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## Assessment of health behaviours in family nurses

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### Abstract

**Introduction.** Health behaviours are understood as any behaviours (habits, attitudes, customs, values) that are concerned with health. Pro-health behaviours are all deliberate

activities aimed at maintaining or improving health. **Aim.** The aim of the research was the determination of health behaviours in family nurses. **Material and method.** The research was performed in 152 family nurses from the Lublin and Mazovian Region by means of Health Behaviour Inventory (the HBI). The research tool comprises 24 items in four categories: proper eating habits, preventive health behaviours, health practices, positive attitude. **Results.** The mean value of health behaviours indicator in the group researched was 85.86 points. A total of 49.34% of nurses presented a high level of health behaviours. The group of 40.97% of family nurses were individuals who depicted a moderate level of health behaviours. Merely 9.87% of the nurses researched showed a low level of health behaviours. On the basis of the analysis of the data collected it was found that preventive health behaviours were rated the highest (3.76 points), whereas health practices were rated the lowest (3.36 points). Proper eating habits and positive attitude were determined on a very similar level. **Conclusion.** The family nurses researched showed moderate level of health behaviours. The best results were obtained in preventive health behaviours, whereas health practices were rated the lowest. Professional experience of the nurses affected their health behaviours in terms of preventive behaviours

**Key words:** health behaviours, family nurses

## **Introduction**

Health behaviours comprise any behaviours (habits, attitudes, customs, values) that concern health. Pro-health activities are all deliberate actions aimed at maintaining or improving health. There are three methods of specifying health behaviours. The first one highlights the purpose of the actions, the second is concerned with the correlation between behaviour and health and the third one stresses the relationship between the knowledge of an individual and his/her health behaviours [1].

Professional attitudes and their realization by nurses can be determined by health behaviours. This profession, which is responsible for prevention and health education, has a

significant influence on the development of health potential in others. Thus, nurses themselves ought to present a considerable level of credibility [2,3].

**Aim.**

The aim of the research was determination of health behaviours in family nurses.

**Material and method**

The research was performed in a group of 152 family nurses from the Lublin and Mazovian Region in line with the ethical rules. Participation in the research was voluntary and preceded by obtaining informed consent to take part in it.

Characteristics of the research group is depicted in table1.

**Table 1. Characteristics of the research group**

Sociodemographic characteristics		%
Age	Up to 39 years old	26.32
	40-50 years old	44.08
	51 years old and more	29.60
Place of residence	Rural areas	25.66
	Urban areas	74.34
Education	Vocational	20.40
	Bachelor of Science in Nursing	37.50
	Master of Science in Nursing	42.10
Work experience	Up to 24 years	50.00
	25 years and more	50.00
Marital status	Single	26.30
	Married	73.70

The research was performed with the Health Behaviour Inventory which comprises 24 items divided into four categories: proper eating habits, preventive health behaviours, health practices, positive attitude. The total number of the points obtained (range 24-120 points) constitutes the so called general indicator of health behaviours intensity. The results are calculated into sten scale and categorized into: a low result (1-4 sten), a moderate result (5-6 sten) and a high result (7-10 sten) [4].

The values of the analysed parameters were presented using the mean value, standard deviation, cardinality and percentage. Differences between variables were determined by means of statistical tests: analysis of variance - for more than two groups; Student's t-test for two groups; U Mann-Whitney - for comparison of two independent collections and Kruskal-Wallis - for more than two independent groups. Significance level of  $p < 0.05$  was adopted to

indicate occurrence of statistically significant differences or correlations. STATISTCA 10.0 (StatSoft Polska) computer software was used to manage the database and statistics.

## Results

The mean value of health behaviours indicator in the group of family nurses researched was 85.86 points. A high level of health behaviours was presented by 49.34% of the nurses researched. Individuals with a moderate level of health behaviours constituted a group of 40.79%. Only 9.87% of the nurses depicted a low level of health behaviours.

According to the analysis of the data collected, it was found that preventive behaviours were rated the highest (3.76 points), whereas health practices were rated the lowest (3.36 points). Proper eating habits and positive attitude were determined on a comparable level (Table 2).

**Table 2. Mean values of health behaviours**

<b>Health behaviours</b>	<b>Mean</b>	<b>SD</b>
Health behaviours indicator	85.86	12.19
Proper eating habits	3.65	0.66
Preventive behaviours	3.76	0.67
Positive attitude	3.64	0.63
Health practices	3.36	0.62

Health behaviours were analysed with regard to the age of the individuals researched. Nurses aged 51 years of age and more (86.71 points) and up to 39 years of age presented the highest level of health behaviours. Proper eating habits and preventive behaviours were rated the highest in the group of nurses aged more than 51 years old. The highest results in terms of positive attitude and health practices were obtained in the group of nurses aged more than 39 years old. The difference between the groups was not statistically significant (Table 3).

**Tabela 3. Zachowania zdrowotne pielęgniarek rodzinnych z uwzględnieniem wieku**

**Health behaviours of family nurses with regard to age**

Health behaviours	up to 39 years old		40-50 years old		51 years old and more		Statistical analysis
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	
<b>Health behaviours indicator</b>	86.63	11.09	84.84	13.93	86.71	10.37	F=0.421 p=0.657
<b>Health behaviours indicator (STEN)</b>	6.50	1.54	6.33	1.89	6.56	1.37	F=0.286 p=0.752
<b>Proper eating habits</b>	3.68	0.61	3.60	0.70	3.69	0.66	F=0.352 p=0.704
<b>Preventive behaviours</b>	3.65	0.60	3.73	0.70	3.88	0.65	F=1.256 p=0.288
<b>Positive attitude</b>	3.76	0.53	3.58	0.74	3.63	0.52	F=1.025 p=0.361
<b>Health practices</b>	3.34	0.67	3.23	0.64	3.25	0.54	F=0.445 p=0.642

*F — analysis of variance*

The next stage of the research involved determining health behaviours depending on the nurses' place of residence. The results indicated a similar level of declared health behaviours both in the general result and in all elements of the Health Behaviour Inventory (rural inhabitants slightly outnumbered the group). Statistical analysis did not show a significant difference between the groups researched (Table 4).

**Table 4. Health behaviours of family nurses with regard to place of residence**

Health behaviours	Rural areas		Urban areas		Statistical analysis
	Mean	Standard deviation	Mean	Standard deviation	
Health behaviours indicator	86.26	10.94	85.73	12.63	Z=0.117 p=0.907
Health behaviours indicator (STEN)	6.42	1.54	6.45	1.70	Z= -0.323 p=0.747
Proper eating habits	3.67	0.61	3.64	0.69	t=0.337 p=0.736
Preventive behaviours	3.87	0.52	3.72	0.70	Z=0.886 p=0.376
Positive attitude	3.64	0.64	3.64	0.63	Z=0.028 p=0.978
Health practices	3.19	0.55	3.29	0.64	Z= -0.790 p=0.430

For the purpose of the research, the nurses were divided according to their marital status into two groups: single and married individuals. Married nurse obtained higher scores (86.68 points) in the general result and in all the subscales of the inventory. The statistical analysis did not show significant differences between the groups (Table 5).

**Table 5. Health behaviours of family nurses with regard to marital status**

Health behaviours	Single		Married		Statistical analysis
	Mean	Standard deviation	Mean	Standard deviation	
<b>Health behaviours indicator</b>	83.58	11.51	86.68	13.82	Z= -1.264 p=0.206
<b>Health behaviours indicator (STEN)</b>	6.18	1.77	6.54	1.61	Z= -1.122 p=0.262
<b>Proper eating habits</b>	3.51	0.73	3.70	0.64	Z= -1.312 p=0.189
<b>Preventive behaviours</b>	3.60	0.73	3.81	0.63	Z= -1.648 p=0.100
<b>Positive attitude</b>	3.59	0.63	3.66	0.63	Z= -0.420 p=0.675
<b>Health practices</b>	3.22	0.71	3.28	0.59	Z= -0.349 p=0.727

*U Manna-Whitney- Z test*

Nurses with secondary medical education presented the highest level of health behaviours (86.07 points). Preventive behaviours were also rated the highest in this group (3.99 points). The highest result in the group of nurses with the Bachelor's degree in Nursing was obtained in terms of proper eating habits (3.72 points) and health practices (3.28 points). Positive attitude was rated the highest in the group of nurses with the Master's degree in Nursing (3.68 points). No statistically significant difference between the groups of nurses was found (Table 6).

**Table 6. Health behaviours of family nurses with regard to education**

Health behaviours	Secondary medical		Bachelor's degree in Nursing		Master's degree in Nursing		Statistical analysis
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	
<b>Health behaviours indicator</b>	86.07	11.84	85.93	11.84	85.70	12.96	F=0.421 p=0.657
<b>Health behaviours indicator (STEN)</b>	6.40	1.61	6.45	1.63	6.45	1.72	F=0.286 p=0.752
<b>Proper eating habits</b>	3.56	0.69	3.72	0.66	3.63	0.66	F=0.352 p=0.704
<b>Preventive behaviours</b>	3.99	0.49	3.69	0.57	3.71	0.79	F=1.256 p=0.288
<b>Positive attitude</b>	3.57	0.66	3.63	0.60	3.68	0.64	F=1.025 p=0.361
<b>Health practices</b>	3.23	0.61	3.28	0.63	3.27	0.62	F=0.445 p=0.642

*F — analysis of variance*

The last aspect analysed was the determination of health behaviours of family nurses in terms of their work experience. Respondents with greater professional experience showed/presented a higher level of health behaviours both in the general result and in all subscales researched. The difference was statistically significant only in terms of preventive behaviours (p=0.034). Detailed analysis of the results is depicted in table 7.



**Table 7. Health behaviours of family nurses with regard to professional experience**

Health behaviours	Up to 24 years old		25 years old and more		Statistical analysis
	Mean	Standard deviation	Mean	Standard deviation	
Health behaviours indicator	84.37	13.23	87.36	10.94	t= -1.517 p=0.131
Health behaviours indicator (STEN)	6.24	1.81	6.64	1.48	t= -1.526 p=0.129
Proper eating habits	3.55	0.68	3.74	0.64	t= -1.741 p=0.083
Preventive behaviours	3.64	0.69	3.87	0.62	t= -2.138 p=0.034
Positive attitude	3.64	0.67	3.64	0.59	t= -0.064 p=0.949
Health practices	3.23	0.65	3.30	0.59	t= -0.764 p=0.446

*t- Student's t-test*

## Discussion

Leading a healthy lifestyle facilitates modelling improper behaviours in health care recipients. However, plentiful research indicates that nurses do not present a high level of health behaviours. The risk of obesity, insufficient or lack of time devoted to physical activity, improper eating habits, smoking, excessive alcohol consumption, inadequate rest, stressful working environment are the most common problems that nurses face [5-8].

A moderate level of health behaviours of family nurses was found in the authors' own research. Similar results were obtained by Rasińska and Nowakowska [9] whose research showed a moderate level of health behaviours at 85.98 points. The research by other authors were consistent with our results: the research by Książek et al. performed in a group of 183 theatre nurses[10], the research by Różewicz et al. who assessed health behaviours in 200 nurses employed in two hospitals in Lublin [11], as well as the research by Jankowska-Polańska et al. who studied 100 professionally active nurses [12].

Having analysed behaviours in the given subscales in the authors' own research, respondents declared the highest scores in preventive behaviours and the lowest ones in health

practices. Proper eating habits and positive attitude were rated almost identically. Similar results were obtained in the research by Rózewicz et al. [11].

The research performed did not indicate statistically significant differences in the assessment of health behaviours between age groups. Proper eating habits and preventive behaviours were rated the highest by nurses aged 51 years old and more, whereas positive attitude and health practices by respondents aged up to 39 years of age. Rózewicz et al. [11] also did not find statistically significant differences with regard to the age. It was observed, though, that nurses aged 51-65 years old presented the highest level of health behaviours in all categories.

No significant relation between the intensity of health behaviours and education was noted in the authors' own research. Nevertheless, it was observed that family nurses with higher education declared the highest level of health behaviours in all aspects except for preventive behaviours which were rated higher by the respondents with secondary medical education. Rózewicz et al. [11] proved that proper eating habits and preventive behaviours were scored the highest in the group of nurses with Bachelor's degree, whereas health practices were rated the highest by respondents with higher education. The lowest results in terms of positive attitude were found in the group of respondents with Master's degree.

No influence of marital status on the level of health behaviours presented was found in the authors' own research. However, married nurses declared better health behaviours in all subscales. The results obtained by Rózewicz et al. [11] indicated that single respondents rated health practices and proper eating habits slightly better, whereas married ones rated positive attitude and preventive behaviours better.

It was noted in the authors' own research that the level of health behaviours increases along with professional experience. Similarly, the research by Rózewicz et al. [11] proved that the respondents with work experience of 30 years or more declared better health behaviours in all aspects and in the general result compared to individuals researched with shorter work experience.

Family nurses who participated in the research present the knowledge of pro-health behaviours and the majority of them accept the necessity of fulfilling them in their everyday lives, which means that they realise health behaviours. However, this does not regard the entire research group.

Nurses who are aware of the importance of healthcare and potential for health development can contribute to the achievement of health aims in the entire society; therefore, it is vital for them to have their level of health behaviours as high as possible [13].

### **Conclusions**

Family nurses researched presented a moderate level of health behaviours. The highest results were obtained in terms of preventive behaviours, whereas health practices were rated the lowest. Professional experience of the nurses affected their preventive behaviours.

### **Conflicts of interest**

The authors declared no potential conflicts of interest.

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