




ORIGINAL PAPER

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Health behaviors in professionally active nurses – preliminary research

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ABSTRACT

Introduction. Health behaviors are all behaviors related to health. The study was aimed at recognizing the health behaviors of professionally active nurses.

Aim. The aim of the study was to evaluate health behaviors presented by professionally active nurses.

Material and methods. 103 nurses were included in the study. The method of diagnostic survey was used in the paper, and the research tool was the author's questionnaire for socio-demographic data and the Inventory of Health Behaviors.

Results. Nearly 60% of the respondents declared participation in preventive examinations. 70% of nurses put the family first in the hierarchy of life values. In the group of professionally active nurses, the value of health behavior index was 80.52 points.

Conclusion. The greatest value in the life of nurses was the family right after health and work. Nurses declared regular participation in preventive screenings. They presented the average level of health behaviors. The nurses' educational level positively affected the level of their health behavior. Nurses living in the countryside showed a higher level of health behavior. Nurses with chronic condition presented a lower level of health behaviors than their healthy colleagues.

Keywords. health, health behaviors, lifestyle, nurse

Introduction

According to the World Health Organization (WHO), "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".¹ The WHO definition points to three dimensions of health, i.e. physical, mental and social drawing attention to its multi-dimensional character.

The concept of health behavior refers to any health-related behavior. In other words, health (health-

-promoting) behaviors are actions taken by an individual for health reasons or such that have a documented impact on health.²

Numerous definitions of health behaviors may be found in the literature. According to A. Titkow, health behaviors are human activities and actions expressed by means of behavioral variables - related to the sphere of health and disease.³ However, according to Puchalski, health behaviors are actions, behaviors or types of be-

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Participation of co-authors: A – Author of the concept and objectives of paper; B – collection of data; C – implementation of research; D – elaborate, analysis and interpretation of data; E – statistical analysis; F – preparation of a manuscript; G – working out the literature; H – obtaining funds

Received: 2.08.2019 | Accepted: 4.09.2019

Publication date: September 2019

havior selected by an observer and / or a subject, which under a certain system of knowledge (colloquial beliefs, a given scientific theory or social ideology) remain significant, defined in the adopted option of a relationship with health in the sense assumed in this system.³

Health behaviors are those behaviors which, in the light of modern medical knowledge, cause specific - positive or negative - health effects in people who implement them, they are both reactions to all situations related to health, as well as habits and deliberate actions.³

The World Health Organization emphasizes the division of health into the following dimensions: physical, mental and social, therefore, health behaviors are to ensure maintenance, improvement and restoration of health in these areas:⁴

- physical health, which consists in ensuring personal hygiene of the body and surroundings, proper nutrition, adequate physical activity - motor and rehabilitation exercises as well as body immunity.
- mental health related to effective coping with stress, building self-confidence and strength, as well as trust and high self-esteem.
- social health means activities related to building relationships between social units, skillful communication, and solving social problems and disputes.⁴

Health-related behaviors are defined as e.g. health behaviors, health-promoting behaviors, anti-health behaviors, healthy lifestyle.

Everyone is responsible for one's health, therefore, they make own conscious choices of behaviors that are beneficial or negative for one's health.⁵ The choice of behaviors by a person depends i.e. on gender, age, life goals, and the life situation in which a person finds oneself, it is precisely conditioned by origin, social roles, education, material conditions, and place of residence. These choices also depend on cultural views, family or national traditions.⁶

Aim

The aim of the study was to evaluate health behaviors presented by professionally active nurses.

Material and methods

The research material was obtained by means of diagnostic survey method, survey technique based on the author's questionnaire to collect socio-demographic data and the Health Behavior Inventory according to Juczynski. The questionnaire items concerned the socio-demographic situation, health situation and life values of the respondents. The level of health behaviors was determined based on the Health Behavior Inventory. It consisted of 24 statements about health-related behaviors. The respondents' task was to indicate how often during a year they observe the behaviors listed by choosing a value

on the scale, where: 1 meant almost never, 2 rarely, 3 from time to time, 4 often, 5 almost always.⁷

On the basis of the frequencies of behaviors indicated by the respondents, the overall intensity of health-promoting behaviors was determined, as well as the intensity levels of four domains of health behaviors, i.e. proper nutrition habits, preventive behaviors, positive mental attitude, and health practices.

The score of general index of health behaviors was within 24-120 points. The higher the value, the higher the level of health behavior declared.⁷ The research was conducted in May 2018 among nurses employed at John Paul II Podkarpackie Provincial Hospital in Krosno. The study was anonymous and voluntary, the respondents were informed about the purpose of the study in the header of the questionnaire. The inclusion criteria for nurses were following: minimum one-year seniority and voluntary participation in study. Exclusion criteria, nurses who did not meet the above requirements.

The subject of the analysis was to present the health behavior of nurses. The surveys were considered to be completed correctly, when answers were provided to all questions asked. All subjects were informed about the purpose of the study and agreed to it. Before starting the research, the respondents were instructed how to complete the questionnaires correctly. 120 questionnaires were distributed, of which 103 correctly completed questionnaires were included in the final analysis.

Results

The survey covered 103 people working as nurses. In the group of nurses included in the study, rural residents dominated (68%), every third respondent (32%) lived in the city. Over $\frac{3}{4}$ of the respondents were people over 40 years of age.

Considering the professional education of the nurses participating in the study, the largest group had a bachelor's degree (41.8%). Post-secondary education (Registered Nurse - 38.8%) occurred with a slightly lower frequency, and nurses with master's degree were definitely the least numerous group, which in the study group accounted for less than 20%.

40% of nurses had specialization in nursing (various fields), and 60% of the respondents did not have such professional qualifications.

The largest group of respondents declared specialization in conservative nursing (16.5%), followed by emergency nursing (6.8%) and anesthesia and intensive care (6.8%). Such specializations also appeared as surgical nursing (3 persons, i.e. 2.9%) and oncological nursing (2 persons, i.e. 1.9%).

Every tenth person had seniority up to 10 years. Half of the respondents (49.5%) worked from 21 to 30 years, and every fifth worked as a nurse for over 30 years.

Table 1. Characteristics of the study group

Variable	N	%
Place of residence		
city	33	32.0
village	70	68.0
Age in years		
< 30	6	5.8
30-40	17	16,5
41-50	44	42,7
51-60	31	30.1
>60	5	4.9
Education		
Secondary	40	38.8
BSc	43	41.8
MSc	20	19.4
Specialization		
yes	41	40.0
no	62	60.0
Seniority		
> 10 years	11	10.7
10-20	18	17.5
21-30	51	49.5
>30	23	22.3
Participation in preventive screenings		
yes	61	59.6
no	42	40.4
Chronic diseases		
yes	29	28.3%
no	74	71.7%

The surveyed nurses were also asked about participation in preventive screenings. In the light of the results obtained, it is worth noting that over 40% of nurses, i.e. people dealing with health care professionally, did not participate in any preventive screening. Among persons declaring participation in preventive screening, the largest group (30.1%) had mammography. Secondly, cytological tests were indicated (16.5%), and thirdly - colonoscopy (8.7%). Other preventive screenings included gynecological examinations (2 persons, i.e. 1.9%), and in individual cases: tumor markers, glucose control and blood tests.

Every fourth respondent (28.3%) was treated for chronic disease, 71.7% of nurses did not suffer from such diseases. Thyroid diseases (hyperthyroidism or hypothyroidism - 9.7%) were mentioned most often among chronic diseases, followed by hypertension (5.8%). Other chronic diseases mentioned by nurses were diabetes (2 people), and in individual cases: microscopic vasculitis, hyperhomocysteinemia, osteoarthritis and degenerative spinal disc disease.

The respondents were asked to rank their three life values to determine which ones were most important to them. Family was the most frequently mentioned as the

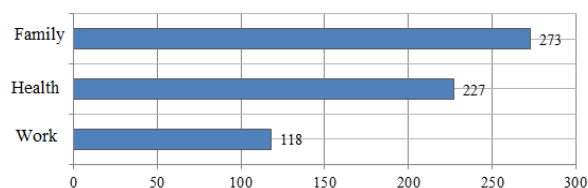
most important value (rank I) (68%). Health was mentioned as the second one (29%). In the third place, nurses placed the value of work (3%) (Table 2).

Table 2. The most important values in life

No.	Study	Rank I	Rank II	Rank III
1.	Family	68.0%	29.1%	2.9%
2.	Health	31.0%	58.3%	10.7%
3.	Work	1.0%	12.6%	86.4%

By converting the obtained distribution of responses into point values, where 3 points were awarded for rank I, 2 points for rank II, 1 points for rank III, a hierarchy of three values was created in the lives of the nurses surveyed.

The final score shows the key role of family in the respondents' lives. Health came second and work third (figure 1).

**Fig. 1.** Life value hierarchy, based on the point score

To gain knowledge about the health behaviors of nurses, study participants were asked to determine how often they followed specific behaviors during a year. A list of twenty-four behaviors was used to which respondents referred using a five-point scale, where 1 meant almost never and 5 meant almost always. The distribution of answers related to all twenty-four issues is presented in the figures below, followed by the calculation of the mean frequency level, to create a hierarchy of the most commonly implemented health behaviors in this professional group.

Based on the frequency of individual health behaviors indicated by the respondents, a general health behavior index was determined, as well as an intensity index in four categories, resulting from the grouping of all twenty-four analyzed health behaviors. Behaviors were assigned to the following broader domains:

- proper eating habits: questions 1, 5, 9, 13, 17, 21,
- preventive behavior: questions 2, 6, 10, 14, 18, 22,
- positive mental attitude: questions 3, 7, 11, 15, 19, 23,
- health practices: questions 4, 8, 12, 16, 20, 24.

Considering the use of a five-point scale to describe twenty-four behaviors, the value of the general index of health behaviors ranges from 24 to 120 points. In the analyzed group of nurses, the value of this index was 80.52 points. The minimum value of the index obtained

in the research sample amounted to 48 points, while the maximum - 108 points.

Taking into account the division into four domains of health behaviors presented above, it can be seen that the highest intensity of behaviors in the group of nurses is visible in the case of preventive behaviors (21.20 points), while the lowest in the case of health practices (18.08 points). The average intensity of behaviors that make up proper eating habits and a positive mental attitude is similar and approximates 20.60 points (figure 2).

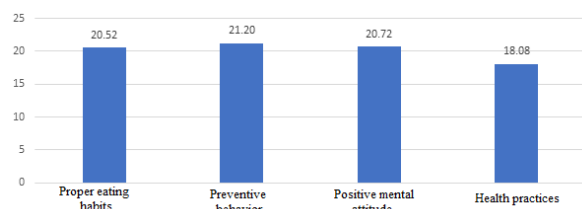


Fig. 2. Severity of nurses' health behaviors broken down into four domains

When analyzing the frequency of health behaviors of nurses, it is worth taking into account their characteristics, such as age, education, place of residence and occurrence of chronic diseases. For each of the variables listed, a calculation and comparison of the value of the general index of health behaviors was made, as well as the value of the index broken down into four domains of health behaviors.

Considering the value of the index of health behaviors of nurses, taking into account their age, it can be stated that it changes stepwise and not linearly. The highest value of the index was recorded for the youngest age category (up to 30 years), and then among people between 41 and 50 years of age and after 60 years of age. Definitely the lowest rate of health behaviors was found in nurses from the 31-40 age group (Figure 3).

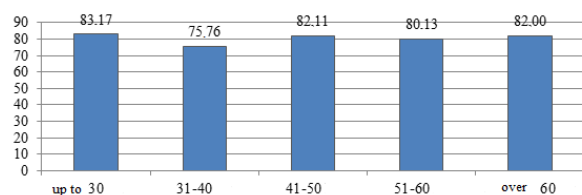


Fig. 3. General index of health behaviors and the age of respondents

The general index of health behaviors was higher in nurses with higher education than in registered nurses, however, in the case of persons with higher education, the value of the index was similar, with a slight advantage in the case of persons with BSc over persons with MSc (Figure 4).

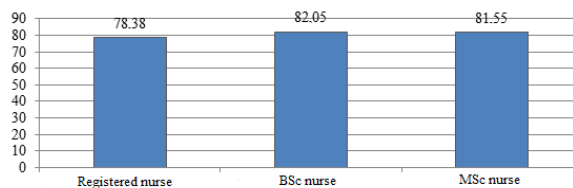


Fig. 4. General index of health behaviors and education of the respondents

When comparing the value of the general index of health behaviors with the place of residence of the respondents, it was found that nurses living in rural areas had a much higher index of health behaviors than nurses living in cities (difference of 4.57 points) (Figure 5).

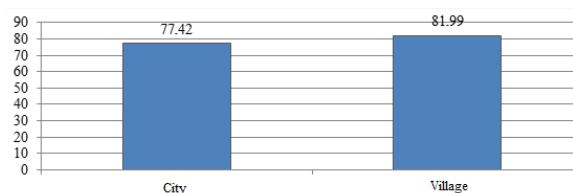


Fig. 5. General index of health behavior and the place of residence of the respondents

Interestingly, it seems that people treated for chronic diseases had a lower rate of health behaviors than those who did not suffer from any chronic disease (Figure 6).

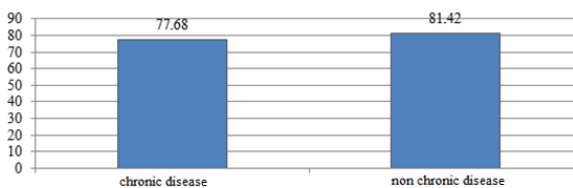


Fig. 6. General index of health behavior and the incidence of chronic disease in the respondents

Summarizing the discussed information on the frequency of health behaviors of the surveyed nurses, a summary of the mean was prepared - from the most common to the least frequently implemented. The nurses most often reduced smoking, had friends and regular family, avoided colds, ate a lot of fruit and vegetables and thought positively. The last positions in the created hierarchy, with the lowest declared frequency, were the avoidance of overwork and excessive physical exertion as well as sufficient rest (Figure 7).

Discussion

Numerous studies on healthy lifestyle are available in the literature of the subject. A survey by Kantar Public conducted in 2017 among 1,000 Polish residents aged 15-69 on physical activity of the population in line with

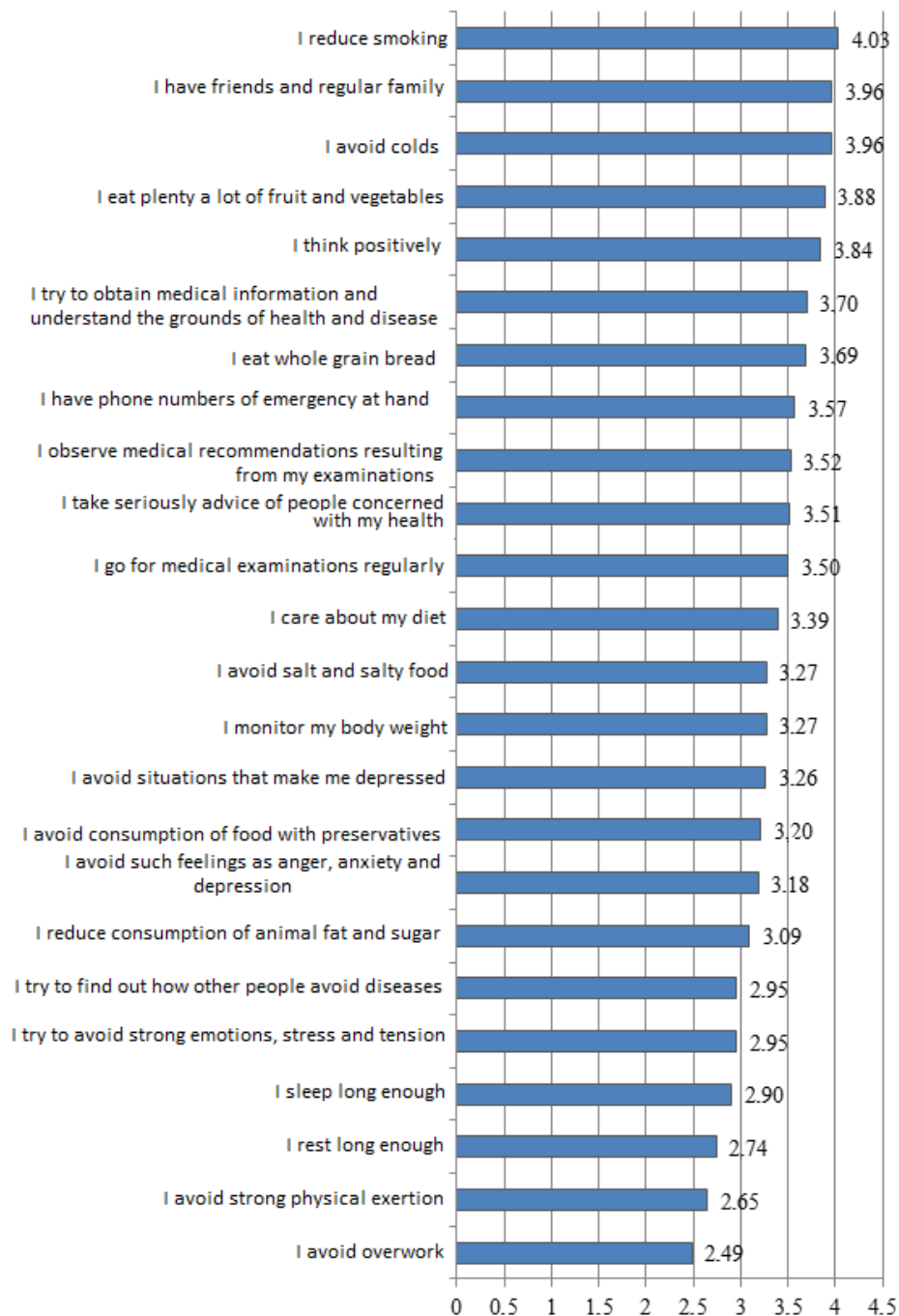


Fig. 7. Mean frequency of selected health-related behaviors

the requirements of the World Health Organization indicated the areas where the subjects are most often active physically.⁸ The largest group, i.e. 30%, indicated work, 27% associated it with mobility, 22% undertake physical activity in their free time, and 21% at home and in the garden.

Nurses, as a group professionally prepared to work in health care, are expected not only to care for the health of their patients, but to serve an example for the entire society on how to care for their own health. The studies on nursing staff conducted in many countries confirm that nurses have professional knowledge of health behaviors, but do not apply this knowledge to

themselves.⁹⁻¹¹ This is particularly visible in the area of diet.¹¹⁻¹³

In our study, nurses were asked about the most important value in life for them. Family, health and work came first. In the paper by Barbara Ślusarska et al., nurses pointed to health as the first, family as the second and work appeared in the third place.¹⁴

The study by Muszalik et al. conducted on a group of 255 nurses indicates that majority of them (71.6%) assess their health at a good level, and every fifth nurse assesses their health condition as poor. In our study, 30% of nurses surveyed indicated that they were struggling with a chronic disease, most often thyroid conditions

- 10 people, hypertension - 6 people, diabetes - 2 people and 6 nurses indicated other diseases.¹⁵ The study by Zagroba et al. on a sample of 100 professionally active nurses indicated that nurses' health condition is as follows: 45 people have back problems, 35 are overweight and 29 have frequent headaches, every fifth nurse declares no health problems - 23.¹⁶ In the same study, the authors came to the conclusion that nurses present average level of physical activity, which undermines their credibility as health promoters.

Over 60% of the nurses surveyed admitted that they participate in screenings, which is a surprisingly low result considering that the respondents are representatives of the medical profession and are required to serve as an example in the field of health. In the study by Mrozowicz and Guta conducted on a group of 100 women, 49% of women surveyed (n = 100) take part in preventive screenings at least once a year, and 7% do not participate in them at all.¹⁷

On the other hand, in the Andruszkiewicz and Nowik study among nurses and teachers by means of the Positive Health Behaviors Scale for Women (n = 83), where five domains were assessed: health care, nutrition, body care, preventive behaviours, psychosocial health and physical activity indicated that the profession does not differentiate the level of health behavior. The highest results were obtained in the area of body care, i.e. the respondents underwent periodic examinations (cytological examination, breast self-examination).¹⁸

It is also worth paying attention to the study by Remigrońska and Włoszczak-Szubzda, where the results indicate the reproduction of disturbing anti-health behaviors such as: bad eating habits, passive lifestyle, exposure to stress and insufficient rest in working nurses (n = 110).¹⁹ Lack of physical activity is also a problem for nurses in the USA, Turkey and Korea.^{11, 13, 20-21}

In the analysis, the value of the health behavior index in the group of nurses amounts to 80.52 points. The minimum value of the index obtained in the study sample was 48 points, while the maximum was 108 points (the range of values from 24 to 120 points). Based on our research, it can be concluded that the highest intensity of behavior in the group of nurses is visible in the case of preventive behavior (21.20 points), while the lowest in the case of health practices (18.08 points). The average intensity of behaviors that make up proper eating habits and a positive mental attitude is similar with approximately 20.60 points.

In the study by Justyna Palacz on a sample of 664 students of Physical Education, Physiotherapy, Tourism and Recreation as well as Pedagogy, the general index of health behaviors in women amounted to 78.02, while in men 73.28 points.²²

In turn, in the paper by Anna Walentukiewicz et al., where 77 nursing students were examined, the re-

sult was 73.19 points.²³ In another study by this author, where medical students were studied (n = 195), the life-style index evaluation showed that only every 10 student represents a pro-health attitude.²⁴

In the paper by Zadworna-Cieślak and Ogińska-Bulik the studies of open population (n = 285) using the Inventory of Health Behaviors showed that women (74.87) had a higher level of the health behavior index than men (70.60).²⁵

Taking into account our research and quoted studies of various authors, it can be stated that both in the open population and among medical professionals there are many deficits related to health-promoting behaviors.

Conclusion

The greatest value in the life of nurses was the family right after health and work. Nurses declared regular participation in preventive screenings. They presented the average level of health behaviors. The nurses' educational level positively affected the level of their health behavior. Nurses living in the countryside showed a higher level of health behavior. Nurses with chronic condition presented a lower level of health behaviors than their healthy colleagues.

References

1. Jonderka G. Podręczna encyklopedia zdrowia. Poznań: Wydawnictwo Zysk i S-Ka; 2002: 102.
2. Łuczyńska A. Zmiana zachowań zdrowotnych. Gdańsk: GWP; 2004: 14.
3. Sygit M. Zdrowie Publiczne. Warszawa: Wolters Kluwer; 2010: 25.
4. Gruszczynska M, Bąk-Sosnowska M, Plinta R. Zachowania zdrowotne jako istotny element aktywności życiowej człowieka. Stosunek Polaków do własnego zdrowia. *Hygeia Public Health*. 2015;50(4):558-565.
5. Suchocka L. Poczucie odpowiedzialności w zdrowiu i w chorobie, perspektywa neo-teoretyczna. Warszawa: Wydawnictwo Difin SA; 2011: 54.
6. Zadworna-Cieślak M, Ogińska-Bulik N. Zachowania zdrowotne młodzieży. Uwarunkowania podmiotowe i rodzinne. Warszawa: Wydawnictwo Difin; 2011: 46.
7. Juczyński Z. Narzędzia pomiaru w promocji i psychologii zdrowia. Warszawa: Pracownia Testów Psychologicznych; 2009:110-116.
8. Poziom aktywności fizycznej Polaków 2017. Ministerstwo Sportu i Turystyki, Kantar Public, 2017.
9. Ross A, Bevans M, Brooks AT, Gibbons S, Wallen GR. Nurses and health-promoting behaviors: Knowledge may not translate into self-care. *AORN Journal*. 2017;105(3):267-275.
10. Malik S, Blake H, Batt M. How healthy are our nurses? New and registered nurses compared. *British Journal of Nursing*. 2011; 20(8): 489-496.

11. Zapka JM, Lemon SC, Magner RP, Hale J. Lifestyle behaviours and weight among hospital-based nurses. *Journal of nursing management*. 2009;17(7):853-860.
12. Phiri LP, Draper CE, Lambert EV, Kolbe-Alexander TL. Nurses' lifestyle behaviours, health priorities and barriers to living a healthy lifestyle: a qualitative descriptive study. *BMC Nursing*. 2014;13(1):38.
13. Nahm ES, Warren J, Zhu S, An M, Brown J. Nurses' self-care behaviors related to weight and stress. *Nursing outlook*. 2012;60(5):23-31.
14. Ślusarska B, Barczak B, Zarzycka D, Dobrowolska B, Cuber T. Znaczenie wartości osobistych i symboli szczęścia wśród pielęgniarek aktywnych zawodowo. *Problemy pielęgniarstwa*. 2011;19(2):219-227.
15. Muszalik M, Kędziora-Kornatowska K, Marzec A, Klawe J. Analiza zachowań zdrowotnych, samooceny oraz zagrożeń zdrowia pielęgniarek studiujących zaocznie. *Probl Hig Epidemiol*. 2007;88(3):354-359.
16. Zagroba M, Kulikowska A, Marcysiak M, Wiśniewska E, Ostrowska B. & Skotnicka-Klonowicz G. Aktywność fizyczna pielęgniarek. *Problemy Pielęgniarstwa*. 2010;18(3):329-336.
17. Mrozowicz A, Guty E. Styl życia, a zachowania zdrowotne: poglądy kobiet. *Zdrowie i dobrostan*. 2013;1:133-147.
18. Andruszkiewicz A, Nowik M. Zachowania zdrowotne kobiet czynnych zawodowo. *Problemy Pielęgniarstwa*. 2011;19(2):148-152.
19. Remigrońska A, Włoszczak-Szubda A. Zachowania zdrowotne pielęgniarek czynnych zawodowo, *Aspekty zdrowia i choroby*, 2016, T 1: 41-51.
20. Kirag N, Ocaktan EM. Analysis of health promoting lifestyle behaviors and associated factors among nurses at a university hospital in Turkey. *Saudi Med J*. 2013;34(10):1062-7.
21. Kim MJ, Son KH, Park HY, et al. Association between shift work and obesity among female nurses: Korean Nurses' Survey. *BMC public health*. 2013;13(1):1204.
22. Palacz J. Zachowania zdrowotne studentów w świetle wybranych uwarunkowań. *Medycyna Ogólna i Nauki o Zdrowiu*. 2014;20(3):301–306.
23. Walentukiewicz A, Łysak A, Wilk B. Zachowania zdrowotne studentek pielęgniarstwa. *Problemy pielęgniarstwa*. 2013;21(4):484-488.
24. Walentukiewicz A, Łysak A, Wilk B. Styl życia studentek kierunków medycznych. *Probl Hig Epidemiol*. 2013;94(2):247-252.
25. Zadworna-Cieślak M, Ogińska-Bulik N. Specificity of health-related behaviours in middle and late adulthood. *Health Prob Civil*. 2018;12(1):7-13.