

SATISFACTION WITH NURSING CARE FOR PATIENTS TREATED IN NON-INVASIVE TREATMENT WARDS

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A. Study design/planning • B. Data collection/entry • C. Data analysis/statistics • D. Data interpretation • E. Preparation of manuscript • F. Literature analysis/search • G. Funds collection

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ABSTRACT

Introduction: Nursing care is an important factor influencing the guarantee of quality in medical facilities. The aim of the assessment of patients' satisfaction with care is to gather data necessary for undertaking successful actions so as to improve the service quality and create rules for healthcare policy.

Aim of the study: Assessment of satisfaction with nursing care of patients treated in non-invasive treatment wards.

Material and methods: The research was carried out in wards of non-invasive treatment profile. To measure the level of satisfaction with nursing care, the NSNS-PL (The Newcastle Satisfaction with Nursing Scale) was used. The research covered 101 patients aged 21-79 years.

Results: Satisfaction with nursing care was evaluated in the researched group at 67.12 points on average out of a maximum of 100 available points. The average score for experience with nursing care was 70.87 points, and overall nursing care scored 81.52 points. The surveyed patients assessed their overall stay in the non-invasive treatment ward at 79.04 points on average. A statistically significant difference was shown in the assessment of experiences with nursing care, depending whether a particular nurse responsible for care in the ward was assigned ($p = 0.0392$).

Conclusions: The highest rated indicator of nursing care for patients treated in non-invasive treatment wards was the overall assessment of nursing care as well as overall assessment of the stay in the ward. The lowest rated was satisfaction with nursing care. Socio-demographic factors did not have any connection with the assessed aspects of care.

Key words: nursing care, satisfaction with care, nursing quality.

INTRODUCTION

Management of quality in medical facilities is related to measurement of patient's satisfaction with received healthcare services. Nursing care is one of elements influencing the guarantee of quality in medical facilities. Patient's satisfaction assessment is a subjective evaluation by a patient based on their individual experience, needs, and expectations [1].

Patients' satisfaction with medical care is an individual and subjective evaluation. Moreover, it is an emotional and cognitive condition resulting from fulfilling patients' emotional and medical needs by medical staff, as well as the abilities to solve and resolve many problems of the patient. A patient's satisfaction level depends on factors such as: medical staff's performance, communication within the team, communication between the staff and the patient, diagnostic examinations, performance of

administration, and conditions related to the stay in the facility (hotel conditions, catering) [2-4]. In the case of medical organisations, a very important role is played by the staff directly involved in the performing of medical services. The patient's overall satisfaction with their hospital stay depends on numerous factors. The research shows, however, that nursing care is the most important factor, and nurses constitute the highest percentage of medical staff [5, 6].

In hospitals in Poland two main categories of wards may be distinguished: operation and non-invasive treatment wards. Operation wards provide surgical care when pharmaceutical treatment and rehabilitation are not sufficient, or if the patient's condition requires surgical intervention. Non-invasive treatment wards include: cardiothoracic surgery, cardio-surgery, vascular surgery, paediatric surgery, plastic surgery, neurosurgery, transplantology, orthopaedics and traumatology,

gynaecology and midwifery, urology, laryngology, and anaesthesiology [7]. Non-invasive treatment wards are wards commonly referred to as internal wards. Internal as a separate field of knowledge has always featured a holistic approach to a patient, extended diagnostics, necessity to use complex therapy, and development of pharmacotherapy. Particular divisions of internal have been created: cardiology, gastroenterology, endocrinology, nephrology, pulmonology, rheumatology, haematology, allergology, paediatrics, dermatology, venereology, neurology, psychiatry, and infectious diseases [8].

The aim of the assessment of patients' satisfaction with care is to gather information necessary to undertake effective actions to improve service quality and create rules of healthcare policy. In the process of reviewing and assessing nursing care quality, the patient plays a superior role. The feeling of satisfaction depends on external and internal factors [9]. A patient's satisfaction with care is influenced by: types of health services, fulfilment of the patient's expectations, safe and quick performance of medical procedures, and longevity of treatment effects. What is important for satisfaction assessment is to determine the influence of patient's individual expectations for the level of satisfaction with nursing care [10]. The patient, while assessing care, compares their own experiences with their own expectations [11, 12].

Problems with insufficient numbers of nursing staff in hospital wards, including internal, directly influence the nursing care of patients. Human resources management in healthcare requires overcoming and combining many difficulties. Financial limitations, demand for better, available for everyone, medical care, and good and decent working conditions for the staff are factors that are sometimes difficult to combine. Some researchers claim that the main reason for deficiency in nursing staff in Poland is underestimation of the importance of this profession by the government and society, and at the same time insufficient remuneration for the work provided [13].

AIM OF THE STUDY

The aim of the research was to assess satisfaction with nursing care of patients treated in non-invasive treatment wards.

MATERIAL AND METHODS

The research was carried out from March to June 2018 in non-invasive treatment type wards (in internal, cardiological, and geriatric wards) at the University Hospital in Cracow. In the research the method of diagnostic polling was used, by survey. A standardised scale for assessment of satisfaction with nursing care was used (The Newcastle Satisfaction with Nursing Scale, NSNS-PL). The scale consists of three parts: Part I – ex-

perience with nursing, covering 26 questions; Part II – satisfaction with nursing, 19 questions on nursing care during the stay in the hospital; and Part III, which covers 11 questions, including six that concern socio-demographic data of patients and their hospital stay (i.e. duration of hospitalisation, and the assignment of a particular nurse to care for them in the ward). The final questions concern the patient's overall satisfaction with care and their whole stay in the facility [12].

After decoding data obtained from questionnaire NSNS-PL the final result was computed, independently for Part I and II of the scale. The scoring is within the range from 0 to 100 points, where 100 is the best score, and 0 the worst [12]. The results obtained in Part III of the scale were considered separately. This part contained data on gender, age, education, professional activity, marital status, place of residence, and the time the patient spent in the ward, as well as whether or not a particular nurse had been assigned to care for them in this ward. Patients were also asked to list suggested measures to improve their nursing during stay in the ward.

The research covered 101 patients aged 21-79 years. The criteria to include in the research were: over 18 years old, staying in the ward for at least two days, and assessment of satisfaction performed on the day of discharge from the hospital.

Each person participating in the survey, before filling the questionnaire, was informed about anonymity, the aim of the survey, as well as the possibility to refuse to take part in the survey. The survey was run with prior consent granted by the manager of the hospital, the head of the internal ward, and the ward nurse. The research was approved by the Bioethics Committee of Jagiellonian University, No. 122.6120.286.2016.

Statistical analysis

Statistical analysis was performed in the package Statistica 13.3. To present the results in the case of quantitative and qualitative variables, the methods of descriptive statistics were used. To assess normality of variable spread, the Shapiro-Wilk test was used. To assess differences between the two groups, the Mann-Whitney *U* test was used. With three and more variables, the Kruskal-Wallis test (Anova) was used, with suitable post-hoc tests. Spearman's rank correlation coefficient was used to correlate two variables that did not meet the criterion of normality. Statistical significance was accepted for $p < 0.05$.

RESULTS

The majority of the research group were women – 53.5% ($n = 54$). The age of the surveyed people ranged from 21 to 79 years. The average age of the group was 49.72 years (SD = 16.85). Less than 10% of respondents

Table 1. Descriptive statistics of overall assessment of nursing care

| Assessment of nursing care | Descriptive statistics | | | | | | | |
|--|------------------------|-----------|-------|-------|--------|-------|-------|-------|
| | <i>n</i> | \bar{x} | Me | Min. | Max. | Q1 | Q3 | SD |
| Patients' experiences with nursing care | 101 | 70.87 | 71.79 | 39.74 | 82.05 | 68.59 | 75.64 | 7.87 |
| Patients' satisfaction with nursing care | 101 | 67.12 | 69.74 | 21.05 | 100.00 | 53.95 | 84.87 | 19.77 |
| Assessment of overall nursing care | 101 | 81.52 | 83.33 | 50.00 | 100.00 | 66.67 | 83.33 | 13.72 |
| Overall assessment of stay in the ward | 101 | 79.04 | 83.33 | 16.67 | 100.00 | 66.67 | 83.33 | 13.88 |

n – number of observations, \bar{x} – arithmetical average, Me – median, Min. – minimum, Max. – maximum, Q1 – lower quartile, Q3 – upper quartile, SD – standard deviation

declared basic vocational education ($n = 10$), and secondary – 39.6% ($n = 40$). Half of the research group held a university degree ($n = 51$). The time of stay in a non-invasive treatment ward ranged from two to 60 days (10 days on average). Over half of the surveyed, i.e. 56.4% ($n = 57$), thought that they had not been assigned a particular nurse responsible for caring for them in the ward. The remaining 43.6% ($n = 44$) were not sure whether such a nurse had been assigned. Replying to the question “Are there measures which would improve nursing care during hospital stay?” only a few surveyed, i.e. 14%, pointed to a greater number of nurses in the ward, and 2% suggested newer equipment in the ward. The others did not offer any suggestions.

The average score in the sub-scale of the assessment of experiences with nursing care was 70.87 points. (SD = 7.86). Satisfaction with nursing was evaluated at 67.12 points, with maximum 100 points and minimum 21.05 points, whereas the average score of overall nursing care was 81.52 points (SD = 13.72). Overall stay in a non-invasive treatment ward was evaluated by the surveyed group at 79.04 points (SD = 13.87) (Table 1).

Patients' experiences with nursing

No statistically significant correlation between assessment of nursing experience and gender of the surveyed patients ($p = 0.6531$), their age ($p = 0.1468$), and level of education ($p = 0.8237$) was detected. However, a statistically significant difference was shown in the assessment of experiences with nursing care depending on whether a particular nurse was assigned as responsible for care in the ward ($p = 0.0392$). This aspect was rated the lowest by patients who claimed that they had not been assigned a particular nurse responsible for care of them. A higher score was given by patients who were not sure whether they had been assigned such a nurse (72 points vs. 74 points). No statistically significant correlation between the number of days spent in the ward and assessment of experiences with nursing care was found ($p = 0.8446$).

Assessment of experiences with nursing correlated with assessment of satisfaction with nursing. Assessment of experiences with care became higher along with the increase of satisfaction ($p < 0.001$, $r = 0.681$).

The obtained results also show a positive correlation between the scores for experiences with nursing and overall assessment of nursing ($p < 0.001$, $r = 0.441$). Moreover, it was shown that the higher the overall assessment of the stay in the ward, the higher the assessment of experiences with nursing care provided by nurses ($p = 0.0002$, $r = 0.355$).

Patients' satisfaction with nursing care

No statistically significant difference in assessment of satisfaction with nursing depending on gender ($p = 0.8702$) or education of the surveyed ($p = 0.8261$) was detected. Nonetheless, satisfaction with nursing was scored the highest by patients with secondary education (87 points). Also, the dependency between assessment of satisfaction with nursing and age of the surveyed patients was not statistically significant ($p = 0.0546$). It was shown, however, that patients who were not sure whether they had been assigned a particular nurse to care for them were more satisfied with care than patients who claimed that they had not been granted individual care (Figure 1).

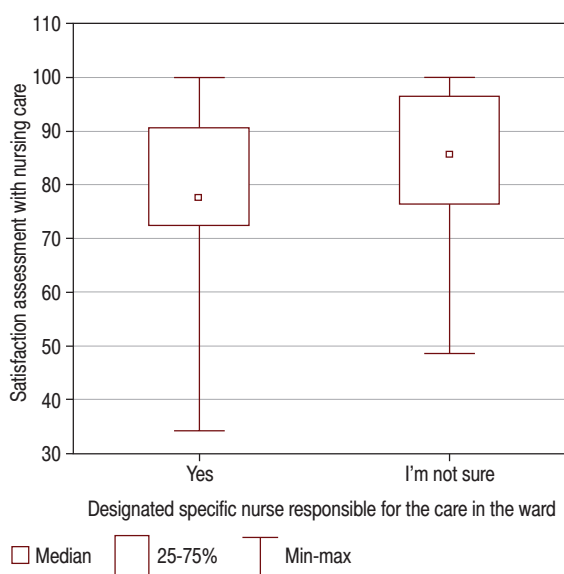


Figure 1. Assessment of satisfaction with nursing care depending on assigning a particular nurse responsible for care in the ward

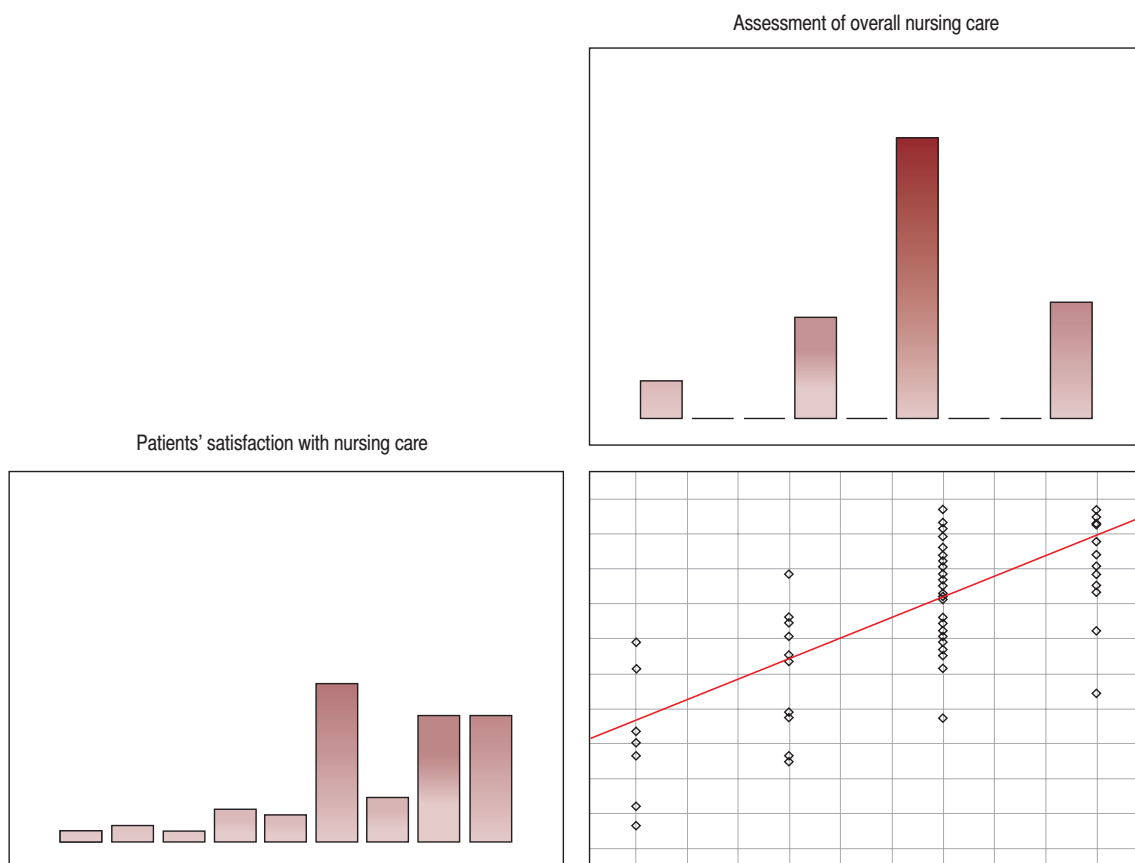


Figure 2. Graphic interpretation of Spearman's rank correlation for overall assessment of nursing care and patients' satisfaction with nursing care

Statistically significant dependency between assessment of satisfaction with nursing and the number of days spent in the ward ($p = 0.1405$) was not detected.

Statistical analysis showed a dependency between assessment of satisfaction with nursing care and overall assessment of nursing care provided in the ward ($p < 0.001$) (Figure 2).

A statistically significant dependency between assessment of satisfaction with nursing care and overall assessment of stay ($p < 0.0001$) was detected. Satisfaction with care increased with higher overall assessment of the patient's stay in the ward (Figure 3).

Assessment of overall nursing care

No significant connection between assessment of nursing care and gender ($p = 0.2881$), age, or education of the surveyed persons ($p = 0.1934$) was detected. Patients with secondary education scored nursing care the highest. The presence of a particular nurse to care for the patient did not influence overall assessment of nursing care ($p = 0.0945$), either.

Statistical analysis showed, however, that assessment of overall care provided by nurses was better

when the surveyed patients spent more nights in the ward ($p = 0.0077$).

Overall assessment of nursing care also increased along with the increase of overall assessment of stay in the ward ($p < 0.001$).

Overall assessment of stay in the ward

Similarly to the other sub-scales, dependency between overall assessment of stay and gender of the surveyed ($p = 0.3742$), their age ($p = 0.0659$), or the level of education ($p = 0.1036$) was detected. Statistical analysis also showed a lack of correlation between overall assessment of stay by patients and the assignment of a particular nurse responsible for care in the ward ($p = 0.1613$). It was found, however, that overall assessment of stay positively correlated with the number of nights spent on the ward ($p = 0.0166$).

The median of the number of nights spent on the ward during that stay was higher values in the group of persons who did not offer any proposals of improving nursing care ($Me = 9$), and was lowest in the group of persons who thought that nursing care would improve thanks to new equipment ($Me = 2$).

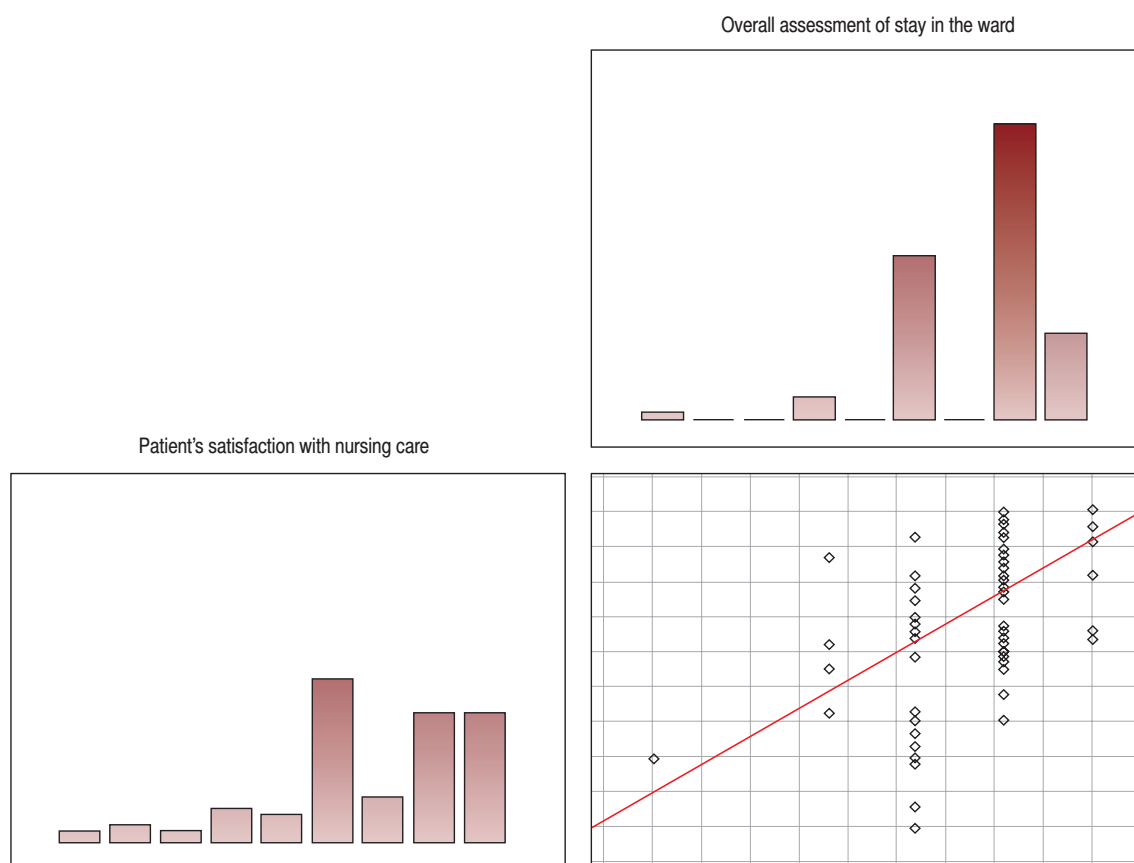


Figure 3. Graphic interpretation of Spearman's rank correlation for overall assessment and assessment of satisfaction with nursing care

DISCUSSION

The institution responsible for medical care should pay greater attention to the patients' satisfaction with the received medical service. Research by the Centre for Public Opinion Research (Polish: CBOS – Centrum Badań Opinii Społecznej) from 2018 showed that only 30% of the surveyed were satisfied with the functioning of healthcare in Poland. The vast majority, i.e. 70%, of the polled, according to CBOS, negatively assessed medical care. However, comparing those research results with the results from 2016, it may be observed that satisfaction with healthcare increased by 7%. The surveyed people were more satisfied with doctors' competences and their engagement in their work, and the availability of GPs. Availability of appointments with specialists and the number of medical staff in hospitals was scored the lowest [14]. The results obtained by CBOS suggest that healthcare functioning has improved in our country, which influences the increase of patients' satisfaction with received services. This was confirmed by our own studies, in which the surveyed scored highly overall stay in hospital (average 79.04 points).

The research results of the NSNS-PL scale validation prove that the scale is a suitable tool for assess-

ing patients' satisfaction with nursing care provided in medical sectors; moreover, it shows sufficient sensitivity to differences in satisfaction of patients hospitalised in particular wards or hospitals [12].

The research on British patients treated in the surgical ward of University Hospital St. Martin showed a high level of satisfaction with nursing care (90 points out of 100 possible) [15]. These results are higher than our own research results. The differences in assessment may result from higher subsidies for medical care in the UK compared with Poland. What is more, the UK does not show such a deficiency of medical staff as in Poland.

The results by Sierpińska and Dzirba showed that the level of patients' satisfaction with medical care received from nurses is high. The surveyed most often scored the care provided by nurses as very good or good. The research confirms that although analysis of satisfaction with nursing care is a subjective evaluation, it is worth performing cyclically because it ensures improvement of quality of the service provided [3]. The obtained scores are at a level similar to our own research.

Assessment of experiences with nursing care in the study by Stanisławska *et al.* showed 94.16 points

in the urology ward and 65.41 points in the cardiology ward. It must be underlined that patients who stayed in the wards for up to five days (49% of the surveyed) scored experiences with nursing care at the level of 82 points, patients who spent 6-10 days (42.5% of the surveyed) – at the level of 78 points, while patients staying over 10 days (9.5% of the surveyed) assessed experiences with nursing care at the level of 75 points. Assessment of nursing care provided during patients' stay in the urology ward was scored at the level of 96.97 points, and in the cardiology ward the result reached 54.63 points. Patients who were hospitalised for up to five days evaluated nursing care at 80 points, patients staying in the wards longer, i.e. from 6 to 10 days – 73 points, while the surveyed who spent the longest time in hospital, i.e. more than 10 days, were satisfied at the level of 65 points. [16]. Our own research did not show any correlation between the number of days spent in the ward and assessment of experiences with nursing care ($p = 0.8446$).

In most studies concerning satisfaction with nursing care, men were significantly more satisfied with care than women [12, 17-19]. Stanisławska's research showed significant differences in assessment of experience and satisfaction depending on gender [16]. Men assessed satisfaction with nursing care and experience with nursing care higher than women. Studies by Talarska and Wolska, however, did not indicate differences between measurements of satisfaction levels of men and women [20]. A lack of statistical differences between assessment of experience and satisfaction with nursing care was shown by our own research.

Our own research proves that satisfaction with nursing care depends on numerous factors. First of all, attention must be paid to the specifics of the ward where the research was carried out, subsidising of healthcare in a particular country, and nursing staff deficiencies. However, it must be remembered that individual treatment by medical staff is the most important for a patient, as well as interest in their health condition. Steady development of health protection is understood as better medical equipment, constant increase of competences by nurses and doctors significantly influencing the increase of quality of medical services provided and patients' satisfaction.

CONCLUSIONS

The highest rated parameter of nursing care for patients treated in non-invasive treatment wards was overall assessment of nursing care and overall assessment of stay in the ward, while the lowest score was given to satisfaction with nursing care.

Socio-demographic factors like gender, age, and education of the surveyed did not have any correlation with any of the assessed aspects of care.

Overall assessment of nursing care and overall assessment of hospital stay was highest in the group of patients staying on the ward for the longest time.

Among proposals of improvement of nursing care, patients listed the increase in the number of staff and providing the ward with new equipment.

Disclosure

The authors declare no conflict of interest.

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