Patient Satisfaction with Services Provided at Night and the Assessment of the Quality of Care in the Hospital

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ABSTRACT

Night nursing care has different priorities from the care in the morning and afternoon hours. The patient as the subject of nursing activities may assess the quality of this care in a more or less objective way, thus giving the opportunity to improve or improve these services. The study was conducted to assess the quality of care and general nursing care. The studied population constituted 585 patients hospitalized in the Clinical Hospitals of the city of Rzeszów. The research was carried out from 1 January 2016 to 31 May 2016. In the patients opinion survey, the method of the diagnostic survey was used, using two standardized NSNS questionnaires, the PASAT HOSPIT1 package and the original questionnaire. The assessment of services provided by nurses at night that was made with the use of the Newcastle scale was high (experience - 63.7 points, satisfaction - 60.3 points), and the assessment based on the Author's Questionnaire. The correlation between the assessment of night-time care and the overall assessment of nursing care indicates statistically significant (R=0.51 and R=0.47) and significantly influenced assessment of the overall nursing care. The quality of the night tasks resulting from the therapeutic function and caring were considerably related to the overall assessment of the nursing care. The relationship between the assessment according to the PASAT HOSPIT 1 questionnaire and the assessment of nursing care on the basis of the Newcastle scale is most correlated with the nurse's availability (satisfaction -p=0.0000***), the speed of response to the call (satisfaction -p=0.0000*** and the satisfaction from nursing care.

Keywords: Quality of care; Patient; Nurse; Night shift; Nursing

Introduction

Health care constitute activities that meet the needs of society in the field of health promotion, prevention, treatment, diagnosis and rehabilitation. One of the determinants of the effectiveness of a health care provider in terms of healthcare is the quality factor [1]. In addition, it should give a sense of efficiency, effectiveness and security. The high quality of care should not only be organized in the best possible way, but have maximum human resources, medical and financial resources and infrastructure. The most important and the most commonly used measure of the quality of nursing care is the measurement of the level of patient satisfaction, i.e. its subjective assessment understood in terms of a sense of satisfaction with the received care or lack thereof. Analyzing available literature, you can find many publications on the evaluation and feelings of patients during hospitalization [2-4]. A good indicator of the quality of nursing care is the examination of the level of satisfaction. Due to the fact that each person has a specific ceiling and the scale of requirements and expectations, satisfaction is subjective individual impression. In their research, Otani and Kurz showed that nursing care had the greatest impact on the assessment of the patient's total satisfaction with the hospital stay [5]. The quality of nursing care has a huge impact on the patient's opinion. A patient's care satisfaction survey strengthens his self-esteem, importance and importance throughout the entire healthcare system. Expectations towards medical staff focus on appropriate and professional treatment that is in line with global standards. The patient/client has the right to choose, ask questions, obtain optimal knowledge about the health condition, the proposed treatment methods, nursing. In addition, in medical entities covered by the accreditation system the staff expects the patient to assess the level of the care provided which is equally satisfactory from nurses health services and their own feelings. There are many factors hindering the work of nurses at night. Every effort should be made to make one of the components such as night nursing services a strong pillar of the healthcare system [5]. A patient's care satisfaction survey strengthens his self-esteem, importance and importance throughout the entire healthcare system. The patient has become an entity in the market of medical services. Patients expect a sense of security and want to trust the staff who will look after them. The healthcare system must therefore be based on integrity, respect and interest in the problems of the sick [6]. Kelly emphasizes that "night nursing" is traditionally marginalized and treated as "Cinderella" services. Quite wrongly, due to, for example, professional liability issues [7].

For example, a professional offense can occur both at night and in the morning, in the afternoon or in the evening. The primary
goal of changes in nursing is to optimize the quality of care, leading to maximum patient satisfaction [8].

**Methods**

The research was carried out in two public Clinical Hospitals of the city of Rzeszów (Clinical Regional Hospital No.1 named after Fryderyk Chopin in Rzeszów and the Clinical Hospital No. 2 named after Saint Jadwiga Queen in Rzeszów) in randomly selected clinics with comparable conservative and surgical characteristics from January 1, 2016 until 31st of 2016. Participation in them was voluntary and anonymous. The study population consisted of patients who were of legal age, agreed to be examined, spent at least two nights in the clinic and needed help in self-care during night duty (the severity of the disease and the extent of the care required are not specified). Exclusion criteria mean that the patient is not allowed to participate in the study and the patient's consciousness is disturbed. The nurses at the beginning of their night shift selected patients for participation in a research. In turn, pollsters (unrelated professionally with the randomly selected clinic as well as those who are not employees of a given hospital) carried out the research in the morning. The research project received a positive opinion of the Bioethics Committee at the University of Rzeszów on December 2, 2015 - Resolution No. 4/12/2015. In the patient opinion survey, the method of a diagnostic survey was used two standardized questionnaires and an original questionnaire survey:

**The Newcastle satisfaction with nursing scale (NSNS)**

Scale developed at the Health Care Research Center at Newcastle University in England [9]. The Polish cultural adaptation of NSNS was done by Gutyisz-Wojnicka and Dyk, respecting the criteria of equivalence [10]. Reliability of the scale was analyzed separately "for experience" and "satisfaction" using the reliability coefficient of Alfa Cronbach.

The scale consists of three parts:

- part one-examines the experience of nursing care (26 claims including: 11 negative, 15 positive),
- part two-examines the level of self-satisfaction (19 aspects of nursing care),
- the third part-examines the patient's feelings related to the hospital stay and contains questions about the demographic characteristics of the patient [10].

**PASAT questionnaire - PASAT HOSPIT1 package**

A nationwide tool for conducting patient opinion surveys. It is a unified model of patient satisfaction survey, repeatedly tested using statistical techniques. It was developed at the Center for Quality Monitoring in Health Care in Krakow. The tests should be carried out with patients staying in the hospital wards for not less than 48 hours. For a one-off satisfaction study, it is proposed to include approximately 400 hospital patients. The questionnaire consists of 16 questions (groups of questions) regarding patient satisfaction from the stay in the hospital ward and the patient's report. The subject was subject to aspects of hospital care such as: admission to the hospital, stay in a hospital ward, medical care, other staff (nurses' friendliness, availability during the day and at night, diligence of treatments, speed of response to the call, provision of nursing services in the atmosphere of respect and respect for the dignity of courtesy), care for the bedridden patients and other aspects of the stay in the hospital (providing during the hospital stay the comprehensive information about the state of health and methods of treatment, about the risk connected with the treatment and about the side effects of medications, the course of surgery and about the possibility of contact with competent people in difficult times).

**The questionnaire of the self-made survey**

Contains a set of 11 questions with the possibility of answering in a 5-point Likert scale and a short report. Among the evaluated dimensions of night-time nursing services are tasks resulting mainly from the caring and therapeutic function. Questions are closed. The criteria for including the patient in the study were: 18 years of age and more, minimum 2 nights spent in the ward, reading and writing skills, while staying in the hospital only in one ward no impairment of consciousness and being asked for a consent to participate in the study. A test sample of 600 people were selected. 592 were obtained successfully, of which 585 questionnaires were correctly filled and completed, which constituted 97.5% of the assumed test sample. The minimum test sample was 383. The confidence level was 95%, the size of the fractions: 0.5, maximum error: 4%. In the statistical analysis of the obtained research results, statistical tests were used: Mann-Whitney, Kruskal-Wallis and Spearman’s rank correlation coefficient. The calculations were performed using the IBM SPSS Statistics 20 program. The work assumed the significance level p<0.05.

**Results**

331 women and 254 men participated in the study. Among the 585-person study group, 150(25.6%) of the respondents were aged 60 and over. The secondary education was 216(36.9%). 314 patients (53.7%) were professionally active and working. The highest number of hospitalized people were at least 6 days - 222(37.9%), 198(33.8 %) of the respondents spent 4-5 nights in the hospital. 168(31%) reported difficulties in falling asleep during normal functioning in home life. 248(42.4%) of patients stated that there were no problems falling asleep. Gender, age and marital status did not differentiate in a statistically significant way of assessing the quality of nursing care. Residents of rural areas estimate the satisfaction of care much better (difference by 12 points, p <0.001). The highest experience in nursing care was rated by people with higher education (p=0.0204). Nurses are better assessed by unemployed people (=67.4), and pensioners (=69.1). The more nights spent in the hospital, the lower ratings issued by respondents for nursing care (Table 1).

**Assessment of nursing care provided at night, and overall nursing care based on the Newcastle scale**

The assessment of the services provided by nurses at night by
the numerical scale of Newcastle was high. For the experience
of nursing care it was 63.7 points, and for the satisfaction of
nursing care 60.3 points. The assessment of nursing night care
was high-about 75 points. The results obtained between the
assessment of night care and the overall assessment of nursing
care indicate a statistically significant correlation of moderate
strength (R= 0.51 and R=0.47). Assessment of night care
significantly influenced the assessment of overall nursing care.

The assessment of the quality of nocturnal tasks resulting from
the nurse's therapeutic function was related to the general
assessment of nursing care.

The assessment of individual care tasks was significantly
related to the overall assessment of nursing care. The strongest
assessment of the nurse's work was correlated with satisfying
the wishes regarding night rest and: experience from nursing
care (p=0.0000***), satisfaction with nursing care (p=0.0000***).
An important care task was also the possibility of talking with
the nurse and: experience from nursing care (p=0.0000***),
satisfaction with nursing care (p=0.0000***). The obtained
dependencies significantly differentiated the assessment of
nurses' work (Table 2).

**Assessment of night care (PASSAT HOSPIT1)**

Using the Spearman's rank correlation coefficient, the
relationship between the opinion on nursing care expressed
in the PASAT HOSPIT 1 questionnaires was examined (in
question 11), and the evaluation of night care during the last
night before the questionnaire was completed (Table 3).

In the same way, answers to questions have been summarized.
11 A-F from the PASAT HOSPIT 1 questionnaire with a
nursing assessment done on the Newcastle scale. Correlations
are statistically significant. A stronger relationship with the
assessments included in PASAT HOSPIT 1 shows the satisfaction
assessment of nursing care. The strongest correlations concern
the nurse's availability and speed of reaction to the call and
satisfaction with nursing care (Table 4).

**Discussion**

There are many studies linking the shift work system (early
morning and night) with the quality of nursing care [11-14].
The results of own research included aspects of, above all,
nursing care at night. The study assessed the satisfaction of
patients with nursing services. The following were taken
into account: the kindness of nurses, diligence in performing
treatments, availability at night, speed of reaction to the call,
respect and respect for dignity. How the patient's satisfaction
is based on the selected implementation of nursing services at
night. Defining the concept of quality of medical services at
night is not an easy task. Analyzing world literature, it can be
noticed that with the use of new research tools, not only the
level of satisfaction with nursing care is assessed, but also the
assessment of the overall care provided in closed institutions
[15,16].

This problem concerns not only the general assessment of
services provided by the hospital, but also the conditions and
course of treatment as well as satisfaction with the contact with
the nurse and other hospital staff. Patient-the client assesses not
only the medical service, but also the level of personal culture,
speed of response to the call, reliability, honesty and availability
[17].

The traditional nursing model does not matter, which assumed
that the patient is not competent to give opinion on the quality
of medical services. On the other hand, there are no definitions
of the terms: satisfaction [18].

| Table 1: Socio-demographic factors, time of hospitalization and the nature/specialty of the ward and the level of satisfaction and with night time benefits (according to Newcastle). |
|---|---|---|
| Socio-demographic factors and others (time of hospitalization, nature / specialty of the ward / clinic) | Experience from nursing care | Newcastle SCALE | Satisfaction with nursing care |
| Sex | p=0.1442 | p=0.1615 |
| Age | p=0.1878 | p=0.1028 |
| Marital status | p=0.1634 | p=0.1784 |
| Professional status | p=0.1223 | p=0.0021** |
| Education | p=0.0204* | p=0.2874 |
| Place of residence | p=0.8436 | p=0.0007*** |
| The number of nights spent in the hospital | p=0.0002*** | p=0.0001*** |
| Clinic / branch | p=0.4944 | p=0.7134 |

| Table 2: Tasks resulting from the caring function and the general assessment of nursing care. |
|---|---|---|
| Therapeutic services | Experience from nursing care | Newcastle SCALE | Satisfaction from nursing care |
| Satisfying the patient's wishes regarding the night rest by the nurse | p=0.0000*** | p=0.0000*** |
| Getting the necessary nursing help | p=0.0000*** | p=0.0000*** |
| Satisfying your food and drink needs | p=0.0000*** | p=0.0000*** |
Nursing care usually takes place in direct contact with the patient. Nursing is a kind of subsystem that determines the level of medical services. High quality nursing practice should have a rational basis in the form of high qualifications and continuous professional development of nurses. Increasingly, in clinical nursing, the method of individual cases is used not only in theory but also in practice [19]. The role of a nurse changed from a person dealing only with a patient per person with logistic management skills, supervising control and measurement devices, human resource management, and material flows. The assessment of the nurse's work does not therefore cover the whole process of providing services. These skills are directly related with quality management [20]. The tasks of the nurse working on the night shift include observing whether patients have symptoms of sleep disorders, which should inform the doctor and provide the patients with optimal conditions to meet the need for night rest. If possible, the nurse should respect the patient's habits, including bedtime, number of hours of sleep, favorite sleeping position or drinking a warm drink at bedtime. The nurse is obliged to ensure that the top light is off and if needed, this should provide night-time lighting, it must be remembered that the rooms should have an appropriate microclimate. You should not be hungry or fed up. Activities performed during night duty should be limited only to necessary and performed with calmness, because the noise wakes up patients. The assessment of individual care tasks was significantly related to the overall assessment of nursing care. The strongest assessment of nurse work was correlated with the wishes for night rest: experience in nursing care (p=0.0000 ***), and satisfaction with nursing care (p=0.0000 ***). An important care task was also the possibility of talking with a nurse: experiences from nursing care (p=0.0000 ***), and satisfaction with nursing care (p=0.0000 ***). The obtained dependencies significantly influenced the assessment of nurses' work.

Respondents expressed a similar opinion in the studies of Larrabee et al. The patients indicated tasks resulting from the care function as the most important and characteristic in the work of nurses (79.1% - caring for, 54.6% - patience, 34.2% - showing care and interest, 32.1% - knowledge, skills, attitude) [21]. To filuk in their research confirmed that 63% of respondents could always count on talking to their nurse about their problems [22]. Research of Gawel and co-workers confirmed that nurses spend enough time for interviews with patients (87.8% of nurses talk with patients). However, the respondents stressed the need for even longer communication (45.6% of patients) [23]. Koracka and Łukaszuk in the conducted studies they confirmed that the availability of staff at night in the opinion of the respondents, it was at a very high level (82.18% very good) and was not dependent on the number of the respondents' stays in the hospital (p =0.673) [24]. Interesting research results were obtained by

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**Table 3:** List of correlations between assessments of various aspects of nursing care and the assessment of nursing services performed at night.

<table>
<thead>
<tr>
<th>PASAT HOSPIT 2 (quest. 11A-F)</th>
<th>Evaluation of night care</th>
</tr>
</thead>
<tbody>
<tr>
<td>kindness of nurses</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>(p=0.0001***</td>
</tr>
<tr>
<td>diligence of performing treatments</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>(p=0.0002***</td>
</tr>
<tr>
<td>availability during the day</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>(p=0.0009***</td>
</tr>
<tr>
<td>availability at night</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>(p=0.0003***</td>
</tr>
<tr>
<td>response speed</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>(p=0.0004***</td>
</tr>
<tr>
<td>respect and respect for dignity</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>(p=0.0002***</td>
</tr>
</tbody>
</table>

**Table 4:** List of correlations between assessments of various aspects of nursing care.

<table>
<thead>
<tr>
<th>PASAT HOSPIT 2 (quest. 11A-F)</th>
<th>Experience from nursing care</th>
<th>Newcastle SCALE</th>
<th>Satisfaction from nursing care</th>
</tr>
</thead>
<tbody>
<tr>
<td>kindness of nurses</td>
<td>0.07 (p=0.0747)</td>
<td>0.12</td>
<td>0.12 (p=0.0047**)</td>
</tr>
<tr>
<td>diligence of performing treatments</td>
<td>0.08</td>
<td>0.12</td>
<td>(p=0.0026**)</td>
</tr>
<tr>
<td>availability during the day</td>
<td>0.14 (p=0.0005**)</td>
<td>0.20</td>
<td>(p=0.0000***)</td>
</tr>
<tr>
<td>availability at night</td>
<td>0.17 (p=0.0000***)</td>
<td>0.23</td>
<td>(p=0.0000***)</td>
</tr>
<tr>
<td>response speed</td>
<td>0.18 (p=0.0000***)</td>
<td>0.25</td>
<td>(p=0.0000***)</td>
</tr>
<tr>
<td>respect and respect for dignity</td>
<td>0.16 (p=0.0001**)</td>
<td>0.21</td>
<td>(p=0.0000***)</td>
</tr>
</tbody>
</table>
In the studies of Aiken et al. confirm that patients experience a high level of trust in the nurse at night, and their satisfaction decreases with the limited availability of nurses [27]. The assessment of services provided by nurses at night significantly influenced on the assessment of overall nursing care. On a regular basis, according to the medical order, the drugs are administered at certain times, also at night. Thus, the nurse is obliged to monitor the patient's condition and observe the patient for, among others, onset of side effects. After administering analgesics, the patient should be under constant supervision and the response to treatment should be evaluated regularly. In carrying out the tasks resulting from the therapeutic function, the nurses spend the most time suffering with the patient, which in effect guarantees a professional and comprehensive care [28]. Analyzing the assessment of the quality of nocturnal tasks resulting from the therapeutic function, it can be stated that the opinion of the respondents was related to the general assessment of nursing care.

Correlations were of average strength, with the exception of slightly different planning categories of delays: experience from nursing care ($p=0.0000^{***}$) and satisfaction with nursing care ($p=0.0000^{***}$). Comparison of the results of own research with the results obtained by other researchers is not easy, because various research tools and different criteria were used to select the study group, which made comparison difficult. Kerr and colleagues nursing staff must have different experience understanding the patient during the day [29]. The studies by Przychodzka. Show that nurses do not give them enough time for interviews ($\text{Chi}^2=14.83$, $p=0.0001(57.00\%$-patients from the provincial hospital, $30.00\%, p=0)$, 0001 patients from a clinical hospital) [30]. According to Bikkeri Thomson, patients assess interpersonal care above that of manual activities. The most important factor confirming the patient's satisfaction with the stay in the hospital there were experiences related to nursing services ($\beta=0.27$, $p<0.001$), and then meeting patients' expectations ($\beta=0.21$, $p<0.001$) [31]. One of the aspects examined by Furtak-Niczyporuk was the punctuality of nurses when administering medication to patients. It has been shown that for 63% of respondents, the precise adherence to the administration time of medicines by nursing staff is a very important element. Analysis of these tests also allowed to assess the response rate of nurses to reported pain by the patient. 58% of the respondents rated the nursing staff very well. In the same studies, 92% of patients declared satisfaction with nursing care at night, and the most important aspect in their opinion was the availability of nurses on night duty [32].

Using standardized tools, reliable, specific and sensitive analysis of the patient's opinion on the quality of services provided at night was carried out. The advantage of the NSNS scale is the fact that it is only adapted to measuring the patient's satisfaction and experience from nursing care. Certainly, the extension in the analysis of the factors assigned to particular aspects of nursing care would allow to create specific scopes of tasks resulting from the professional functions of nurses. Pasat Hospital assesses the overall hospital care. Benchmarking of medical entities using PASAT is a guarantee of high quality of medical services. However, this tool allows you to analyze nursing care as one of the areas of overall care, and thus does not recognize the weaknesses of nursing.

Increasing the quality of nursing services is a continuous challenge and the continuing problem solved does not end cyclical activities. Nursing is characterized not only by taking actions directed to health, autonomy and self-assessment of professional activity, but also by striving to ensure the highest quality. Nurses as professionals providing medical services are people referring to patients in a personal and professional way [33].

**Conclusion**

1. The quality of services provided by nurses at night influences the overall assessment of the quality of medical services, as evidenced by the relationship between the patient's satisfaction with the services provided at night and the assessment of the quality of care in the hospital.

2. The patient's satisfaction is the most important measure of the actions of pro-quality healthcare entities.

3. The analysis of very good assessments of patients' experiences and satisfaction with nursing care indicates the need to emphasize the importance of services provided by nurses at night time from the patient's perspective (his subjective feelings, needs, expectations) in his pro-quality activities.

4. Nursing care in terms of care and therapeutic function at night was the most valued by patients, especially in terms of such expectations towards nurses as: the ability to observe, the ability to talk and fulfill wishes regarding night rest and diligence in performing treatments.

5. All activities related to both the admission and the stay of the patient in medical entities they influence the assessment of the quality of services provided, and patient satisfaction surveys can be used as a method of assessing the effectiveness of nursing staff management (in the scope of introducing modifications).

6. Expectations of patients relative to nursing staff are constantly growing and they are clearly articulated in the area of services provided at night.

**Demands**

Improvement of working conditions and activities for broadly understood care of patients at night should be a priority objective...
of the pro-quality direction of development of every medical institution, especially clinical.

Ethical Approval

The research was carried out in accordance with the Resolution of the Bioethical Commission at the University of Rzeszów of December 2, 2015 - Resolution No. 4/12/2015

References


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