.* report on timeliness of response to a request as the nursing procedure that is most often missed²³.

Kalisch and Williams determined that nurses who reported on rationed health care were less satisfied with their job²⁸. Also, Bekker *et al.* report that the highest degree of job dissatisfaction was recorded in jobs with incomplete nursing tasks²⁶. Zeleniková *et al.* showed that rationed care was linked to overall job satisfaction and the intention of nurses to leave their actual job²⁷.

Jones states that the correlation between PIRNCA results and nurses’ assessment of quality of care is $r=-0.492$, $p<0.005$, while the assessment of job satisfaction is $r=-0.375$, $p<0.001$. Uchmanowicz *et al.* had the same results^{20,29-31}. This means that the higher the level of nursing care quality assessment and job satisfaction assessment, the lower is the level of missed care.

In order to verify the validity of the adapted instrument, this study also found that the total scores on the PIRNCA questionnaire were negatively correlated with the assessment of the quality level ($r=-0.38$, $p<0.001$), which means that there is a negative relationship between the perceived implicit rationing of nursing care and the quality of care, although this correlation has a low measure of association. Regarding total job satisfaction ($r=-0.43$, $p<0.001$), lower perceived satisfaction was associated with a higher degree of care rationing (also with a low measure of associa-

tion). The results are in accordance with the cited literature and testify to the discriminatory validity of the Croatian version of the PIRNCA questionnaire.

Conclusion

The purpose of this study was to translate and validate the PIRNCA questionnaire. Study results showed the Croatian version of the PIRNCA questionnaire to be a reliable tool for the measurement of nursing care rationing in Croatian hospitals. It is our belief that more research using the above questionnaire is needed and that this research will enable outcome improvements in nursing practice.

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Sažetak

HRVATSKA PRILAGODBA I VALIDACIJA UPITNIKA PERCIPIRANO IMPLICITNO RACIONIRANJE SESTRINSKE SKRBI (PIRNCA) – PRESJEČNA STUDIJA

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Cilj ove studije bio je provesti prilagodbu i validaciju upitnika Percipirano implicitno racioniranje sestrinske skrbi. Implicitno odlaganje prvi je korak koji povezuje medicinske sestre s kvalitetom ishoda liječenja bolesnika i rezultira određivanjem prioriteta zdravstvene skrbi u određenoj skupini bolesnika za koju medicinska sestra skrbi. Percipirano implicitno racioniranje sestrinske skrbi je instrument koji se rabi u procjeni racioniranja skrbi u sestrinskoj praksi. Sudionici studije bili su medicinske sestre i tehničari koji rade na bolničkim odjelima u 4 kliničke bolnice u Republici Hrvatskoj. Upitnik je ispunilo 438 sudionika. Podatci su prikupljeni od travnja do studenog 2018. godine. Nakon faktoriranja glavne osi usvojeno je jednofaktorsko rješenje na temelju korelacijske matrice. Izmjereni konstrukt je jednodimenzionalan, a ekstrahirani faktor objašnjava 47,2% varijance. Nadalje, pouzdanost cijelog upitnika utvrđena je korištenjem koeficijenta unutarnje konzistentnosti Cronbach alpha za Percipirano implicitno racioniranje sestrinske skrbi na 31 česticu, koji je bio 0,96, što je iznimno visoka pouzdanost unutarnje konzistentcije. Zaključno, studija je otkrila visoku razinu pouzdanosti i valjanosti prevedenog upitnika Percipirano implicitno racioniranje sestrinske skrbi, potpuno usporedivog s izvornikom. Upitnik se može primjenjivati za procjenu fenomena implicitnog racioniranja sestrinske skrbi u hrvatskim bolnicama.

Ključne riječi: *PIRNCA; Validacija; Racionirana sestrinska skrb; Sigurnost bolesnika; Sestrinstvo*