Krzyżanowska Ewa, Polska Magda, Łuczyk Robert Jan, Wawryniuk Agnieszka, Sawicka Katarzyna, Olszak Cecylia, Daniluk Jadwiga. Subjective evaluation of health behaviour of patients with chronic kidney disease. Journal of Education, Health and Sport. 2017;7(12):118-132. eISSN 2391-8306. DOI http://dx.doi.org/10.5281/zenodo.1108803
http://ojs.ukw.edu.pl/index.php/johs/article/view/5111

The journal has had 7 points in Ministry of Science and Higher Education parametric evaluation. Part B item 1223 (26.01.2017).
1223 Journal of Education, Health and Sport eISSN 2391-8306 7

The authors declare that there is no conflict of interests regarding the publication of this paper.
Received: 10.11.2017. Revised: 15.11.2017. Accepted: 12.12.2017.

Subjective evaluation of health behaviour of patients with chronic kidney disease

Ewa Krzyżanowska[1], Magda Polska[2], Robert Jan Łuczyk[1], Agnieszka Wawryniuk[1],

Katarzyna Sawicka[1], Cecylia Olszak[1], Jadwiga Daniluk[1]

[1]Department of Internal Medicine and Department of Internal Medicine in Nursing, Faculty of Nursing and Health Sciences, Medical University of Lublin

[2]Faculty of Nursing and Health Sciences, Medical University of Lublin Graduate

Abstract

The aim of the study: The aim of the study was to evaluate of health behaviour in each of several of patients with chronic kidney disease.

Material and methods: In total 116 people diagnosed with chronic kidney disease were tested. The study was conducted from February to April of 2017 in the Nephrology Department of the Regional Clinical Hospital in Zielona Góra, Poland, the Nephrology and Arterial Hypertension Department of the Regional Specialist Hospital in Lublin, Poland as well as in the Private Healthcare Centre "Diaverum" in Lublin, Poland. In the study the Inventory of the Health Behaviour (Inwentarz Zachowań Zdrowotnych, IZZ) was used. IZZ consists of four health behaviour categories: positive mental attitude, preventative actions, healthy eating habits and health practices. The patients who were research subjects determined the frequency of particular factors within the above mentioned categories. The total numerical values determine the overall health behaviour index, whose value lies between 24 and 120 points. The higher the score, the higher the declared frequency of health behaviour.

Results: Patients with chronic kidney disease described their health behaviour as average. The highest rated categories were health practices and preventative actions as opposed to healthy eating habits which were rated the lowest. The educational background and place of residence do not influence the health behaviour significantly. The inhabitants of the Lubelskie region (with the capital city of Lublin) rated their health behaviour higher than the inhabitants of the Lubuskie region (with the capital city of Zielona Góra) in all the categories. However, this discrepancy turned out to be statistically insignificant. The age of the patients had a significant impact on the responses of the research subjects. The patients between 60 and 69 had the highest index value, and these under 49 the lowest.

Conclusions: The study concludes that women rated their health behaviour higher than men, within the analysed categories except for healthy eating habits, which men rated higher than women. The place of residence did not influence the ratings of the research subjects. People living in urban areas as well as in rural areas rated their health behaviour on a similar level. In the researched group the age is the factor determining the health behaviour – the oldest patients rated their health behaviour the highest. The kind of treatment influences the health behaviour ratings. Patients who are treated with haemodialysis rated their health behaviour higher than those undergoing conservative treatment.

Keywords: Health behaviour, chronic kidney disease

Introduction

Currently in Poland, and indeed in the world, more and more people are diagnosed with chronic kidney disease. It is estimated that there are ca. 4 million people with this condition. Chronic kidney disease (CKD) is considered to be one of the diseases of affluence.[6]

Kidney Disease: Improving Global Outcomes (KDIGO) defines CKD as a complex syndrome caused by a permanent damage to, or decrease in the number of, active nephrons due to various disease processes in kidney medulla. In its initial stage CKD is difficult to diagnose at the beginning of its development since it progresses implicitly. Therefore, the majority of CKD patients learn about the illness too late. Commencing treatment in the early stage prevents further progression of the illness and defers its advancement.[6]

An important aspect to observe when treating a chronic disease is health behaviour, defined as every human activity in daily life that has any impact on health. Health behaviour is part of a particular patient's lifestyle and the most important determinant of patient's health. In this respect health behaviour comprises of the following: a diet, addictive substances consumed, work, ways of relaxation and sexual activities. Health behaviour is greatly affected by both environmental and psychological factors, e.g. motivation and personality, psychosocial factors, economic factors and public institutions. Altering one's health behaviour in a more healthy way has positive results, e.g. helps to diminish symptoms of the illness, alleviate of an illness and increase the effectiveness of pharmacological treatment. [3,8]

The aim of the study: The aim of the study was to evaluate of health behaviour in each of several of patients with chronic kidney disease.

Material and methods: The research reference used in the study was Inventory of The Health Beaviour (InwentarzZachowańZdrowotnych, IZZ) by ZygfrydJuczyński. The IZZ questionnaire comprises 24 statements relating to health behaviour with the opportunity to assign them their frequency from 1 to 5, with 5 being the highest frequency. The health behaviour index lies between 24 and 120 points. The higher the index, the higher the declared frequency of health behaviour. IZZ questionnaire comprises four categories of statements about health behaviour: positive mental attitude, preventative actions, healthy eating habits and other health practices. In total 116 people with recognised chronic kidney disease were studied. The study was conducted from February to April of 2017 in Nephrology Department of Regional Clinical Hospital in Zielona Góra, Poland, Nephrology and Arterial Hypertension of Regional Specialist Hospital in Lublin, Poland as well as in Private Healthcare Centre "Diaverum" in Lublin, Poland. The characteristics of the researched group are presented in figures 1,2,3,4,5,6.

Characteristics of the studied group

47.4% of participants in the study were women and 52.6% were men. (Fig.1)

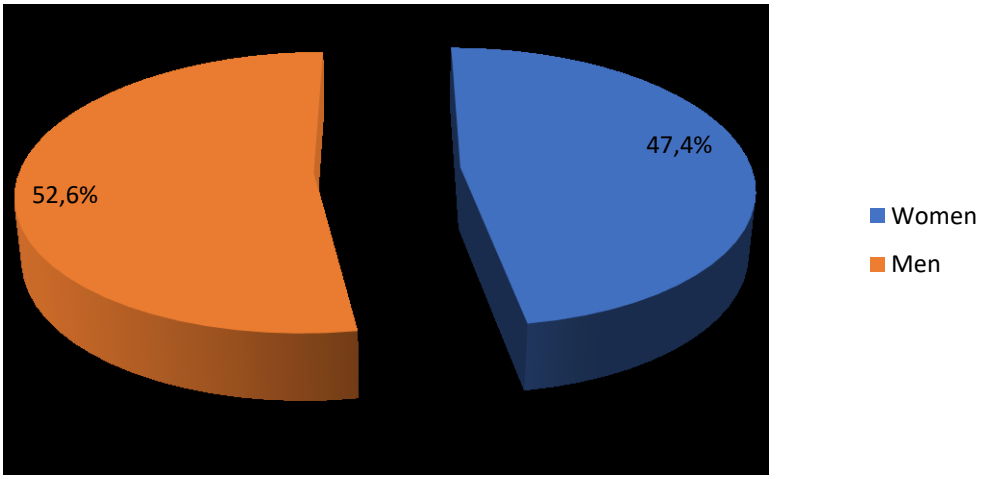

Fig.1 Gender breakdown of the studied group

In the researched group 6% of participants were at the age between 18 and 29, 7.8% between 30 and 39, 9.5% between 40 to 49, 20.7% between 50 to 59, 22.4% between 60 and 69, and 33.6% were 70 and older. (Fig.2)

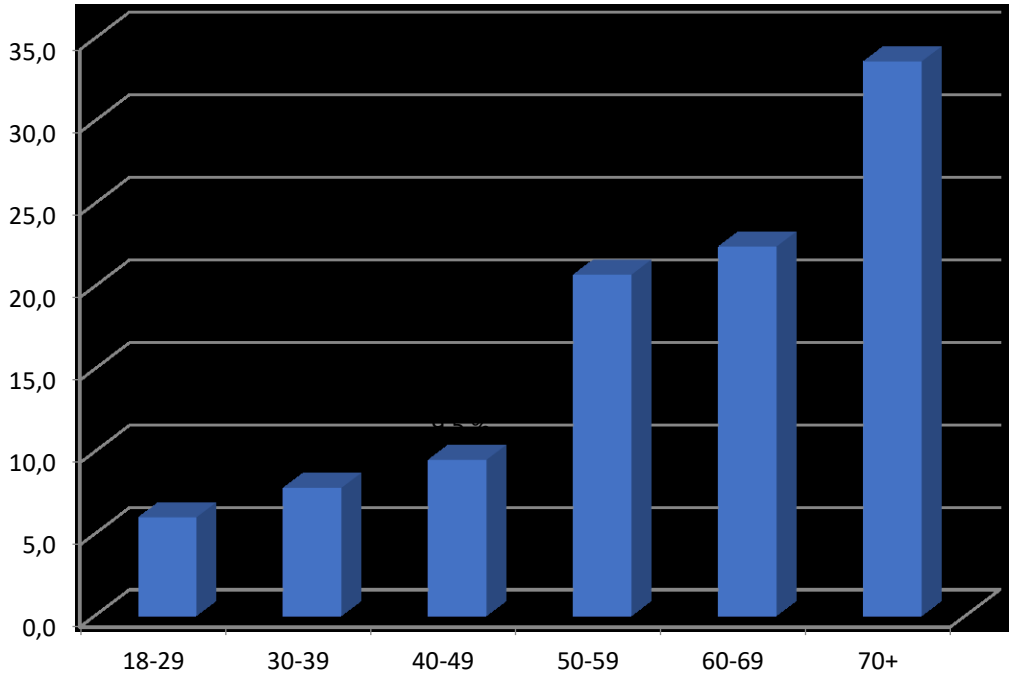

Fig.2 Age breakdown

39.7% of the group lived in the rural areas and the remaining 60.3% in the urban areas. (Fig.3)

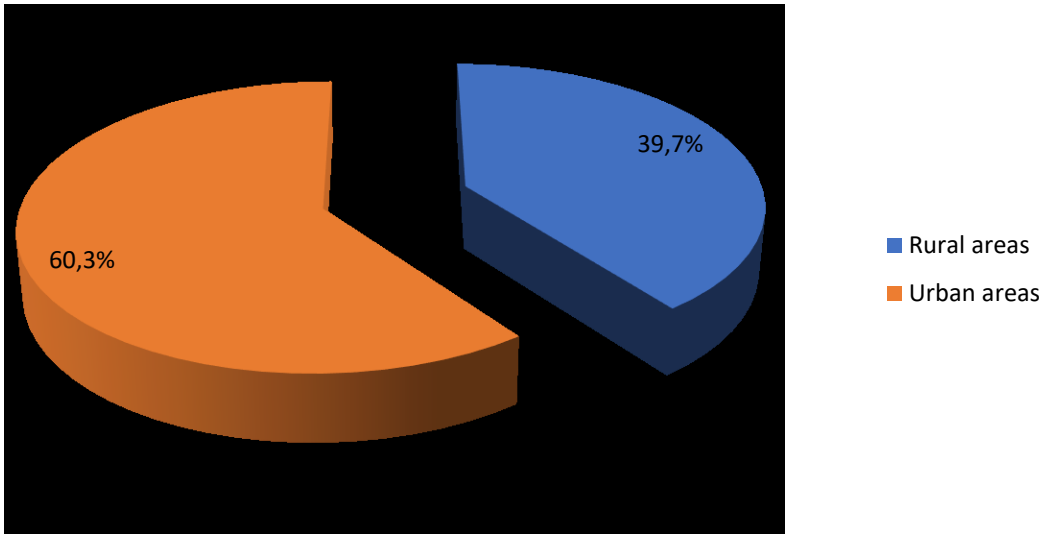

Fig.3 Place of residence breakdown

In the group 19% had primary education, 32.8% had high school education, 24.1% had technical school education, and 24.1% had higher education. (Fig.4)

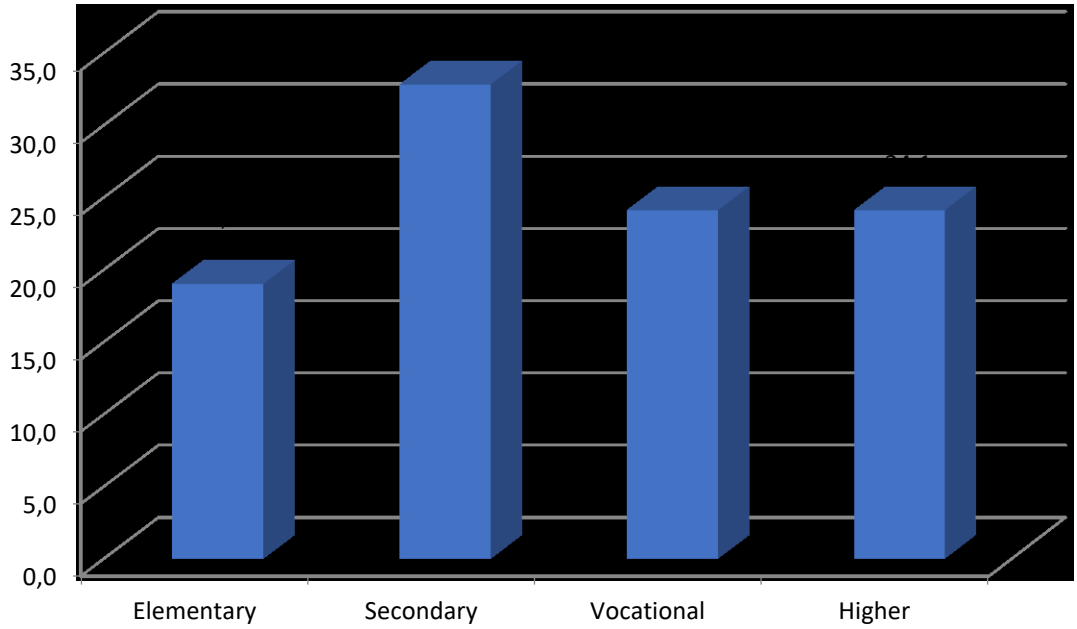

Fig.4 Education breakdown

In the group 50% of people were treated pharmacologically and the other 50% were treated with haemodialysis. (Fig.5)

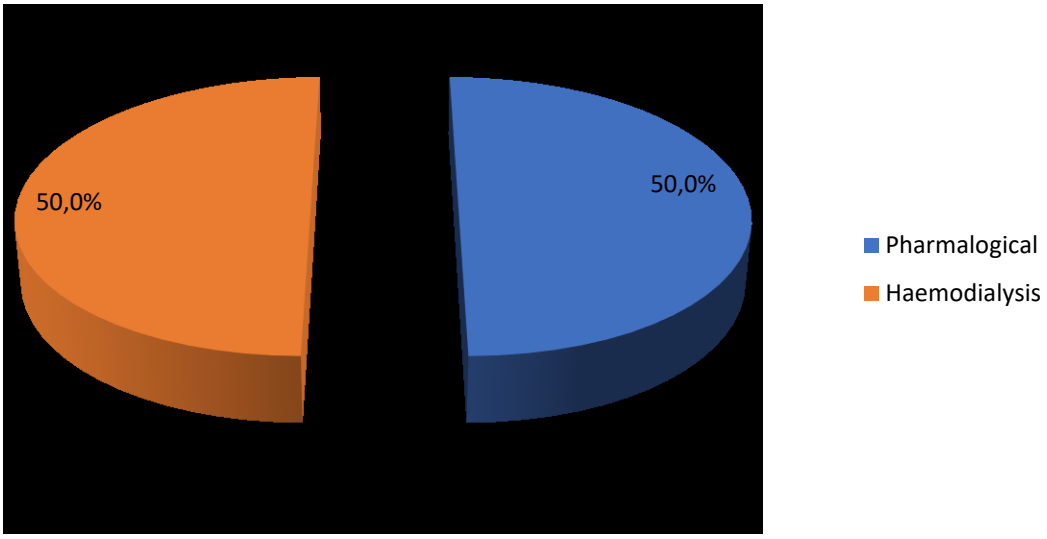

Fig.5 Method of treatment breakdown

48.3% of the research subjects lived in Lubuskie region (Voivodeship) and 51.7% lived in Lubelskie region (Voivodeship). (Fig.6)

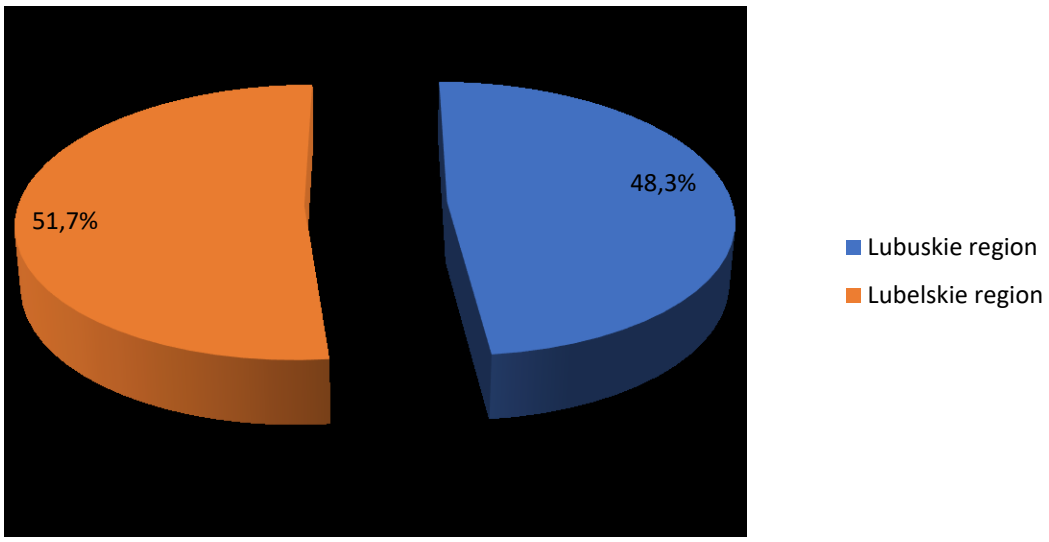

Fig.6 Region breakdown

The rating of health behaviour in the questionnaire using the IZZ method

The patients indicated average level of health behaviour. The arithmetic mean of the health behaviour indicator is equal to 88.43 (SD=13.45). The standard deviation value indicates the wide variety of the results. The patients gave the highest rating to their health practices (M=3.82; SD=0.78) and preventative actions (M=3.78; SD=0.65), and the lowest rating to their healthy eating habits (M=3.48; SD=0.68). (Fig.7)

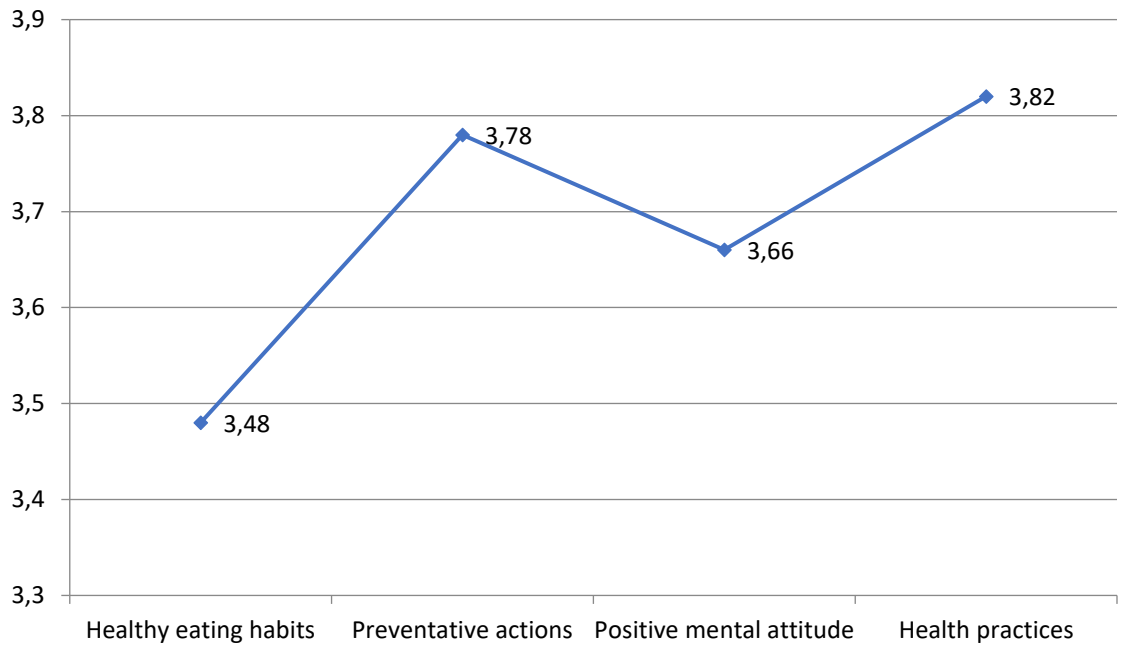

Fig.7 The frequency of health behaviour broken down by the IZZ category

The rating of health behaviour with regards to gender

The raw IZZ index was converted into a sten score (Standard Ten score) with regards to sex. 18.2% of examined women obtained low scores, 38.2% average scores, and 43.6% high scores. 14.8% of examined men obtained low scores, 27.9% obtained average scores, and 57.4% high scores. (Fig.8)

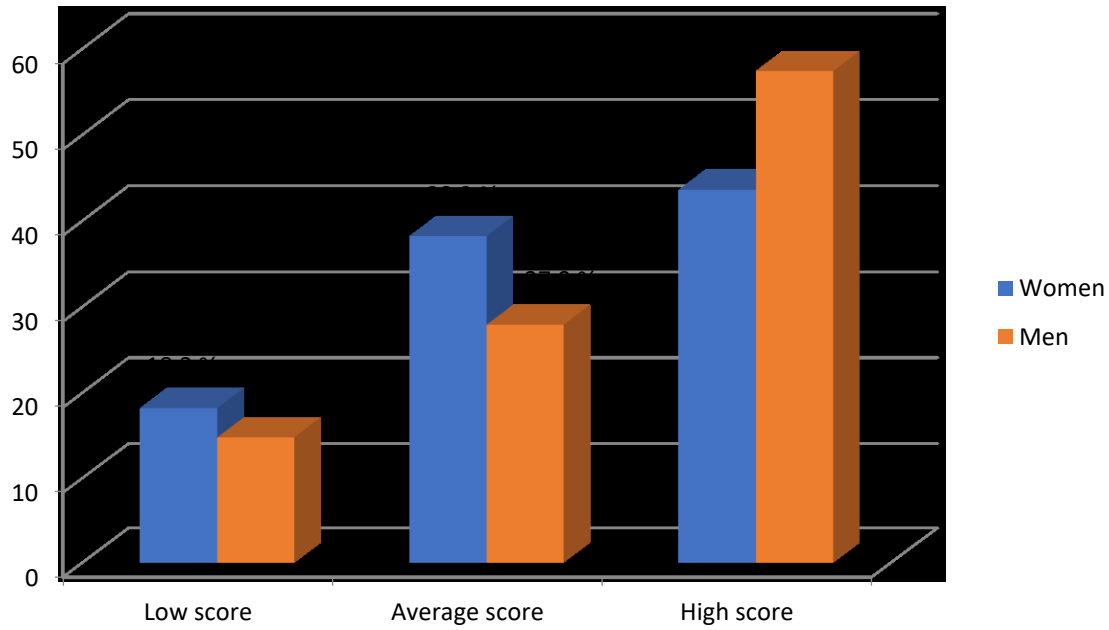

Fig.8 The frequency of health behaviour broken down by gender

The rating of health behaviour with regards to the categories of health behaviour

Out of all 24 statements, statement 10 was rated the highest – "I observe doctor's orders based on my examination" (M=4.28; SD=0.82), as well as statement 19 – "I avoid anger, anxiety and depression" (M=4.20; SD=1.43) and 16 – "I have enough sleep" (M=4.20; SD=1.14). The lowest rated statement was "I try to learn about how other people avoid illnesses" (M=2.84; SD=1.21). In the positive mental attitude category the highest ranked statement was "I avoid anger, anxiety and depression". The lowest ranked statement was "I avoid upsetting and distressing situations". In preventative actions the highest ranked statement was "I observe doctor's orders based on my examination", and the lowest ranked was "I try to learn about how other people avoid illnesses". In the healthy eating habits category the highest ranked statement was "I avoid salt and heavily salted foods", and the lowest ranked was "I eat wholegrain breadstuff". In the health practices category the highest ranked statement was "I have enough sleep", and the lowest ranked was "I avoid overwork". (Tab.1)

Tab.1 The rating of health behaviour of patients diagnosed with CKD

No.	FACTORS	M	SD
Positivementalattitude		3.66	0.70
3	I treat concerns about my health from other people seriously	3.62	1.15
7	I avoid upsetting and distressing situations	**3.53**	1.25
11	I try to avoid strong emotions, stress and pressure	3.80	1.27
15	I have friends and a stable family life	3.76	1.06
19	I avoid anger, anxiety and depression	**4.20**	1.43
23	I have a positive mental attitude	4.02	1.04
Preventativeactions		3.78	0.65
2	I avoidcatchingcolds	3.84	1.04
6	I have ambulance services' telephone numbers noted down	3.73	1.61
10	I observe my doctor's orders based on my examination	**4.28**	0.82
14	I regularly attend physical examinations	4.12	1.13
18	I try to learn how other people avoid illnesses	**2.84**	1.21
22	I try to obtain medical information and to understand the causes of health and illnesses	3.84	1.10
Healthyeatingpractices		3.48	0.68
1	I eat lots of fruit and vegetables	3.44	1.03
5	I limit the consumption of products like animal fat or sugar	3.60	1.05
9	I care about eating healthy	3.65	0.97
13	I avoid food products with preservatives	3.46	1.18
17	I avoid salt and heavily salted foods	**3.74**	1.20

21	I eatwholegrainbreadstuff	**3.30**	1.31
Healthpractices		3.82	0.78
4	I haveenoughrest	3.60	1.05
8	I avoidoverwork	**3.33**	1.19
12	I control my body weight	3.44	1.22
16	I haveenoughsleep	**4.20**	1.14
20	I limit consumption of tobacco products	3.49	1.15
24	I avoid excessive physical excercise	3.90	1.01

1- almost never; 5- almost always

The rating of health behaviour with regards to age

Groups with the highest frequency of health behaviour were 60-69 and 70+, and the lowest frequency was found in group 50-59. In the group of people up to 49 years old the highest rated category was preventative actions, and the lowest positive mental attitude. In the group 50-59 the highest rated category was preventative actions, and the lowest healthy eating habits. In the group 60-69 and 70+ the highest rated category was health practices, and the lowest healthy eating habits. Statistically significant differences occur in the categories of positive mental attitude and health practices. (Fig.9)

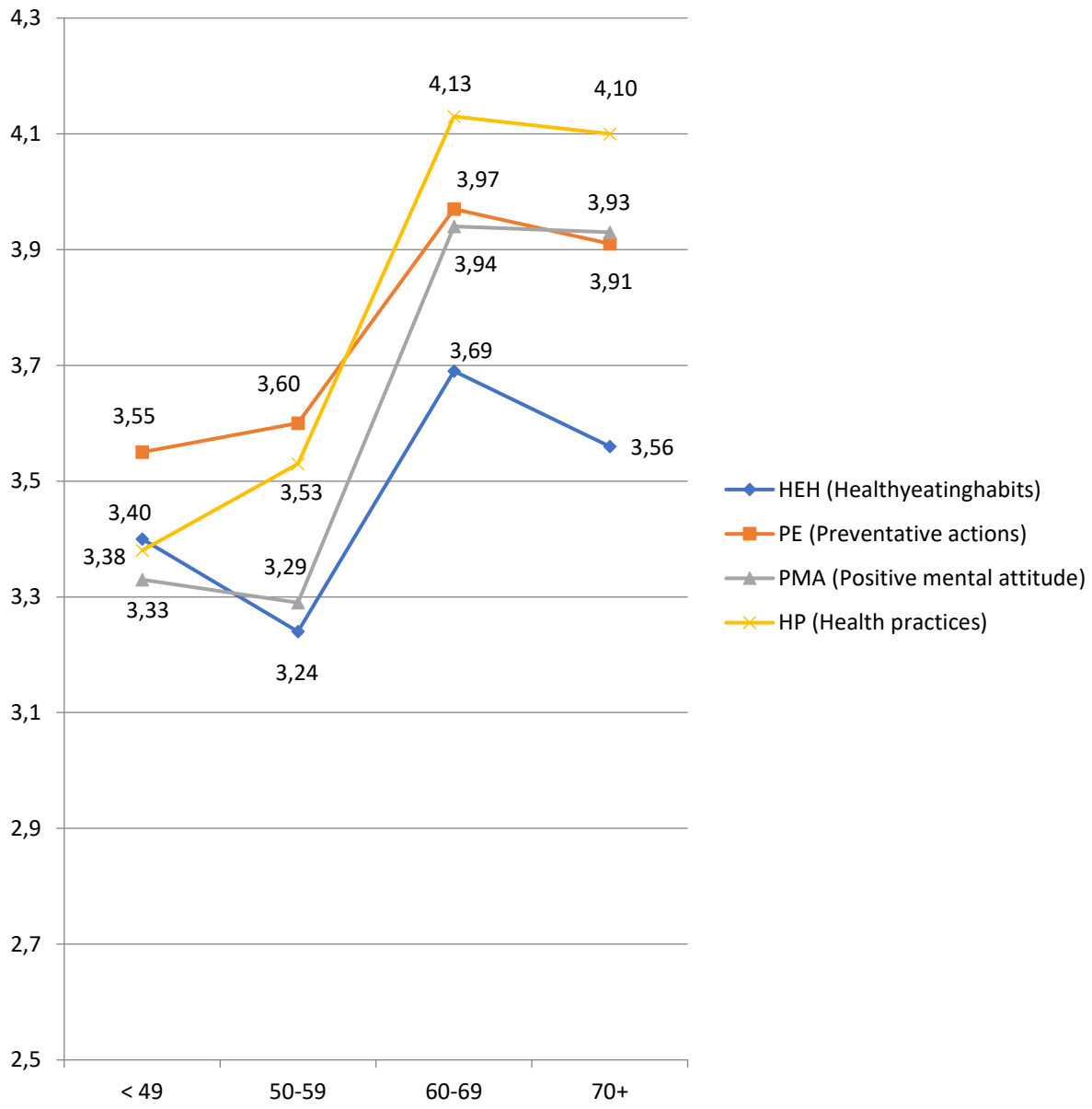

Fig.9 The rating of health behaviour broken down by age

The rating of health behaviour broken down by gender

Women's health behaviour indices were slightly higher than these of men. Both women and men rated the highest the health practises category, and the lowest healthy eating habits. These differences are not statistically significant. Only in the healthy eating habits category did women obtain much higher index than men ($p = 0.020$). (Fig.10)

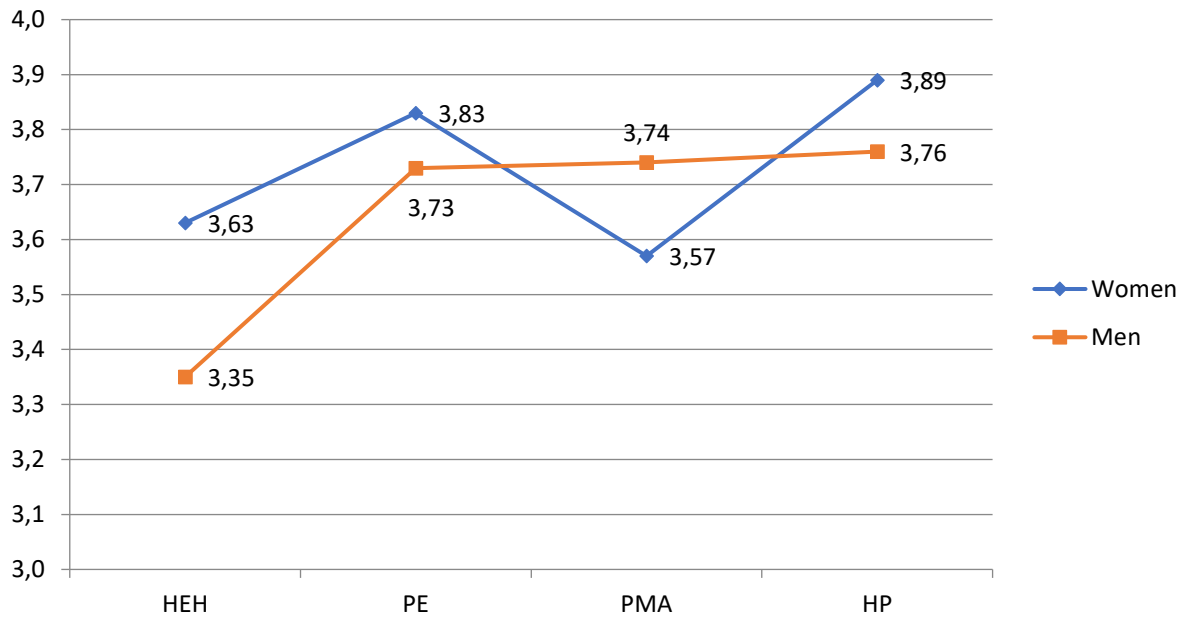

Fig.10 The rating of subsequent categories of health behaviour broken down by gender

The rating of health behaviour with regards to education

Statistical analysis showed that the highest frequency of health behaviour occurred in the group with higher education, and the lowest in the group with elementary education. In all the studied groups the lowest ranked category was healthy eating habits. Patients with elementary education ranked preventative actions the highest, and all the other groups ranked health practices the highest. The differences were not statistically significant (p = 0.135). (Fig.11)

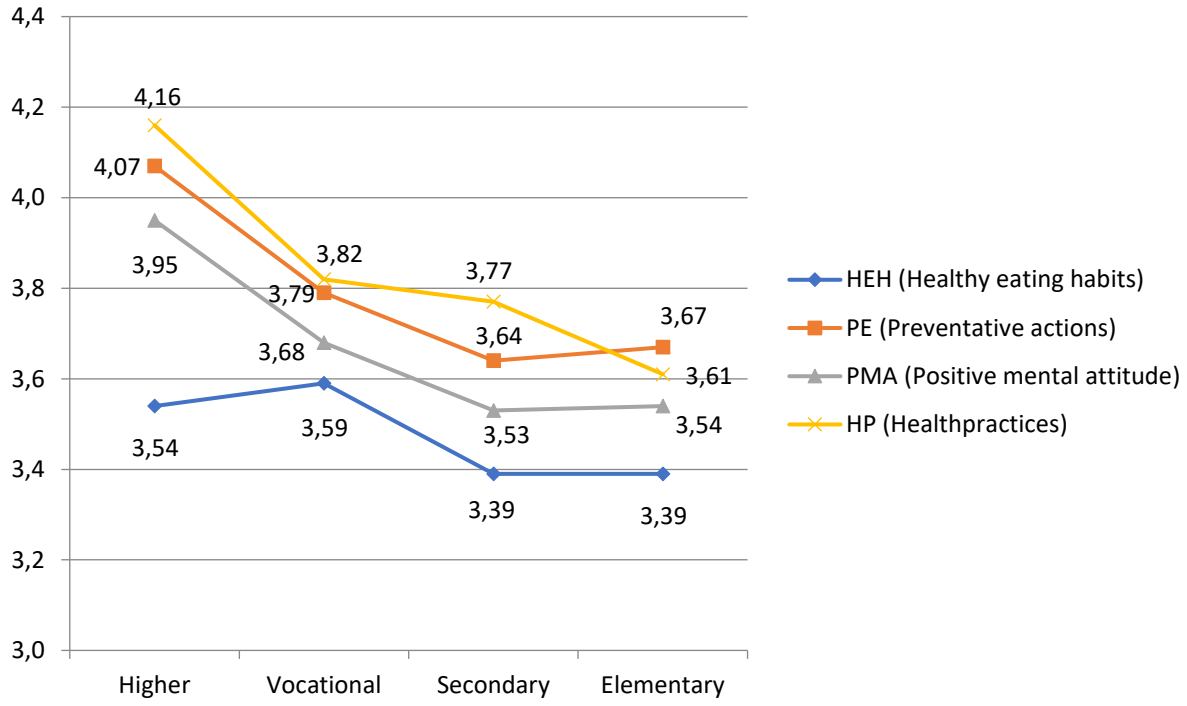

Fig.11 The rating of health behaviour broken down by education

The rating of health behaviour with regards to region

Inhabitants of the Lubelskie region declared slightly higher frequencies of health behaviours than inhabitants of the Lubuskie region. In both regions healthy eating habits were ranked the lowest. Inhabitants of the Lubuskie region ranked health practices the highest, and inhabitants of the Lubelskie region ranked preventative actions the highest. However, this result is not statistically significant (p = 0.152). (Fig.12)

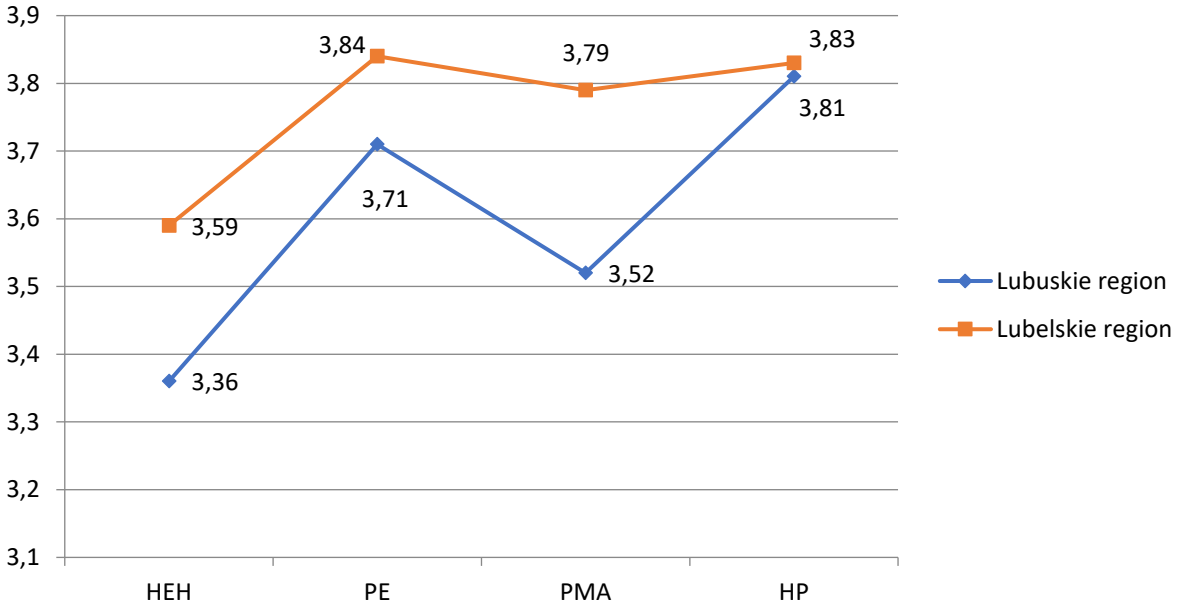

Fig.12 The rating of subsequent categories of health behaviour broken down by region

The rating of health behaviour with regards to place of residence.

Statistical analysis showed that people living in urban areas declare somewhat higher frequencies of health behaviours than people living in rural areas. However, people living in both rural and urban areas ranked their healthy eating habits the lowest category, and health practices the highest category. The differences in ranks were statistically insignificant (p=0.152). (Fig.13)

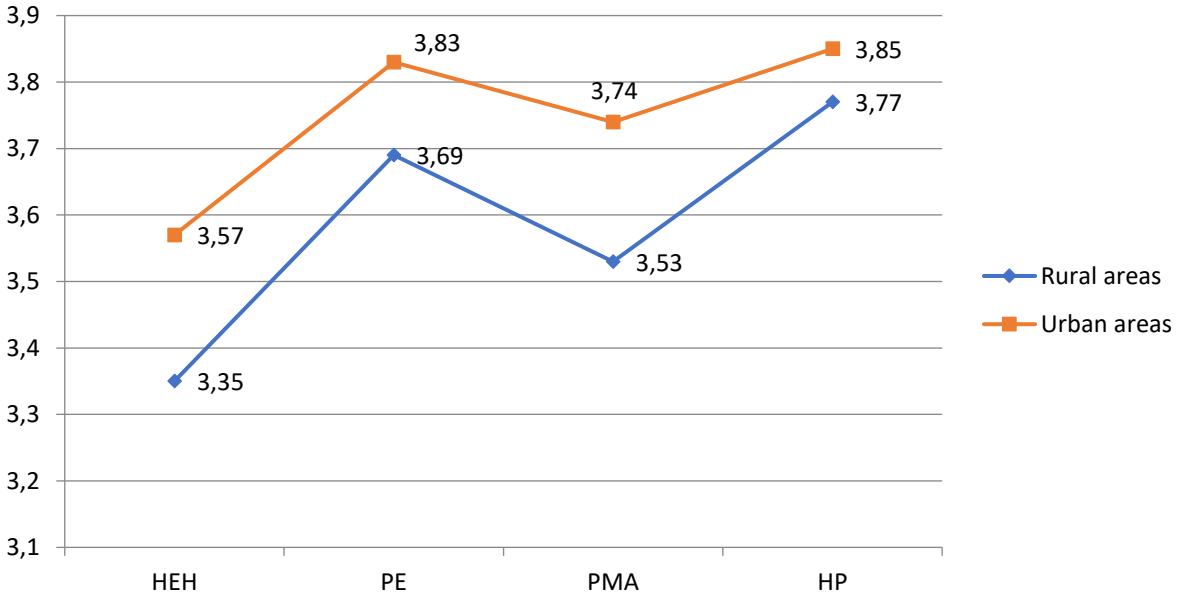

Fig.13 The rating of subsequent categories of health behaviour broken down by place of residence

The rating of health behaviour with regards to method of treatment

The study indicates that patients treated with haemodialysis declare higher frequencies of health behaviours than patients treated pharmacologically. Patients treated with haemodialysis gave higher ratings in all the categories. (Fig.14)

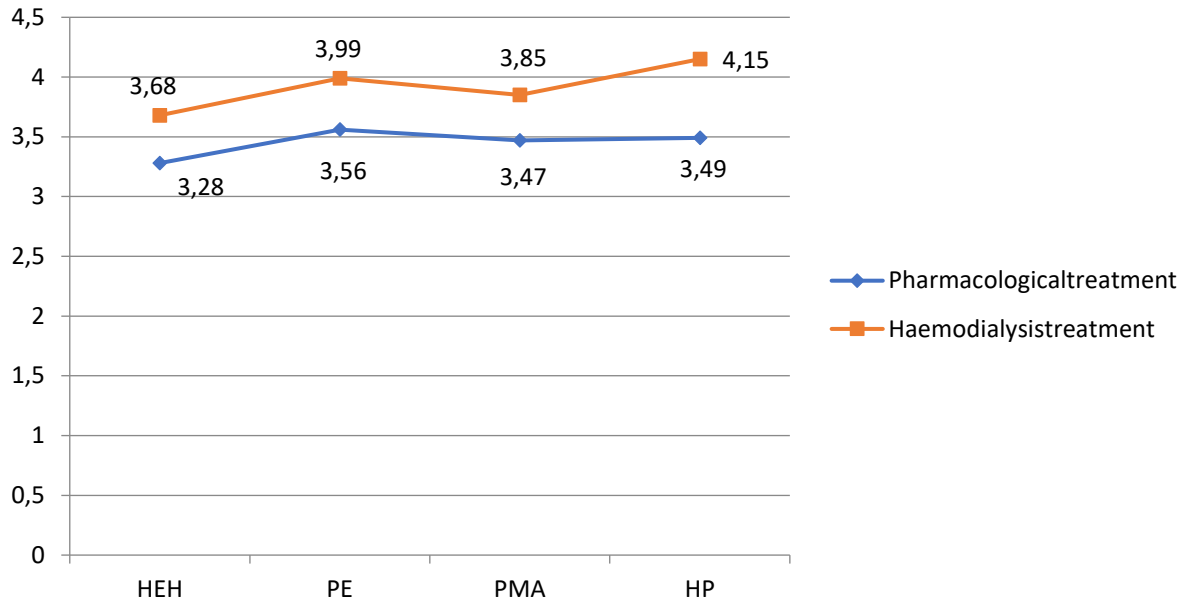

Fig.14 The rating of subsequent categories of health behaviour broken down by method of treatment

Discussion

Health is a state of well-being, understood as the development of the individual in order to achieve their full potential, as well as their needs with regards to the body, spirit, mind and social roles. This holistic approach to health highlights the significance of personal responsibility in individual health. [2,4] Therefore, in recent years scientists from various fields of study have become interested in the lifestyle and health behaviour,

The study showed the average frequency of health behaviours of patients with chronic kidney disease. A. Marzec obtained similar results, from which one can conclude that patients on kidney disease treatment evince an average frequency of health behaviour. [9] The highest rated categories of health behaviour in the examined group were health practices and preventative actions, and the lowest rated was healthy eating habits. This study corresponds to the Kurowska and Wyrzucka study, in which the studied group had similar category ratings. [7]

In this study the connection between the age of the patients and their health behaviour was researched. The patients who were 60-69 and older rated their health behaviour the highest in all the categories, which correlates with Smoleń study (which examined health behaviour of the elderly). [11]

All the categories were rated higher by men than women, apart from healthy eating habits, which was rated higher by women. In the other study by Morozowicz and Guty, concerning lifestyle and health behaviour, women rated their healthy eating habits very high. [10] Similar results were obtained by Gniadek – in this study women declared higher frequency of healthy eating habits, as well as preventative actions and positive mental attitude. [3]

The study did not show any statistically significant differences between health behaviour and education of the patients. These results correspond to Gniadek's results, in which the only difference was patients with elementary education declaring the frequency of preventative actions at a higher level than the other groups. [3]

The place of residence did not affect the rating of health behaviour. The inhabitants of rural and urban areas rated their health behaviour at a similar level in all the categories. This is slightly different from what Kurowska's study suggests, which is that the inhabitants of rural areas rate their health behaviour higher in every category. [7] In this study health behaviour of patients treated with haemodialysis and treated conservatively were examined. The results suggested that patients treated with regular haemodialysis rate their health behaviour higher than those treated conservatively.

Health behaviour constitutes an important part of vital human activity and has a very big impact on one's health. In the event of disease proper health behaviour can remove its symptoms and delay its development. Therefore it is so important to educate patients and promote healthy lifestyle. [1,7]

Conclusions

1. The study indicated the average frequency of health behaviour of patients with chronic kidney disease. The highest rated category was health practices and preventative actions, and the lowest was healthy eating habits.
2. Age influences health behaviour of the examined patients. The highest frequency of health behaviour was declared by patients at the age 60-69, and the lowest by patients under 49.
3. There weren't any statistically significant differences between ratings of men and women. Both men and women rated their health behaviour at a similar level. Women rated their healthy eating habits slightly higher than men.
4. Education and place of residence do not influence the health behaviour of patients with CKD.
5. Inhabitants of the Lubelskie region rated their health behaviour higher than inhabitants of the Lubuskie region in all categories. The differences in the ratings have not been statistically significant.

Bibliography

1. Andruszkiewicz A, Banaszkiewicz M : „Promocja zdrowia dla studentów studiów licencjackich kierunku pielęgniarstwo i położnictwo" Tom I, Czelej, Lublin 2008
2. Formański J: „Psychologia. Podręcznik dla szkół medycznych" PZWL, Warszawa 2003
3. Gniadek A, Bodys – Cupak I: „ Zachowania ryzykowne oraz prozdrowotne wśród pacjentów poddawanych hemodializie" Problemy Pielęgniarstwa 2015; 23 (4) 452-457
4. Heszen I, Sęk H : „Psychologia zdrowia" Wydawnictwo Naukowe PWN, Warszawa 2007
5. Koźmińska E : „ Jak pomóc pacjentom z przewlekłą chorobą nerek uniknąć dializoterapii" Medycyna po dyplomie vol20/nr9/2011 95-102
6. Król E., Rutkowski B. : „Przewlekła choroba nerek - klasyfikacja, epidemiologia i diagnostyka" Forum Nefrologiczne 2008, tom 1, nr 1, 1-6
7. Kurowska K, Wyrzucka L: „Zachowania zdrowotne a umiejscowienie kontroli zdrowia u osób po przeszczepieniu nerki" Psychiatria i Psychologia Kliniczna, 2013, 13 (3), 174–183
8. Łuszczyńska A: „Zmiana zachowań zdrowotnych. Dlaczego dobre chęci nie wystarczają?" Gdańskie Wydawnictwo Psychologiczne, Gdańsk 2004
9. Marzec A, Andruszkiewicz A: „The health behaviour and the health status of patients with chronic kidney disease treated by the outpatients department – in the light of research using the questionnaires "Inventory of the health behavior (IHB/IZZ)" and General health questionnaire GHQ-28" Pielęgniarstwo Polskie nr 4 (62) 2016, 529-53
10. Mrozowicz A, Guty E: „ Styl życia a zachowania zdrowotne; poglądy kobiet" Zdrowie i Dobrostan 1/2013 133-147
11. Smoleń E, Gazdowicz L: „Zachowania zdrowotne osób starszych" Pielęgniarstwo XXI wieku, nr 3 (36)/2011, 5-9