Pomeranian J Life Sci 2019;65(4):61-66 doi: 10.21164/pomjlifesci.636

Aggression among nurses*

Zjawisko agresji wśród pielęgniarek

Maria Mazur✉

Pomorski Uniwersytet Medyczny w Szczecinie, Zakład Pielęgniarstwa, ul. Żołnierska 48, 71-210 Szczecin
Pomeranian Medical University in Szczecin, Department of Nursing
✉ mmazur116@gmail.com

ABSTRACT

Introduction: Aggression among nurses is a topic that is lively and often touched. However, the level of nurses' aggression needs to be analyzed with regard to stress, personality traits, and sociodemographic variables.

The aim of this study was to assess the level of aggression among nurses with regard to stress, personality, sociodemographic data, and work-related factors.

Materials and methods: The study involved 189 nurses employed in West Pomeranian hospitals. The research instruments were: the Buss–Perry Aggression Questionnaire (BPAQ), the Neuroticism-Extroversion-Openness-Five Factor Inventory (NEO-FFI), the Perceived Stress Scale (PSS-10), and a self-developed questionnaire concerning sociodemographic data.

Results: Chronic stress, longer work experience, neurotic personality, place of residence, and the form of employment, translate into aggression experienced by nurses. The general aggression rate according to the BPAQ was 69.9 ±18. According to the PSS-10, the largest group of respondents (38.62%) were nurses with the highest stress levels (7–10 sten scores). The nurses with higher perceived stress levels were more prone to anger, verbal aggression and hostility ($p < 0.00$).

Conclusions: Aggression in the nursing environment is common and is determined by the severe stress faced by nurses. Unquestionably, the levels of stress and aggression are directly proportional. The most common personality traits among nurses are conscientiousness and agreeableness. A higher level of neuroticism is associated with proneness to aggression. The level of aggression is determined by sociodemographic data, stress, and personality traits. Variables that characterize nurses showing aggressive behaviors are: having children, advanced age, and living in a city with a population of up to 100,000, as well as having several jobs and a contract for a specific task as a form of employment.

Keywords: nurses; aggression; stress; personality.

ABSTRAKT

Wstęp: W przeszłości zjawisko agresji wśród pielęgniarek interesowało wielu badaczy. Wciąż jednak konieczne jest zbadanie jej poziomu w zależności od odczuwanego stresu, typu osobowości oraz innych zmiennych socjodemograficznych.

Celem badań była ocena nasilenia agresji wśród pielęgniarek z uwzględnieniem takich czynników, jak: stres, wpływ osobowości, zmienne socjodemograficzne oraz związane z pracą.

Materiały i metody: W badaniach udział wzięło 189 czynnych zawodowo pielęgniarek z zachodniopomorskich szpitali. Wykorzystano w nich autorski kwestionariusz ankietowy dotyczący danych socjodemograficznych oraz 3 standaryzowane narzędzia badawcze: kwestionariusz agresji Bussa–Perry'ego (BPAQ), Inwentarz Osobowości (NEO-FFI) oraz Skalę Odczuwanego Stresu (PSS-10).

Wyniki: Chroniczny stres, długość stażu pracy, osobowość neurotyczna, miejsce zamieszkania oraz forma zatrudnienia przekładają się na agresję wśród pielęgniarek. Na podstawie wyników kwestionariusza BPAQ wykazano, że ogólny wskaźnik agresji wśród badanych wyniósł M ±SD = 69,9 ±18. Z opracowanych wyników skali PSS-10 wynikało, że najliczniejszą grupę badanych (38,62%) stanowiły pielęgniarki odczuwające stres na poziomie 7–10 stenów. Osoby o wyższym postrzeganiu odczuwanego stresu były bardziej skłonne do gniewu, agresji słownej, wrogości ($p < 0,00$).

Wnioski: Zjawisko agresji wśród pielęgniarek jest częste i powiązane z silnie odczuwanym przez nie stresem – im większy stres respondentki odczuwają, tym bardziej rośnie ich skłonność do agresji. Najczęściej występującymi cechami osobowości wśród pielęgniarek są sumienność oraz ugodowość, a nasilenie neurotyczności sprzyja skłonności do agresji. Wśród czynników socjodemograficznych, które wpływają na nasilenie agresji wśród pielęgniarek są m.in.: mieszkanie w dużych miastach, praca w kilku miejscach oraz zatrudnienie na umowach cywilnoprawnych.

Słowa kluczowe: pielęgniarki; agresja; stres; osobowość

INTRODUCTION

Despite the fact that the phenomenon of aggression is not unknown to us, there is not one universally accepted definition of aggression [1]. It is recognized as an intentional action which aims at causing harm, pain or damage to another person [2].

Aggression is increasingly being studied, and interest in this subject is absolutely understandable. First of all, it is a multidimensional phenomenon, so it should be interpreted at many levels, and various concepts should be taken into account. What is more, aggression has negative social consequences whose long-term effects are difficult to predict [1].

* A concise version of the master's thesis approved by the Council of the Faculty of Health Sciences, Pomeranian Medical University in Szczecin. Thesis supervisor: dr hab. n. zdr. Elżbieta Grochans, prof. PUM. Original version consists of 68 pages, 17 tables, 59 references.

Literature mainly provides reports on patient aggression towards nurses. Both verbal and nonverbal attacks resulting from difficulties accepting their condition. Sometimes however, they are immediate reasons for psychiatric hospitalization. Disease is a burden for both the patients and their families [3]. The most common form of patient aggression faced by nurses is verbal attacks: squabbles, threatening to file a complaint, or taking revenge. There are also dangerous forms of nonverbal aggression, such as throwing objects and physical abuse [4, 5]. As a result of such behavior, nurses feel frightened and lose their sense of safety. Aggression is often observed among members of the therapeutic team. Interpersonal conflicts between superiors and subordinates and between co-workers result from various problems. Nursing working conditions are far from perfect and involve severe time pressure, insufficient staff, being overworked, being employed in several places, and being managed by people untrained for this job. In the current situation, avoiding aggression is impossible. Unfortunately, unsettled disputes lead to further escalation of the problem: verbal attacks, insults, shouting, or ignoring [6, 7]. Reports about acts of aggression from other team members are alarming. Even if such behaviors are incidental, they reflect the worker's inability to cope effectively with occupational stress and negative emotions. As a consequence, we observe a decline in the quality of patient care and the quality of nurses' lives [4, 8]. An hypothesis concerning the causes of aggression between nurses is upsetting. There are grounds to conclude that aggressive behaviors do not result from psychological or emotional deficits of an aggressor-nurse, but rather from imitating co-workers – in other words, nurses learn aggression from their colleagues [7]. Methods of persecution are sometimes so subtle that they are almost impossible to notice and recognize as aggression. Aggressive behavior is a threat to the social and professional status of the attacked person, who is exposed to constant criticism, humiliating remarks and intimidation. It also often happens that groundless accusations are made, giving rise to unfair rumors and slander. Aggressive behavior also refers to social isolation, withholding information from a person, and ignorance. Victims of aggression are overloaded with work, and excessively controlled. It happens that instructions given to victims either require a higher competence than they have or, quite the reverse, completely undermine their professionalism [9].

The circumstances in which Polish nurses work make their jobs requiring, onerous, and extremely stressful [10, 11]. Our interest in the phenomenon of aggression in the nursing environment results from the fact that this problem is constantly growing. At the present stage, Polish nursing circles are ready to notice their mistakes, to analyze them, and to establish the causes. Moreover, they are prone to talk about their internal problems, and to make attempts at solving them. Hence, our analysis of the phenomenon of aggression in the context of stress, personality and sociodemographic data. We believe that the results described in this study will improve self-awareness of the nursing environment, and draw nurses' attention to their own aggressive behaviors.

The aim of this study was to assess the level of aggression among nurses with regard to stress, personality, sociodemographic data (place of residence, having children, age), and work-related factors (form of employment and years of service).

MATERIALS AND METHODS

The study was conducted between the last quarter of 2017 and the first quarter of 2018. Participation was completely anonymous. The inclusion criteria were: being employed, working as a nurse, and taking part in the study on a voluntary basis.

The study sample consisted of 189 nurses, 97.88% women and 2.12% men. Among the respondents 41.27% were aged between 40–49 years. The majority of the participants were citizens of cities with a population of over 100,000. Most nurses had children older than 18 years. The average time on the job was 19.97 years. The majority of the participants worked 12-hour shifts on the basis of an employment contract.

This survey-based study was carried out in Szczecin hospitals: the Independent Public Clinical Hospital No. 1 at the Pomeranian Medical University in Szczecin (PMU), and the Independent Public Voivodeship Integrated Hospital, as well as other hospitals in West Pomeranian Voivodeship. The following research instruments were applied:

1) the Buss–Perry Aggression Questionnaire (BPAQ) is a popular psychological self-assessment test measuring aggression in adults. The BPAQ includes 29 items, subdivided into 4 dimensions of aggression (which results from factor analysis): physical aggression (9 items), verbal aggression (5 items), anger (7 items), and hostility (8 items). The answers are rated on a scale 1–5, where 1 denotes "it completely does not suit me", and 5 – "it perfectly suits me";

2) the Perceived Stress Scale (PSS-10) is used to measure the level of stress caused by particular situations. The questionnaire contains 10 questions, and the answers reflect respondents' feelings about problems, behaviors, and coping with difficult situations during the previous month. Respondents provide subjective assessment of the frequency of particular events rating their responses on the scale 0–4 (0 denotes "never", and 4 – "very often");

3) the Neuroticism-Extroversion-Openness-Five Factor Inventory (NEO-FFI) – consists of 5 subscales measuring personality traits: neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness. Predisposition to experience negative emotions is associated with neuroticism. Extroversion is associated with optimistic and positive attitude towards everyday life. Openness to experience entails intellectual curiosity. Conscientiousness means a person's perseverance in pursuing a goal, and agreeableness refers to the interpersonal sphere. Sixty self-descriptive statements (12 for each subscale) are answered on the scale 1–5 (1 denoting "I absolutely disagree", 2 – "I disagree", 3 – "I do not know", 4 – "I agree", 5 – "I absolutely agree".

The study was approved by the Bioethical Commission of PMU.

Statistical analysis

The data were calculated and manipulated using Microsoft Excel 2016 PL. Statistical analysis was performed using IBM SPSS v. 22. The level of statistical significance was set at $p < 0.05$.

RESULTS

The BPAQ analysis average score was 17.8 ±5.9, the lowest score was 7, and the highest score was 33 points. The average score for physical aggression was 17.6 ±6.1, the minimum score was 9, and the maximum score was 35. The possible score for hostility ranged 8–37 points, and the average score obtained was 20.42 ±6.5. The average score for verbal aggression was 14.04 ±4.0, the lowest score was 5, and the highest score was 25. The general score for aggression was 69.8 ±18.3, the minimum score was 33, and the maximum score was 120 points (Tab. 1).

TABLE 1. Descriptive statistics of the level of aggression assessed by the Buss–Perry Aggression Questionnaire (BPAQ)

The BPAQ	M ±SD	Min–Max
Anger	17.8 ±5.9	7–33
Physical aggression	17.6 ±6.1	9–35
Hostility	20.42 ±6.5	8–37
Verbal aggression	14.04 ±4.0	5–25
Total	69.8 ±18.3	33–120

M – arithmetic mean; SD – standard deviation

The average score for the PSS-10 was 5.9 ±1.9, the minimum score was 1, and the maximum score was 10. Analysis showed that 38.62% of nurses had the highest levels of stress, 34.39% of nurses had average stress levels (5–6 sten scores), and 26.98% had low levels of stress (0–4 sten scores).

Analysis of the NEO-FFI results revealed that the studied nurses had high levels of conscientiousness and agreeableness. Extroversion and neuroticism were less common (Tab. 2).

TABLE 2. Descriptive statistics of the personality traits according to the Neuroticism-Extroversion-Openness-Five Factor Inventory (NEO-FFI)

The NEO-FFI	M ±SD	Min-Max
Neuroticism	4.8 ±1.9	1–10
Extroversion	4.8 ±1.7	1–10
Openness to experience	4.3 ±1.6	1–9
Agreeableness	5.9 ±2.0	1–10
Conscientiousness	6.9 ±1.7	3–10

M – arithmetic mean; SD – standard deviation

There was a moderate positive correlation between the levels of stress and aggression. The nurses with higher stress levels were more likely to exhibit verbal aggression, anger, and hostility ($p < 0.00$) – Table 3.

TABLE 3. The relationship between the results of the Perceived Stress Scale (PSS-10) and the results of the Buss–Perry Aggression Questionnaire (BPAQ)

The BPAQ	r	p
Anger	0.366	0.000
Physical aggression	0.278	0.000
Hostility	0.392	0.000
Verbal aggression	0.217	0.003
Total	0.395	0.000

r – Spearman's correlation coefficient; p – level of significance

Analysis of the data showed that the level of aggression was closely related to the type of personality. There was a positive correlation between the levels of neuroticism and aggression, with the more neurotic nurses more prone to physical aggression, verbal aggression, hostility, anger ($p < 0.05$). Agreeableness, on the other hand, was proved to correlate negatively with aggression. The nurses with high levels of agreeableness had the lowest levels of aggression. This was a statistically significant moderate correlation ($p < 0.05$). Both the levels of anger and physical aggression, and the general level of aggression statistically significantly negatively correlated with conscientiousness ($p < 0.05$) – Table 4.

TABLE 4. The relationship between personality traits according to the Neuroticism-Extroversion-Openness-Five Factor Inventory (NEO-FFI) and the results of the Buss–Perry Aggression Questionnaire (BPAQ)

The BPAQ	NEO-FFI									
	neuroticism		extroversion		openness to experience		agreeableness		conscientiousness	
	r	p	r	p	r	p	r	p	r	p
Anger	0.4	0.0	-0.1	0.2	-0.1	0.2	-0.3	0.0	-0.3	0.0
Physical aggression	0.3	0.0	-0.1	0.1	-0.1	0.1	-0.4	0.0	-0.3	0.0
Hostility	0.4	0.0	-0.1	0.1	-0.1	0.1	-0.3	0.0	-0.1	0.1
Verbal aggression	0.2	0.0	0.0	0.8	0.0	0.7	-0.2	0.0	-0.1	0.1
Total	0.4	0.0	-0.1	0.1	-0.1	0.1	-0.4	0.0	-0.3	0.0

r – Spearman's correlation coefficient; p – level of significance

Analysis of the results demonstrated that age had an impact on the level of physical aggression, with a low statistically significant positive correlation (p = 0.002). The older respondents had higher levels of physical aggression than the younger ones (Tab. 5).

The level of verbal aggression was related to place of residence. The highest levels of verbal aggression were observed in the residents of cities with a population of up to 100,000 (15.1 ±4.2), and the lowest levels were found in residents of cities with a population above 100,000 (14.0 ±4.0), and the dwellers of rural areas (13.5 ±4.4). The respondents living in cities with a population of up to 10,000 had the lowest levels of verbal aggression (12.5 ±3.2; p = 0.03) – Table 6.

TABLE 5. The relationship between age and the results of the Buss–Perry Aggression Questionnaire (BPAQ)

The BPAQ	r	p
Anger	0.022	0.767
Physical aggression	0.221	0.002
Hostility	0.081	0.268
Verbal aggression	0.015	0.841
Total	0.128	0.079

r – Spearman's correlation coefficient; p – level of significance

The level of physical aggression was proved to be determined by the fact of having children. Analysis demonstrated that those most likely to show physical aggression were respondents who had children aged 18 years and younger (19.7 ±6.4). Lower levels of physical aggression were noted in the participants having children older than 18 years (17.8 ±6.2). The lowest levels of physical aggression were observed in the childless respondents (16.3 ±5.5; p = 0.032) – Table 7.

There was a positive correlation between the level of physical aggression and the length of time on the job (p = 0.004). The correlation was low but significant (r = 0.206) – Table 8.

The form of employment was related to the level of verbal aggression. The highest levels of verbal aggression were noted in the nurses employed on a contract for a specific task, working 12-hour-shifts (M ±SD = 16.0 ±3.1). The level of verbal aggression was lower in the nurses employed on a contract for a specific task, working 7.35-hour-shifts (M ±SD = 14.8 ±3.9), and those employed in several places (M ±SD = 15.0 ±5.3). Even lower levels of verbal aggression were found in the nurses working 12-hour-shifts on the basis of an employment contract (M ±SD = 13.9 ±3.6), and the lowest levels of verbal aggression were observed in the nurses working 7.35-hour-shifts on the basis of an employment contract (M ±SD = 12.8 ±4.2; p = 0.027). Other forms of aggression were independent of the form of employment (p > 0.05) – Table 9.

TABLE 6. The influence of place of residence on the level of aggression

The BPAQ	Place of residence								The Kruskal–Wallis Anova	
	rural areas		cities with a population of up to 10,000		cities with a population of up to 100,000		cities with a population of over 100,000			
	M ±SD	Me	M ±SD	Me	M ±SD	Me	M ±SD	Me	T	p
Anger	17.7 ±6.2	17	15.9 ±4.2	15	19.6 ±6.6	19	17.3 ±5.5	18	7.4	0.1
Physical aggression	17.4 ±5.8	15	15.9 ±5.0	15	18.8 ±6.0	18	17.5 ±6.5	16	5.9	0.1
Hostility	21.7 ±7.8	22	18.3 ±4.4	18	21.8 ±6.3	22	19.8 ±6.4	20	7.0	0.1
Verbal aggression	13.5 ±4.4	14	12.5 ±3.2	12.5	15.1 ±4.2	15	14.0 ±4.0	14	9.0	0.0
Total	70.3 ±20.1	71	62.6 ±13.1	62	75.4 ±18.7	76	68.6 ±18.1	69	10.2	0.0

M ±SD – arithmetic mean ±standard deviation; Me – median; T – Kruskal–Wallis Anova; p – level of significance

TABLE 7. The influence of having children on the level of aggression

The BPAQ	Having children						The Kruskal–Wallis Anova	
	I do not have children		<18 years of age		>18 years of age			
	M ±SD	Me	M ±SD	Me	M ±SD	Me	T	p
Anger	17.9 ±5.7	18.0	17.5 ±4.8	18.0	17.8 ±6.3	17.0	0.1	0.9
Physical aggression	16.3 ±5.5	16.0	19.7 ±6.4	19.0	17.8 ±6.2	15.0	6.9	0.0
Hostility	20.0 ±6.7	20.0	19.9 ±6.4	19.0	20.8 ±6.4	21.0	0.8	0.7
Verbal aggression	13.9 ±3.9	14.0	13.7 ±3.6	14.0	14.2 ±4.3	14.0	0.5	0.8
Total	68.0 ±7.6	69.0	70.8 ±16.0	72.0	70.7 ±19.4	69.0	1.1	0.6

M ±SD – arithmetic mean ±standard deviation; Me – median; T – Kruskal–Wallis Anova; p – level of significance

TABLE 8. The relationship between years of service and the results the Buss–Perry Aggression Questionnaire (BPAQ)

The BPAQ	r	p
Anger	-0.009	0.907
Physical aggression	0.206	0.004
Hostility	0.042	0.568
Verbal aggression	-0.02	0.782
Total	0.093	0.204

r – Spearman's correlation coefficient; p – level of significance

DISCUSSION

An analysis of literature demonstrated that aggression in the nursing environment is an area of special interest to researchers. In the majority of studies, aggression is regarded as something that attacks nurses from the outside, as they are attacked by aggressive patients, physicians, and other nurses. According to Kowalczuk et al., nurses experience stress associated with acts of aggression from their workmates and physicians, as well as vulgar and crude behavior of their superiors, in front of other workers [12]. Comparable results were reported by

TABLE 9. The influence of place of residence on the level of aggression

The BPAQ	Form of employment					The Kruskal–Wallis Anova	
	an employment contract 12 h	an employment contract 7.35 h	a contract for a specific task 12 h	a contract for a specific task 7.35 h	more than one form of employment		
	M ±SD	M ±SD	M ±SD	M ±SD	M ±SD	T	p
Anger	18.1 ±5.6	16.2 ±5.4	19.4 ±7.0	19.0 ±5.9	17.7 ±6.3	6.5	0.2
Physical aggression	17.0 ±5.6	18.1 ±6.4	18.5 ±5.9	17.9 ±6.8	16.8 ±6.5	2.5	0.6
Hostility	20.6 ±5.8	18.6 ±6.9	23.4 ±7.7	20.5 ±5.5	21.1 ±5.8	7.6	0.1
Verbal aggression	13.9 ±3.6	12.8 ±4.2	16.0 ±3.1	14.8 ±3.9	15.0 ±5.3	11.0	0.0
Total	69.7 ±16.1	65.8 ±19.4	77.3 ±18.6	72.1 ±18.0	70.6 ±21.6	6.5	0.2

M ±SD – arithmetic mean ±standard deviation; T – Kruskal–Wallis Anova; p – level of significance

Jankowiak et al., who found that 20% of the nurses faced various forms of aggression every day [13]. Also Lickiewicz and Piątek analyzed aggression towards nurses, finding that 70% of those surveyed fell victim to aggression, where more than 50% of aggressors were patients and their families, but – what is interesting – 15% of attacks were committed by other workers [4].

Thorough analysis of literature shows that aggression in the nursing environment is usually discussed in terms of severity, based on the nurses' subjective opinions. In so far as aggressive behavior by patients is not surprising, the aggression demonstrated by co-workers is alarming. Hence, in our study we did not just focus on nurses' subjective perception of the level of aggression in their working environment, but made an attempt at analyzing the aggression displayed by nurses themselves. These levels of aggression by nurses have so far not been studied. This problem has been ignored and treated as a taboo. Therefore, we made an effort to assess the level of aggression by nurses and to identify its determinants.

Our study revealed a statistically significant relationship between perceived stress and aggression. Individuals more likely to show verbal aggression, anger, and hostility were those living under constant stress. The most numerous aggressive nurses were those with the highest stress levels (7–10 sten scores). Burba and Gotlib demonstrated that a nursing job is extremely stressful and identified stress contributors. The most stressful factors were time pressure and very high responsibility. The nurses analyzed by these authors asserted that they often faced violence at work [14]. In the research of Zdziebło et al., who applied a questionnaire of their own design, the majority of the respondents regarded their work as stressful. The symptoms they mentioned were chronic fatigue, back pain, and – which should be especially emphasized – irritability and impatience [15].

Our investigation provided evidence that the level of aggression is closely linked to the type of personality. The most frequent personality traits in our study sample were conscientiousness and agreeableness, while in the study of Cybulska et al. the prevailing traits were extroversion, then openness to experience, agreeableness, and conscientiousness [16]. Both in our study and in Cybulska et al., the least common trait was neuroticism.

In our research, there was no statistically significant correlation between age and the level of aggression, apart from physical aggression, whose levels were higher in older individuals than in younger ones. Different results were obtained by Kliszcz et al., who informed that the levels of depression

and aggression were medium or low for the whole study sample [17]. According to Marcysiak et al., older individuals, and thus with more years worked, scored higher for emotional exhaustion [18]. Considering the above, the research carried out by Wieder-Huszla et al. is extremely interesting. It confirmed that younger people, those with the fewest years of service, and those enjoying the fruits of their work, had the lowest levels of depersonalization [19]. Also Dziąbek et al. described an interesting correlation based on the results of the Satisfaction with Life Scale – the life satisfaction of the nurses was inversely proportional to the number of years served [20].

In our study, there was no statistically significant relationship between the level of aggression and the number of hours worked per month. The form of employment was associated with the level of verbal aggression. Cwanda et al. reported that 80% of the nurses analyzed in their study claimed that an employment contract gave them a sense of safety and stability [21]. Furthermore, as the respondents claimed, a contract for a specific task was tantamount to a lack of employee benefits (70%), and entailed chronic fatigue (64%) as well as longer and irregular working time (56%). Thus it is possible that the level of aggression is associated with chronic fatigue and the lack of stability resulting from a form of employment (a contract for a specific task).

As noticed in this study, aggression in the nursing environment is common and requires observation. The problem of aggression displayed by nurses needs to be discussed. The purpose of the debate, however, should not be to find the culprits, or to stigmatize certain behaviors or consent to them. It is essential to identify the causes of aggression in the nursing environment and think about solutions to the problems.

CONCLUSIONS

Aggression in the nursing environment is common and determined by the severe stress faced by nurses. Unquestionably, the levels of stress and aggression are directly proportional.

The most common personality traits among nurses are conscientiousness and agreeableness. A higher level of neuroticism is associated with proneness to aggression.

The level of aggression is determined by sociodemographic data, stress and personality traits. Variables that characterize nurses showing aggressive behaviors are: having children, advanced age, and living in a city with a population up to 100,000, having several jobs, and a contract for a specific task as a form of employment.

REFERENCES

1. Stępnik A. Agresja – dwa ujęcia biologiczne. Ruch dla Kultury 2009;9:111-8.
2. Kenrick DT, Neuberg SL, Cialdini RB. Psychologia społeczna. Rozwiązane tajemnice. Gdańsk: Gdańskie Wydawnictwo Psychologiczne; 2002.
3. Wojnicka D, Włoszczak-Szubzda A. Wiedza i umiejętności personelu medycznego w odniesieniu do przejawów agresji ze strony pacjenta. Aspekty Zdrowia i Choroby 2017;2(2):51-63.
4. Lickiewicz J, Piątek J. Doświadczanie agresji w pracy pielęgniarskiej. Sztuka Leczenia 2014;3-4:11-22.
5. Barański J, Steciwko A, Mastalerz-Migas A, editors. Agresja w opiece zdrowotnej. Zagadnienia wprowadzające. Wrocław: Elsevier Urban & Partner; 2014.
6. Drabek M, Merecz D, Mościcka A. Skala narażenia na agresję w miejscu pracy pracowników służby zdrowia i sektora usług. Med Pr 2007;58(4):299-306.
7. Dellasega CA. Bullying among nurses. Am J Nurs 2009;109(1):52-8.
8. Rowe M, Sherlock H. Stress and verbal abuse in nursing: do burned out nurses eat their young? J Nurs Manag 2005;13(3):242-8.
9. Johnson SL. International perspectives on workplace bullying among nurses: a review. Int Nurs Rev 2009;56(1):34-40.
10. Śniegocka M, Śniegocki M. Analiza sposobów odpowiedzi na stres zawodowy wśród pielęgniarek. Probl Pielęg 2014;22(4):503-10.
11. Tartas M, Derewicz G, Walkiewicz M, Budziński W. Źródła stresu zawodowego w pracy pielęgniarek zatrudnionych na oddziałach o dużym obciążeniu fizycznym i psychicznym – hospicjum oraz chirurgii ogólnej. Ann Acad Med Gedan 2009;39:145-53.
12. Kowalczuk K, Krajewska-Kułak E, Kułak W, Van Damme-Ostapowicz K, Klimaszewska K, Rolak H. Wpływ agresji na występowanie stresu w populacji pielęgniarek i położnych na terenie województwa podlaskiego. Probl Hig Epidemiol 2010;91(3):444-50.
13. Jankowiak B, Kowalczuk K, Krajewska-Kułak E, Sierakowska M, Lewko J. Narażenie pielęgniarek na agresję. Ann Univ Mariae Curie-Skłodowska Sectio D 2006;60(Suppl 16):458-63.
14. Burba M, Gotlib J. Ocena występowania stresu w grupie pielęgniarek zatrudnionych w Samodzielnym Publicznym Szpitalu Klinicznym im. prof. Witolda Orłowskiego w Warszawie. Pielęg Pol 2017;1(63):54-61.
15. Zdziebło K, Zboina B, Stępień R, Mędrykowska A. Stres zawodowy jako czynnik determinujący jakość życia w opinii pielęgniarek. Polish J Health Fitness 2015;1:57-71.
16. Cybulska AM, Wieder-Huszla S, Jurczak A, Grochans E. Wpływ cech osobowości i stanu zdrowia psychicznego personelu pielęgniarskiego na wybór stylu radzenia sobie ze stresem w kontakcie z umierającym człowiekiem. Pielęg Pol 2017;3(65):427-36.
17. Kliszcz J, Nowicka-Sauer K, Trzeciak B, Sadowska A. Poziom lęku, depresji i agresji u pielęgniarek, a ich satysfakcja z życia i z pracy zawodowej. Med Pr 2004;55(6):461-8.
18. Marcysiak M, Dąbrowska O, Marcysiak M. Wypalenie zawodowe a radzenie sobie ze stresem pielęgniarek. Probl Pielęg 2014;22(3):312-8.
19. Wieder-Huszla S, Żak B, Jurczak A, Augustyniuk K, Schneider-Matyka D, Szkup M. Wypalenie zawodowe wśród personelu pielęgniarskiego. Fam Med Primary Care Rev 2016;18(1):63-8.
20. Dziąbek E, Dziuk U, Bieniek J, Brończyk-Puzoń A, Kowolik B, Borgosz J. Ocena satysfakcji życiowej w wybranej grupie pielęgniarek i położnych członków Beskidzkiej Okręgowej Izby Pielęgniarek i Położnych w Bielsku-Białej – doniesienie wstępne. Probl Pielęg 2015;23(3):279-84.
21. Cwanda K, Jabłońska N, Bartczyk N, Stankiewicz-Mróz A. Forma zatrudnienia i czas pracy jako czynniki budujące motywację pielęgniarek. Zeszyty Naukowe Politechniki Łódzkiej Organizacja i Zarządzanie 2017;1218(69):5-21.