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Assessment of Empathy Levels in a Selected Group of Nurses

Ocena poziomu empatii w wybranej grupie pielęgniarek

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Abstract

Introduction. Empathy is crucial in nursing, impacting care quality and patient relationships. Defined as the ability to understand and share others' emotions, empathy is essential in therapeutic processes. It facilitates communication, supports healing, reduces stress, and improves well-being. Empathy is vital for professional care, helping nurses understand patient needs and tailor care plans. Studies show that higher empathy levels in nurses lead to better patient relationships, improved treatment outcomes, and reduced staff burnout.
Aim. The study aimed to assess empathy levels in a selected group of nurses and determine if work experience and workplace affect empathy levels measured by the Interpersonal Reactivity Index (IRI).
Material and Methods. The study involved 141 randomly selected nurses with diplomas, working in neurology, internal medicine, emergency, or intensive care departments. Participation was voluntary and anonymous, with consent obtained from all participants. A diagnostic survey using the standardized IRI questionnaire was conducted. The IRI measures empathy across four scales: Fantasy, Perspective Taking, Empathic Concern, and Personal Distress. Sociodemographic data were also collected.
Results. The average IRI score was 61.08 out of 112, indicating moderate empathy levels. Scores ranged from 31 to 99, with a median of 60. The highest scores were in the Empathic Concern scale, and the lowest in the Personal Distress scale.
Conclusions. Empathy levels were moderate, with the highest scores in Empathic Concern. Nurses with longer work experience and those in internal medicine showed higher empathy levels. **(JNNN 2025;14(3):125–130)**
Key Words: emotions, empathy, nurses

Streszczenie

Wstęp. Empatia jest kluczowa w pielęgniarstwie, wpływając na jakość opieki i relacje z pacjentami. Zdefiniowana jako zdolność rozumienia i dzielenia się emocjami innych, empatia jest niezbędna w procesach terapeutycznych. Ułatwia komunikację, wspiera leczenie, redukuje stres i poprawia dobrostan. Empatia jest istotna w zawodzie pielęgniarki, pomagając zrozumieć potrzeby pacjenta i dostosować plany opieki. Badania pokazują, że wyższy poziom empatii u pielęgniarek prowadzi do lepszych relacji z pacjentami, poprawy wyników leczenia i zmniejszenia wypalenia zawodowego personelu.
Cel. Celem badania było ocenienie poziomu empatii w wybranej grupie pielęgniarek oraz sprawdzenie, czy doświadczenie zawodowe i miejsce pracy mają wpływ na poziom empatii, mierzonej za pomocą Indeksu Reaktywności Interpersonalnej (IRI).
Materiał i metody. Badanie objęło 141 losowo wybranych pielęgniarek z dyplomem, pracujących na oddziałach neurologicznym, wewnętrznym, ratunkowym lub intensywnej terapii. Udział w badaniu był dobrowolny i anonimowy, a zgoda na udział została uzyskana od wszystkich uczestniczek. Badania przeprowadzono przy użyciu standaryzowanego kwestionariusza IRI, który mierzy empatię na czterech skalach: Fantasy, Przejmowanie Perspektywy, Współczucie Empatyczne oraz Osobisty Dyskomfort. Zebrano także dane socjodemograficzne.

Wyniki. Średni wynik IRI wyniósł 61,08 na 112, co wskazuje na średni poziom empatii. Wyniki mieściły się w zakresie od 31 do 99, a mediana wyniosła 60. Najwyższe wyniki uzyskano w skali Współczucia Empatycznego, a najniższe w skali Osobistego Dyskomfortu.
Wnioski. Poziom empatii był średni, z najwyższymi wynikami w skali Współczucia Empatycznego. Pielęgniarki z dłuższym stażem zawodowym oraz te pracujące na oddziale wewnętrznym wykazywały wyższy poziom empatii.
(PNN 2025;14(3):125–130)
Słowa kluczowe: emocje, empatia, pielęgniarki

Introduction

Empathy is one of the key elements in the work of a nurse, affecting the quality of care and relationships with patients. In the literature, empathy is defined as the ability to understand and share the emotions of others, which is essential in the therapeutic process [1]. In the context of nursing, empathy not only facilitates communication with patients but also supports their healing process by reducing stress and improving overall well-being [2]. Empathy in nursing is an indispensable element of professional care. An empathetic approach allows for a better understanding of patients' needs, which is crucial in tailoring the care plan to individual requirements. Studies indicate that nurses with higher levels of empathy are more effective in establishing relationships with patients, which translates into better treatment outcomes [3,4] and prevents burnout among staff [5].

The level of empathy in nurses is influenced by many factors, both internal and external. Internal factors include personality traits such as emotional sensitivity and the ability to empathize. External factors include professional experience, education, and working conditions. Research shows that longer work experience and specialized training in communication and empathy can significantly increase the level of empathy [6,7]. Assessing the level of empathy among nurses is crucial for ensuring high-quality care. The literature describes various tools for measuring empathy, such as the Empathy Quotient (EQ [8]) and the Interpersonal Reactivity Index (IRI [9,10]). These tools allow for the assessment of different aspects of empathy, including emotional, cognitive, and somatic empathy.

The aim of this study was to assess the level of empathy in a selected group of nurses and to answer the question of whether work experience and workplace affect the level of empathy measured by the Interpersonal Reactivity Index.

Material and Methods

The study was conducted among 141 randomly selected nurses, each holding a nursing diploma and working in one of four departments: neurology, internal medicine, emergency department, or intensive care unit. Sociodemographic data are presented in Table 1. Participation in the study was voluntary, the survey was anonymous, and each participant gave their consent to participate in the study. The study was conducted in accordance with the Declaration of Helsinki

The method used in this study was a diagnostic survey using a standardized tool, the IRI (Interpersonal Reactivity Index) questionnaire. It was developed in 1980 by H. Davis. This tool is used for multidimensional measurement of empathic skills with the assumption that empathy consists of separate but interrelated emotional and cognitive areas. The questionnaire includes 4 scales: Fantasy (F), Perspective Taking (PT), Empathic Concern (EC), and Personal Distress (PD), each consisting of 7

Table 1. Characteristics of the study group (N=141)

Variable	N	%
Age		
20–30 years	25	17.73
30–40 years	16	11.35
40–50 years	59	41.84
Over 50 years	41	29.08
Education		
Secondary	38	26.95
Bachelor's degree	70	49.65
Master's degree	33	23.40
Work experience		
Up to 5 years	24	17.02
5–10 years	17	12.06
10–20 years	23	16.31
Over 20 years	77	54.61
Marital status		
In a relationship	110	78.01
Single	31	21.99
Workplace		
Neurology Department	34	24.11
Intensive Care Unit	39	27.66
Emergency Department	35	24.82
Internal Medicine Department	33	23.40

N — number of observations; % — percent

items (28 items in total). The PD and EC scales measure the affective aspect of empathy; perspective taking is considered a complex cognitive process, while the placement of the F scale on the "affective-cognitive" dimension is not clear-cut. It is intended to measure the tendency to imagine oneself in the role of characters from films and books. Importantly, the Empathic Concern subscale is associated with feelings directed towards others (other-oriented), such as compassion or concern for another person's fate; while the Personal Distress subscale concerns emotions related to one's own "self" (self-oriented): anxiety, discomfort, which arise in an interpersonal context. Their experience may, and often does — prompt an individual to take actions aimed at providing help; however, the main driver of these actions is probably the desire to minimize one's own suffering or discomfort [9,10]. Sociodemographic data were obtained from additional questions.

Statistical Methods

Quantitative variables (i.e., expressed numerically) were analyzed by calculating mean, standard deviation, median, quartiles, minimum, and maximum. Qualitative variables (i.e., not expressed numerically) were analyzed by calculating frequency and percentage for each value.

Comparison of qualitative variables between groups was performed using the chi-square test (with Yates' correction for 2×2 tables) or Fisher's exact test where low expected frequencies occurred. Comparison of quantitative variables between four groups was performed using ANOVA (when variables had a normal distribution) or Kruskal–Wallis test (otherwise). Post-hoc analysis was performed using Fisher's LSD test (for normal distribution) or Dunn's test (for non-normal distribution) to identify statistically significant differences between groups.

Normality of variable distribution was tested using Shapiro–Wilk test. A significance level of 0.05 was adopted for analysis; thus all p-values below 0.05 were interpreted as indicating significant relationships. Analysis was performed using R software version 3.5.2 [11].

Research Results

The average number of points obtained by respondents in the IRI questionnaire was 61.08 (SD=12.84) out of a possible 112. This result is slightly above the midpoint, indicating a slight predominance of "empathetic" responses. Scores ranged from 31 to 99 points. The median was 60 points, meaning half of the respondents scored less and half scored more than 60 points. The first and third quartiles were 52 and 67 points, respectively, indicating that the typical score in the analyzed group ranged between 52 and 67 points (Table 2).

Table 2. Analysis of IRI results in total empathy

Total empathy [points]	Range	Midpoint	N	$\bar{x}$	SD	Me
0–112	56	141	61.08	12.84	60	31

IRI Subscales. N — number of observations; $\bar{x}$ — mean; SD — standard deviation; Me — median

IRI Subscales

Each subscale has the same range of values, from 0 to 28, which allows for comparison between them. The highest scores were obtained in the Empathic Concern Scale (17.5±3.76), slightly lower in the Perspective Taking Scale (15.94±4.09). The lowest scores were obtained in the Personal Distress Scale (13.64±3.68) (Table 3).

Table 3. Analysis of results in individual IRI subscales (N=141)

IRI Subscales	$\bar{x}$	SD	Me
Fantasy Scale	14	5.62	14
Perspective Taking	15.94	4.09	15
Empathic Concern	17.5	3.76	17
Personal Distress	13.64	3.68	14

N — number of observations; $\bar{x}$ — mean; SD — standard deviation; Me — median

The group was divided based on the length of service in the nursing profession into 4 subgroups. The highest scores for Total Empathy were obtained in the group of nurses with more than 20 years of service (62.07±12.03), and the lowest scores in the group of nurses with 11 to 20 years of service (58.13±13.88). In the group of nurses with up to 5 years of service, the highest score was obtained in the Empathic Concern Scale (16.88±3.27) and the lowest in the Personal Distress Scale (13.04±3.78). In the group of nurses with 6–10 years of service, the highest score was obtained in the Empathic Concern Scale (18±3.54) and the lowest in the Fantasy Scale (14.12±5.4). In the group of nurses with 11–20 years of service, the highest score was obtained in the Empathic Concern Scale (16±4.16) and the lowest in the Personal Distress Scale (13.09±3.22), similar to the group with more than 20 years of service (18.03±3.74 vs. 13.79 ±3.74). There were no significant correlations (as all p>0.05) (Table 4).

Regarding the workplace, the highest score for Total Empathy was obtained in the group of nurses working in the internal medicine ward (62.94±15.37) and the

Table 4. Relationships between total empathy and subscales with work experience

IRI	Up to 5 years (N=24)	6–10 years (N=17)	11–20 years (N=23)	Over 20 years (N=77)	p
Total Empathy					
$\bar{x}$±SD	60.33±14.57	61.59±12.96	58.13±13.88	62.07±12.03	0.479
Me	62	60	55	62	NP
Quartiles	49.5–65.25	53–65	51.5–63	54–68	
Fantasy Scale					
$\bar{x}$±SD	13.83±7.42	14.12±5.49	13.22±5.11	14.26±5.23	0.89
Me	14	15	13	14	p
Quartiles	7.75–20	10–17	10.5–15.5	11–18	
Perspective Taking					
$\bar{x}$±SD	16.58±4.31	14.94±4.02	15.83±4.3	16±4	0.606
Me	16	15	16	15	NP
Quartiles	13.75–18.25	13–16	13–18	13–18	
Empathic Concern					
$\bar{x}$±SD	16.88±3.27	18±3.54	16±4.16	18.03±3.74	0.135
Me	16.5	19	16	17	NP
Quartiles	14–18.25	15–20	14–17.5	15–21	
Personal Distress					
$\bar{x}$±SD	13.04±3.78	14.53±3.92	13.09±3.22	13.79±3.74	0.523
Me	13	14	13	14	p
Quartiles	11.5–15	13–17	11.5–15	12.–16	

p=normal distribution in groups, ANOVA; NP=non-normal distribution in groups, Kruskal–Wallis test; $\bar{x}$ — mean; SD — standard deviation; Me — median

lowest among nurses working in the intensive care unit. In terms of individual subscales, in the group of nurses from the neurology ward, the highest score was obtained in the Empathic Concern Scale (17.06±3.77) and the lowest in the Personal Distress Scale (13.17±3.55). Among nurses working in the intensive care unit, the highest score was obtained in the Empathic Concern Scale (17.51±2.73) and the lowest in the Fantasy Scale (12.9±4.97). In the group working in the emergency department, the highest score was obtained in the Empathic Concern Scale (17.51±2.73) and the lowest in the Personal Distress Scale (13.14±4.51). For nurses working in the internal medicine ward, the highest score was obtained in the Empathic Concern Scale (17.55±4.53) and the lowest in the Fantasy Scale (14.73±5.13). No statistically significant differences were observed between the groups (p>0.05) (Table 5).

Table 5. Relationship between total empathy and subscales with workplace

IRI	Neurology Dept. (N=34)	ICU (N=39)	Emergency Dept. (N=35)	Internal Medicine Dept. (N=33)	p
1	2	3	4	5	6
Total Empathy					
Quartiles	61.7±13.4	58.97±8.21	61.06±14.1	62.94±15.37	0.843
$\bar{x}$±SD	62	60	60	58	NP
Me	50.25–69.25	53.5–63	53–71	52–70	
Fantasy Scale					
Quartiles	14.53±6.02	12.9±4.97	14.03±6.36	14.73±5.13	0.482
$\bar{x}$±SD	14.5	13	14	14	NP
Me	11–18	8–16	9.5–19	11–17	

Table 5. Continued

1	2	3	4	5	6
Perspective Taking					
Quartiles	16.94±4.11	15.13±2.76	16.03±4.42	15.79±4.89	0.276
$\bar{x}$±SD	16.5	15	15	15	NP
Me	14–18.75	13–16	12.5–18	13–18	
Empathic Concern					
Quartiles	17.06±3.77	17.51±2.73	17.86±4.04	17.55±4.53	0.697
$\bar{x}$±SD	16	17	18	17	NP
Me	14–18.75	15–20	14–20.5	15–20	
Personal Distress					
Quartiles	13.17±3.55	13.44±2.89	13.14±4.51	14.88±3.55	0.168
$\bar{x}$±SD	13	14	13	14	p
Me	11–15.75	12–15	11.5–16	13–17	

p=normal distribution in groups, ANOVA; NP=non-normal distribution in groups, Kruskal–Wallis test; $\bar{x}$ — mean; SD — standard deviation; Me — median

Discussion

The results of the conducted studies indicate an average level of empathy among the surveyed nurses, which is consistent with previous studies conducted in Poland [12]. The average number of points obtained in the IRI questionnaire was 61.08, suggesting that nurses exhibit a moderate level of empathy. These results are similar to those obtained in other studies, which also indicate an average level of empathy among nursing staff [1].

Analysis of the results in the context of work experience showed that nurses with the longest work experience (over 20 years) obtained the highest scores in total empathy. This is consistent with the literature, which suggests that professional experience can positively influence the development of empathy [2]. Longer work experience may be associated with a greater number of interactions with patients, allowing for the development of empathetic skills. However, these differences were not statistically significant, which may suggest that other factors, such as individual personality traits, may play an equally important role [3].

The results of our own studies also indicate differences in the level of empathy depending on the workplace. The highest level of total empathy was recorded among nurses working in the internal medicine ward, while the lowest level of empathy was observed in the intensive care unit. This may be due to differences in the nature of work in individual wards. Internal medicine wards often require long-term care for patients, which may foster the development of deeper relationships and greater empathy [4]. On the other hand, work in the intensive care unit may be more stressful and demanding, which can affect the level of empathy.

The analysis of the IRI subscales showed that the highest scores were obtained in the Empathic Concern Scale, suggesting that nurses are particularly sensitive to the needs and feelings of others. This is consistent with previous studies indicating that empathic concern is a key element of nursing work. The lowest scores were obtained in the Personal Distress Scale, which may suggest that nurses are less likely to feel discomfort in situations requiring empathy, which can be beneficial in a professional context.

Empathic competencies are particularly desirable in relation to chronically ill and dying patients. D. Zarzycka et al. describe the role of the nurse accompanying the patient in these difficult moments as the "key to special care", dependent on her competencies, acquired skills, and expressed attitudes [12]. Such patients are most often treated in internal medicine and neurology wards. M. Krajewski emphasizes that reducing the suffering of sick people and a peaceful death in dignified conditions are possible thanks to the professional attitude of nurses with developed empathetic abilities. He also notes the necessity of supporting these predispositions with an appropriate level of knowledge and skills, self-education, and personal commitment [1].

Studies conducted among Polish nurses show that empathy remains at an average level, while a noticeable correlation exists between low levels of empathy and the phenomenon of professional burnout [13].

Conclusions

Empathy in the studied group is at an average level. The highest empathy index is noted in the Empathic Concern Scale of the IRI questionnaire. Furthermore the highest scores for total empathy were obtained in the group of nurses with over 20 years of work experience. In the studied group, the highest level of empathy is characterized by nurses from the internal medicine department and the lowest from the intensive care unit.

Implications for Nursing Practice

Nurses should be encouraged to apply an empathetic approach in their daily practice, which can contribute to improving the quality of care and patient satisfaction. Regular assessments of empathy levels can help identify areas requiring support and further development.

Regular monitoring of empathy levels among nursing staff using tools such as the Interpersonal Reactivity Index (IRI) can help identify training needs and evaluate the effectiveness of implemented support programs. Systematic assessment of empathy can also form the basis for introducing changes in personnel management policies.

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