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Dietary habits of nurses and midwives from Lublin and its region

Health consequences of improper dietary habits are extremely extensive. Proper dietary habits require appropriate energy balance of the rations consumed as well as suitable amounts and quality of food products providing all nutrients indispensable for health. Nowadays, two opposing trends are observed, i.e. deficiency of nutrients (proteins, in particular) and excessive energy intake with animal fats and refined carbohydrates. This leads to the development of numerous civilization diseases, including atherosclerosis, ischaemic heart disease, arterial hypertension, obesity, type II diabetes or osteoporosis. Underestimation of proper dietary habits and insufficient monitoring of diets of various population groups justify the usefulness of such research.

The aim of the study was to analyse comparatively dietary habits of nurses and midwives employed in Lublin hospitals, particularly regularity of meals, frequency of consumption of various foodstuffs and preferences.

MATERIAL AND METHODS

The study included 90 women – 45 nurses and 45 midwives aged 24–50. Dietary habits were evaluated using the anonymous and voluntary questionnaire. The questionnaire contained questions concerning the usual number of meals a day and frequency of consumption of fish, milk and its products, red meat, vegetables and fruits. Moreover, the questions dealt with the health state of respondents and frequency of check-up examinations. Additionally, anthropometric data were analyzed and BMI determined.

The results were statistically analyzed. The values of parameters analyzed were characterized according to the number and percentage. The inter-group differences for unrelated qualitative features were detected using the homogeneity χ^2 test. For the inter-variable differences, the independence χ^2 test was used. $P < 0.05$ was accepted as statistically significant. The database and statistical analysis were based on the STATISTICA 7.0 software (StatSoft, Polska).

RESULTS

Almost any form of human behaviour is likely to be related to health. The questionnaire questions asked about the behaviour which, according to epidemiological studies, is decisive for health: nutrition, glucose and cholesterol level tests. The findings are presented in Table 1.

Table 1. Characteristics of dietary habits and other activities of nurses and midwives

Factor	Nurses	Midwives	p	%
Leaving home without breakfast	every day 25% several times a week 42% never 33%	every day 25% several times a week 45% never 30%	>0.05	every day 25% several times a week 43% never 32%
Last meal	16–20 p.m. 56% 20–24 p.m. 44%	16–20 p.m. 62% 20–24 p.m. 38%	>0.05	16–20 p.m. 59% 20–24 p.m. 41%
Number of meals	3–5 69% 1–2 31%	3–5 76% 1–2 24%	>0.05	3–5 72% 1–2 28%
Consumption of fish	once a week 58% less often 33% I do not eat fish 9%	once a week – 24% less often – 67% I do not eat fish – 9%	<0.05	once a week 41% less often 50% I do not eat fish 9%
Meat preferred	poultry, veal 47% pork, beef 53%	poultry, veal – 42% pork, beef – 58%	>0.05	poultry, veal 44% pork, beef 56%
Consumption of pork and its products	every day 27% 3–4 times a week 62% < once a week 11%	every day – 43% 3–4 times a week – 42% < once a week – 15%	>0.05	every day 35% 3–4 times a week 55% <once a week 10%
Consumption of vegetables and fruits	3 times a day 23% once a day 68% less frequently 11%	3 times a day – 16% once a day – 71% less frequently 13%	>0.05	3 times a day 20% once a day 69% less frequently 11%
Consumption of milk and its products	twice a day 9% once a day 58% < once a day 33%	twice a day 16% once a day 40% <once a day 44%	>0.05	twice a day 12% once a day 49% < once a day 39%
Consumption of wholemeal bread and groats	once a day 38% 3–4 times a week 42% less frequently 20%	once a day 30% 3–4 times a week 20% less frequently 50%	<0.05	once a day 34% 3–4 times a week 31% less frequently 35%
Consumption of sweets	twice a day 25% once a day 42% less frequently 33%	twice a day 22% once a day 47% less frequently 31%	>0.05	twice a day 23% once a day 44% less frequently 32%
Methods of meal preparation	cooking, stewing 47% stewing with searing 31% frying 22%	cooking, stewing 36% stewing with searing 42% frying 22%	>0.05	cooking, stewing 42% stewing with searing 36% frying 22%
Scope of information about diet	sufficient 60% insufficient 40%	sufficient 76% insufficient 24%	>0.05	sufficient 68% insufficient 32%
Changes in dietary habits	reduction of fat and saccharide intake 47% greater regularity of meals 25% both 28%	reduction of fat and saccharide intake 33% greater regularity of meals 36% both 31%	>0.05	reduction of fat and saccharide intake 40% greater regularity of meals 30% both 30%
Blood sugar tests	at least once a year 51% I do not have it tested 49%	at least once a year 36% I do not have it tested 64%	>0.05	at least once a year 43% I do not have it tested 57%
Blood cholesterol tests	at least once a year 22% I do not have it tested 78%	at least once a year 29% I do not have it tested 71%	>0.05	at least once a year 25% I do not have it tested 75%
Health state	ill 27% healthy 73%	ill 49% healthy 51%	<0.05	ill 38% healthy 62%

The study results show that the respondents most often consumed 3–5 meals a day; 31% of nurses and 24% of midwives had fewer than 3 meals daily, however, the differences were not statistically significant. Daily consumption of breakfast was stated by only 33% of nurses and 30% of midwives and one forth admitted that they never had breakfast before work. In the majority of cases the last

meal was consumed between 6–8 p.m. Statistically significant differences ($p < 0.05$) were observed in answers concerning the consumption of fish. Most midwives had fish less frequently than once a week (67%), most nurses – once a week (58%). Almost one tenth had no fish at all. Despite clear recommendations of cholesterol prophylaxis the respondents preferred red meat. The majority of midwives (43%) admitted that they had pork every day while 62% of nurses had it 3–4 times a week; the differences, however, were not significant. Moreover, no statistical differences were found in answers concerning methods of meal preparation. Midwives mostly seared and then stewed food products while nurses cooked them and stewed in water.

Amongst the respondents 33% of nurses and 44% of midwives did not have any meals containing milk and its products during the day; the majority of women had vegetables and fruits only once a week, however almost 70% of respondents admitted having sweets every day. Thus their meals did not meet the requirements of rational nutrition. The statistically significant differences were observed in answers about the frequency of wholemeal bread and groats consumption. Although one third of respondents admitted having these products every day, 50% of midwives answered that they had wholemeal bread and groats less than once a week and the majority of nurses (42%) – 3–4 times a week.

The majority of respondents believe that their knowledge about nutrition is sufficient. All of the respondents admitted that some dietary habits should be changed; 36% of midwives thought that the changes should mainly concern bigger regularity of meals while 47% of nurses would like to reduce their consumption of fats and sweets.

A statistically significantly larger number of midwives (49%) than nurses (27%) admitted suffering from some diseases, most commonly: arterial hypertension, varices of the lower limbs and gastric ulcers. Although medical check-up are essential from the point of view of prophylaxis, which should be known by health care workers, only 51% of nurses and 36% of midwives stated that they had blood glucose tests at least once a year, the rest of them had their glucose levels checked less frequently.

Moreover, the distribution of BMI of responders was analysed. The majority of nurses and midwives had normal weight. One fifth of women were overweighted, obesity was found in 8% and underweight in 26% of responders. The findings are presented in Table 2.

Table 2. Distribution of body mass index (MBI)

Population	Age	Underweight	Normal weight	Overweight	Obesity	Giant obesity
Midwives	24–49	13%	59%	24%	4%	0%
Nurses	20–52	13%	61%	22%	4%	0%

DISCUSSION

An important factor of health and physical condition is the frequency of consumption of well-balanced meals. The majority of respondents consumed 3–5 meals a day, which is consistent with rational dietary principles. In adults, the number of meals should not be lower than 3 as too long breaks between meals decrease the blood glucose level, which in turn results in the feeling of hunger. Hunger and fluid deficiency reduce the ability to concentrate and worsen the mood (3). Lack of breakfast is one of improper dietary habits which in the long term leads to deterioration of health state, and physical as well as mental efficiency (1). The study performed shows that one fourth of nurses and midwives had no breakfast before starting their responsible everyday activities, which is health-threatening for them and dangerous for patients' safety.

The frequency of consumption of particular food products was significantly different from dietary recommendations. A very small percentage of respondents consuming vegetables and fruits 3 times a day was alarming (20%); the consumption of milk and its products twice a day was stated by 12% of women while 32% of respondents had sweets every day. According to the guidelines contained, among others, in the Golden Charter of Healthy Nutrition elaborated by the Council for Healthy Nutrition Promotion, each individual should consume vegetables and fruits with almost every meal and between them, which provides, among other things, natural antioxidants. Moreover, one should drink at least 2 glasses of milk or yogurt a day (5). The majority of nurses and midwives did not apply these recommendations in practice. The daily food rations of adults, particularly women, should include milk and its products as they contain large amounts of best absorbable calcium. Its deficiency in diet favours the development of osteoporosis – currently one of the civilization diseases (1).

Half the respondents consumed fish less than once a week, which is also alarming. Daily food rations of adults should contain fish (particularly saltwater fish) 2–3 times a week. Fishes are the source of wholesome proteins, mineral salts (copper, iodine, cobalt), vitamins A and D but mostly of n-3 fatty acids, which are the nutrients essential for atherosclerosis prophylaxis (1).

According to proper dietary guidelines, red meat should be consumed only several times a month, mostly because of its high content of atherogenic saturated fatty acids and methionine. The majority of our respondents (56%) preferred pork and beef, on average they consumed red meat and its products 3–4 times a week. When the intake of vegetables and fruits is very low and of meat higher, the risk of chronic diseases increases, particularly of cardiovascular diseases, diabetes and diet-related malignant neoplasms (6).

Moreover, the percentage of respondents consuming wholemeal bread and groats was alarmingly low (34%), particularly amongst midwives – 5% of them answered that they consumed them less often than 3–4 times a week. This is extremely unfavourable due to low amounts of vitamins, mineral salts and dietary fibre in their diet. Similar results about the frequency of consumption of vegetables, fruits and whole meal bread were reported by Kozłowska-Wojciechowska (2). According to the author, lack of these basic and important products in the diet indicates that our society, including health care workers, does not understand the need of preventive actions concerning themselves.

Despite so many improprieties demonstrated in dietary habits of nurses and midwives, a vast majority of women (68%) found their knowledge about the well-balanced diet sufficient. Furthermore, all the respondents stated that their dietary habits should be changed. Numerous studies showed the relation between dietary knowledge and conviction about the effects of diet on health, however this relation is not statistically significant, which is thought to be affected by psychological and environmental factors as well as individual features modifying dietary habits. The changes in awareness and knowledge about rational diets are definitely ahead of the changes in dietary habits (5).

The present study revealed that the majority of respondents did not have their health state checked. This means that knowledge and awareness of health dangers often cannot be correlated with healthy behaviour undertaken. Health check-up examinations are essential from the point of view of prophylaxis and health promotion. In civilized societies, check-ups are becoming standard procedures and the attitude towards this issue is one of the characteristics of socio-medical lifestyle (4).

The analysis of BMI showed abnormal body weight in 40% of women, which together with improper diet (both deficient and excessive amounts of nutrients) and lack of medical check-ups might contribute to the development of many civilization diseases and deteriorate the course of already existing ones.

CONCLUSIONS

1. Dietary habits of nurses and midwives significantly differ from basic rational dietary principles. The diets of respondents included too low amounts of milk, its products, vegetables, fruits, fish, wholemeal bread and groats while the amounts of sweets consumed were excessive. Such a long-term improper diet is likely to contribute to the development of many diet-related diseases.

2. One fourth of respondents did not have breakfast before work. Irregular meals are dangerous for their health and for patients' safety.

3. Nurses and midwives still preferred red meat, which they consumed in excessive amounts. This, together with very low intake of vegetables and fruits, increases the risk of chronic diseases, particularly cardiovascular diseases, diabetes and diet-related malignant neoplasms.

4. Despite the improprieties detected, the majority of women thought that their knowledge about rational diet is sufficient. However, all responders stated that their dietary habits should be changed, which means that changes in awareness and knowledge about rational diets are definitely ahead of changes in dietary behaviour.

5. Nurses and midwives did not undergo prophylactic check-up examinations, which indicates that knowledge and awareness of health dangers is not directly correlated with health-promoting behaviour.

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SUMMARY

The aim of the study was to compare the dietary habits of nurses and midwives employed in Lublin hospitals, particularly the regularity of meals, frequency of consumption of various groups of food products and preferences. The study involved 90 women – 45 nurses and 45 midwives. Moreover, the questionnaire questions concerned the health state of respondents and frequency of medical check-up examinations. Additionally, anthropometric data were analysed and BMI determined. The results were statistically analysed. Dietary habits of nurses and midwives were significantly different from the rules of rational nutrition. The diets of respondents included deficient amounts of milk and its products, fruits, vegetables, fish, wholemeal bread and groats and excessive amounts of sweets and red meat. One fourth of the respondents did not have breakfast before work, the majority did not

undergo prophylactic examinations. This long-term improper diet and lack of awareness about health hazards is likely to contribute to the development of numerous diet-related diseases.

Sposób odżywiania się pielęgniarek i położnych Lublina i okolic

Celem pracy była analiza porównawcza sposobu żywienia pielęgniarek i położnych zatrudnionych w lubelskich szpitalach, ze szczególnym uwzględnieniem regularności odżywiania, częstości konsumpcji i poziomu preferencji różnych grup produktów spożywczych. Badaniami objęto łącznie 90 kobiet w tym: 45 pielęgniarek oraz 45 położnych w wieku 24–50 lat. Pytania ankietowe dotyczyły ponadto stanu zdrowia respondentek oraz częstotliwości dokonywania przez nie badań kontrolnych. Przeanalizowano również dane antropometryczne i ustalono wskaźnik BMI. Uzyskane wyniki badań poddano analizie statystycznej. Sposób żywienia pielęgniarek i położnych znacznie odbiegał od podstawowych zasad racjonalnego żywienia. W diecie ankietowanych występowała zbyt mała ilość mleka i jego przetworów, owoców i warzyw, ryb oraz pieczywa razowego i kasz, natomiast w nadmiarze spożywane były słodycze i mięso czerwone. Co czwarta respondentka przed rozpoczęciem pracy nie spożywała pierwszego śniadania oraz większość nie wykonywała badań profilaktycznych. Ten długoterminowy wadliwy sposób odżywiania oraz brak świadomości zagrożeń zdrowotnych może przyczynić się do rozwoju wielu chorób dietozależnych.