

HEALTH BEHAVIOUR IN BABY BOOMERS AND GENERATIONS X, Y, AND Z: FOCUS ON DIETARY FIBRE AND SATURATED FAT INTAKE

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Purpose: To assess the frequency of food intake as a source of dietary fibre and saturated fatty acid intake in terms of preventive health care for women and men of the baby boomer (BB), X, Y, and Z generations.

Design/methodology/approach: The research instrument was a survey questionnaire administered through the computer-assisted web interviewing (CAWI) method using Google Forms. The survey was conducted from February to March 2023. The survey included 204 respondents between the ages of 19 and 60, residents of Gdynia. Purposive group selection was used. The results of the survey are presented as the percentage distribution (percentage) of each evaluation (% of indications). A chi-square test with Yates correction was used to determine the effect of gender and age on lifestyle, dietary style and frequency of dietary fibre and saturated fatty acid intake in the study groups.

Findings: Analysis of the consumption of selected food groups by respondents showed that gender and age influenced the lifestyle and type of selected food products consumed by adults, and therefore the attainment of individual nutrient requirements, and the risk of chronic non-communicable diseases. It is satisfactory that the level of fat intake among the surveyed group of respondents was at an appropriately low level. On the other hand, the inadequate and very low intake of dietary fibre among women and men remains a concern.

Research limitations/implications: The research has certain limitations. The results obtained are not representative and cannot be generalised to the population of women and men of the baby boomer (BB), X, Y and Z generations in Poland.

Practical implications: The present study is part of health risk management and health promotion in the Polish population. It is important that adults (in Poland) pay attention to the impact of the products they consume on their health, since the lack of a balanced diet and an excessive supply of simple carbohydrates and saturated fatty acids carries a risk of reducing their quality of life. It is essential to conduct research monitoring the dietary behaviour of various population groups to evaluate the need for preventive actions to ensure health and better safeguard the mental and physical condition of current and future generations.

Social implications: The research is part of health risk management and health promotion in the Polish population.

Originality/value: The research adds to the knowledge of adult eating behaviour from the perspective of the Sustainable Development Goals.

Keywords: adult consumers, eating habits, health-related quality of life.

Category of the paper: Research paper.

1. Introduction

The analysis of changes in consumer behaviour worldwide suggests that trends in food consumer behaviour are a result of existing threats to food and food security (Garbowska, Radzymińska, Tarczyńska, 2021). The above values are closely related to the assumptions of the Sustainable Development Goals (SDGs). The SDGs represent a roadmap for transforming and reshaping the world in a sustainable manner, meeting the needs of the present generation while respecting the environment and taking into account the needs of future generations (Wiśniewska, 2022). The SDGs aim to develop and perpetuate specific trends in food consumption or contribute to their development. Linking SDGs to food and/or food security issues include: Goal 3 – Ensuring a healthy life for all at all ages and promoting well-being, i.e. "We must continue to work harder to overcome the incidence of many diseases and emerging health threats"; and Goal 4 – Ensuring quality education for all and promoting lifelong learning, as "Quality education is the foundation for improving people's lives and for sustainable development. Universal access to education improves the quality of life and enables innovative solutions to the world's biggest problems" (Wisniewska, 2022).

Non-communicable diseases (NCDs), including cardiovascular disease (CVD), are the leading cause of death worldwide, and account for the largest number of deaths (Bennett et al., 2018; WHO, 2022). An important element in the prevention, both primary and secondary, of CVD is an adequate diet. The results of numerous studies indicate that the type of dietary fat consumed significantly affects the cardiovascular system. The intake of saturated fatty acids significantly affects the lipid profile and may increase the risk of CVD. Implemented diets for individuals, as well as for entire populations, should include recommendations to reduce the intake of saturated fatty acids and increase the intake of fruit and vegetables (Riccardi et al., 2022; Vesnina et al., 2022). A scientific study on the effect of the consumption of saturated fatty acids and trans isomers by adults, children and adolescents confirmed that these substances are responsible for an increase in total cholesterol, LDL fraction cholesterol and diastolic blood pressure. In the prevention of cardiovascular diseases, and thus in the prevention of increased mortality, the intake of the aforementioned fat groups should be as low as possible (Ekhmke vel Emczyńska-Seliga, 2019; Schade, Shey, Eaton, 2020). According to dietary recommendations for the Polish population, in order to maintain the lipid profile and normal

body weight at an appropriate level, depending on age and gender, the supply of saturated fatty acids (SFA) should be limited to a maximum of 10% of the total daily energy intake of the diet. The rest of the energy requirement should be provided by unsaturated fatty acids, of plant origin and contained in marine fish, seafood or algae (Jarosz et al., 2020).

Fats and oils, whose over-consumption negatively affects human health, are essential components of the diet and cannot be completely eliminated from daily menus. From a physiological point of view, they are the main source of energy, being at the same time a carrier of fat-soluble vitamins (A, D, E and K) and components necessary for the proper development and functioning of the organism, i.e. essential unsaturated fatty acids (EFAs) or antioxidants (Dutkowska, Rachoń, 2015). Criteria for consumer evaluation of fats are taste, aroma, appearance, texture and consistency (Ognean et al., 2006, Zychnowska et al., 2015), and more recently, fat quality has also been associated by consumers with its nutritional value related to the presence of essential fatty acids or n-3 and n-6 fatty acids (Dutkowska, Rachoń, 2015; Gutkowska et al., 2012; Fattore, Massa, 2018). Zychnowska et al., 2015).

Another particularly important and recommended dietary component for healthy individuals and patients with metabolic diseases is dietary fibre (Godula, 2019). Its presence in the food consumed reduces the rate of absorption of carbohydrates and saturated fatty acids (Włodarek et al., 2014). An additional advantage of fibre consumption is its anti-obesity and weight-reducing effect, which is particularly important in the prevention of type 2 diabetes. Dietary fibre plays an important role in the functioning of the large intestine. It influences stool weight and composition and is important for the development and composition of the bacterial flora. Insulin and fructooligosaccharides are of particular interest because of their probiotic properties (Paczowska, Białkowska, Kunachowicz, 2001; Searle et al., 2009). These compounds stimulate the growth of bacteria from the *Lactobacillus* and *Bifidobacterium* genera that live in the large intestine (Douglas, Sanders, 2008). The recommended amount of fibre in an adult's daily diet is 20 to 40 g (Jarosz et al., 2020). Dietary fibre intake for people with diabetes, obesity or overweight should be about 15 g/1000 kcal diet (2020 Guidelines). The presence of fibre in food, especially fermenting fibre, is the basis of a healthy diet, while prebiotics are specialized food ingredients that affect specific bacteria and their final fermentation products, and thus have a beneficial effect on the host's health (Hoyles, Vulevic, 2008; Macfarlane, Steed, Macfarlans, 2008).

The literature emphasises (Kaczor-Szkodny, Szkodny, 2021) that the emergence and formation of health attitudes and behaviours are determined by gender, self-perception in the health space and the performance of social roles. Nutrition is one of the basic factors influencing the physical and mental development of the human being, as well as the proper functioning of the organism at each stage of human life. Insufficient, excessive, or poor-quality food supply can affect well-being and health at any stage of life (Ojo et al., 2018, Suliga et al., 2021, Sagili et al., 2022). With the progress of civilisation, adults' lifestyles are changing, and this has consequences also with regard to health. Hence, knowledge about consumer dietary behaviour

and lifestyle factors that affect human health is constantly changing (Kelly, Ciclitira, 2011; Spencer et al., 2015; Wolnicka, Taraszewska, 2019). The relationship between attitudes towards health and eating behaviour is most often described in the literature as positive and characterised by varying strength (Backman et al., 2002; Hearty et al., 2007; Sun, 2008; Pieniak et al., 2010; Czarnocińska et al., 2013). A positive attitude towards nutrition does not determine the consumption of a properly composed meal on a given day, e.g. due to lack of access to appropriate food products, lack of time for meal preparation, etc. (Czarnocińska et al., 2013). For example, young women in Poland mostly show a positive attitude towards health and the health values of food, but they do not pay attention to the cholesterol and saturated fatty acid content of the food products they consume (Platta, Sawlewicz, 2022). Furthermore, the level of acceptance of innovations introduced in food products to reduce total fatty acids depended on the sociodemographic characteristics of female consumers, such as age and education level (Platta, Smigaj, 2021).

According to the authors of the publication, health behaviours, including eating habits, play a key role in maintaining health and reducing the risk of developing many chronic diseases. One important aspect of a healthy diet is to consume adequate amounts of dietary fibre and limit the intake of saturated fatty acids. In the context of public health, the study of these behaviours can contribute to the identification of risk factors and the implementation of effective educational programmes and health interventions. The aim of this study was to assess the frequency of food intake as a source of dietary fibre and saturated fatty acid intake in terms of preventive health for women and men of the baby boomer (BB), X, Y and Z generations.

2. Research methodology

The empirical research was conducted by means of a diagnostic survey, using an indirect interview technique via an online platform (CAWI) from January to February 2023. Respondents gave informed and voluntary consent to participate in the study. They also confirmed that they were familiar with the risk factors associated with the implementation of the CAWI survey.

The study involved 204 respondents aged 19 to 60, residents of Gdynia, including 114 women (55.88%) and 90 men (44.12%) (Table 1). Purposive group selection was used. The study group was dominated by people from generation Z (41.18%) and generation X (30.88%). Generation Y accounted for 14.22% and BB 13.72%. In terms of educational attainment, among both men and women there was a predominance of those with a secondary level of education (50.00 and 54.39% respectively) (Table 1).

Table 1.
Study sample characteristics

Sociodemographic features	% of indications	
	Men	Women
Sex	44.12	55.88
Generations		
Z	20.00	57.89
Y	15.55	13.16
X	37.78	25.44
BB	26.67	3.51
Educations		
Basic	24.44	9.65
Secondary	50.00	54.39
Higher	25.56	35.96

Source: own elaboration based on survey results.

The survey questionnaire included closed-type questions in thematic blocks covering information characterising the population surveyed (gender, age, level of education) and collecting respondents' opinions on their individual self-assessment: health status, diet, lifestyle and the importance of health values of food for consumption.

Two aspects of eating behaviour were assessed using the food frequency method: 1. fibre intake – as a measure of consumption of foods with health-promoting characteristics; 2. fat intake – as a measure of consumption of foods that are not conducive to health, especially when overconsumed.

Validated questionnaires were used in the assessment: 1. the Block Screening Questionnaire for Fruit/Vegetable/Fiber Intake (BSQFVF) (Thompson, Byers, 1994); 2. the Block Screening Questionnaire for Fat Intake (BSQF) (Thompson, Byers, 1994) as modified by Czarnocinska et al. (2013).

The BSQFVF questionnaire was used to obtain data on the habitual frequency of consumption of nine food groups that are sources of dietary fibre. Fibre intake was expressed on a point scale (0-36 points) (Thompson, Byers, 1994; BSQFVF questionnaire). Based on the sum of the points, individuals were assigned to groups of fibre intake as follows: very low (<20 points), inadequate (20-29 points), adequate (≥ 30 points).

Using the BSQF questionnaire, information was collected on the habitual frequency of consumption of 11 food groups, which are either separated fats or important sources of fat in the diet. Fat intake was expressed on a point scale (0-44 points) (Thompson, Byers, 1994). Based on the sum of the points, individuals with fat intake were distinguished between: very high (>27 points), high (25-27 points), moderately high (22-24 points), low (18-21 points), very low (best) (<18 points).

The empirical data collected were statistically analysed using Statistica 13.3. The results of the study were presented by means of the percentage distribution (percentage) of the individual scores (% of indications). A chi-square test with Yates correction was used to determine the effect of gender and age on lifestyle, dietary style and frequency of dietary fibre and saturated fatty acid intake in the study groups. For all analyses, significance was set at $p \leq 0.05$.

3. Results and discussion

Lifestyle and physical activity assessment

Lifestyle assessment of the respondents was carried out taking into account the gender of the respondents. Women and men differed significantly in their assessment of lifestyle and diet except for appreciation of tradition, where no differences were observed in the answers given ($p = 0.11$) (Table 2). Respondents were predominantly engaged in work, study (37.75 and 28.44% of men and 47.55 and 37.25% of women, respectively) and pleasure-oriented activity (36.28% of men and 37.25% of women). In the subjective assessment of their health consciousness, as many as 21.08% of men gave an ambivalent answer ("neither disagree nor agree"), while 33.33% of women answered "I mostly agree" and "agree". Both women and men were dominated by those who value tradition, 29.91 and 29.41%, respectively (Table 2).

Table 2.

Respondents' subjective self-assessment of the lifestyle pursued

Criteria assessed	% of indications		
	Men	Women	<i>p</i> (Chi2)
I consider myself to be a committed professional person			
I disagree	0.98	2.94	0.04
I mostly disagree	2.45	0.98	
I neither disagree nor agree	2.94	4.41	
I mostly agree	18.14	13.73	
I agree	19.61	33.82	
I consider myself to be a person committed to learning			
I disagree	3.43	5.89	0.05
I mostly disagree	2.94	3.43	
I neither disagree nor agree	9.31	9.31	
I mostly agree	15.69	11.27	
I agree	12.75	25.98	
I consider myself a pleasure-oriented person			
I disagree	0.50	8.82	0.01
I mostly disagree	2.45	3.43	
I neither disagree nor agree	4.90	6.37	
I mostly agree	22.06	25.98	
I agree	14.22	11.27	
I consider myself to be a health-conscious person			
I disagree	0.98	1.96	0.09
I mostly disagree	3.43	3.92	
I neither disagree nor agree	21.08	16.67	
I mostly agree	13.24	21.57	
I agree	5.39	11.76	
I consider myself a person who values traditions			
I disagree	1.47	2.94	0.11
I mostly disagree	1.96	6.37	
I neither disagree nor agree	10.78	17.16	
I mostly agree	15.69	12.25	
I agree	14.22	17.16	

Source: own elaboration based on survey results.

In subjective dietary assessment, men and women differed significantly in paying attention to the naturalness of food, convenience and speed of storage, and the health value of the food consumed ($p \leq 0.05$). More men than women considered that they paid attention to the naturalness of food (its low level of processing): 25.00% and 19.61% respectively. Also, more men (33.83%) than women (31.86%) valued the speed and convenience of food preparation and paid attention to the health value of the food consumed (23.04% and 22.55% respectively) (Table 3).

Table 3.

Respondents' subjective self-assessment of the diet implemented

Criteria assessed	% of indications		
	Men	Women	p (Chi2)
I consider myself a person who pays attention to the naturalness of food (low level of processing)			
I disagree	0.49	3.43	0.01
I mostly disagree	2.94	7.84	
I neither disagree nor agree	15.69	25.00	
I mostly agree	18.63	12.75	
I agree	6.37	6.86	
I consider myself to be a person who values the convenience and speed of food preparation			
I disagree	0.00	1.96	0.01
I mostly disagree	4.41	14.71	
I neither disagree nor agree	5.88	7.35	
I mostly agree	13.24	11.27	
I agree	20.59	20.59	
I attach great importance to the health benefits of the food I eat			
I disagree	0.00	4.41	0.03
I mostly disagree	4.41	14.22	
I neither disagree nor agree	16.66	14.71	
I mostly agree	17.16	19.12	
I agree	5.88	3.43	

Source: own elaboration based on survey results.

Subjective self-assessment of health

The subjective self-assessment of the respondents' health status was carried out taking into account two factors differentiating the study group: gender of the respondents and age. No significant differences were observed in the subjective assessment of health status between women and men ($p = 0.37$). However, significant differences were observed in groups where age was the dividing criterion ($p = 0.01$) (Table 4). In the group of men, regardless of age, those describing their health as "good" predominated (from 46.43% in the baby boomer generation to 9.52% in generation Z). Women also, apart from Generation Z (where those describing their health as "neither bad nor good" 27.38% predominated), described their health as good (Table 4). Interestingly, none of the respondents described their health status as "bad" or "very bad".

Table 4.
Respondents' subjective self-assessment of their health status

Health status	Generations	% of indications		<i>p</i>
		Men	Women	
Very good	BB	3.57	0.00	0.01* 0.37**
Good		46.43	10.72	
Neither bad nor good		35.71	3.57	
Very good	X	17.47	9.52	
Good		22.22	26.98	
Neither bad nor good		14.29	9.52	
Very good	Y	13.79	6.90	
Good		17.24	37.93	
Neither bad nor good		17.24	6.90	
Very good	Z	8.33	9.52	
Good		9.52	27.38	
Neither bad nor good		3.58	41.67	

Explanatory notes: * Chi² health status v generation, **Chi² health status v gender.

Subjective self-assessment of diet

Significant differences were observed in the subjective self-assessment of respondents' diets, both between men and women ($p < 0.01$) and within groups, by age ($p < 0.01$). Among men, apart from generation Z (which was dominated by those describing their diet as "sometimes correct and sometimes incorrect" – 11.91%), those describing their diet as "mostly correct" predominated (from 20.69% in generation Y to 39.29% in the BB). In contrast, among women, regardless of age, those describing their diet as "sometimes correct and sometimes incorrect" predominated (from 7.14% for the BB to 54.76% for generation Z) (Table 5).

Table 5.
Respondents' subjective self-assessment of diet

Diet	Generations	% of indications		<i>p</i>
		Men	Women	
Incorrect	BB	0.00	0.00	<0.01* <0.01**
Rather incorrect		3.57	0.00	
Sometimes correct and sometimes incorrect		39.29	7.14	
Mostly correct		42.86	7.14	
Definitely correct		0.00	0.00	
Incorrect	X	0.00	0.00	
Rather incorrect		3.17	3.17	
Sometimes correct and sometimes incorrect		17.46	23.81	
Mostly correct		25.40	17.46	
Definitely correct		7.94	1.59	
Incorrect	Y	0.00	0.00	
Rather incorrect		6.90	6.90	
Sometimes correct and sometimes incorrect		13.79	34.48	
Mostly correct		20.69	10.34	
Definitely correct		6.90	0.00	
Incorrect	Z	0.00	3.57	
Rather incorrect		1.19	7.15	
Sometimes correct and sometimes incorrect		11.91	54.76	
Mostly correct		5.95	11.90	
Definitely correct		2.38	1.19	

Explanatory notes: * Chi² diet v generation, **Chi² diet v gender

The reasons for the differences in eating behaviour and attitudes towards the implemented diet between men and women can be traced back to both psychological and socio-cultural factors. Some differences, depending on gender, appear as early as childhood or adolescence. Women tend to be more aware and knowledgeable about nutrition than men. Women consume more fruit, vegetables, processed cereals and whole grain products, while the consumption of red meat, especially pork, processed meats or eggs is higher in men. Men's approach to nutrition is more often less complex than women's and oriented towards pleasure (Kiefer, Rathmanner, Kunze, 2005). In our own study, women were characterised by greater restraint and a more critical appraisal of their diets, compared to men, in the answers they gave. It is significant that women, irrespective of their age, were most likely to give an ambivalent answer in their subjective self-assessment of their diet, indicating the difficulty of making an unambiguous assessment (Table 5). In contrast, men, and especially those from Generation X and baby boomers, were observed to have a higher subjective self-assessment of diet as mostly correct and ambivalent, with an orientation towards speed and convenience of meal preparation (Table 5).

Assessment of frequency of dietary fibre intake – as a measure of consumption of foods with health-promoting characteristics

As many as 52.94% of the total respondents were categorised as having inadequate dietary fibre intake and only 9.31% as having sufficient dietary fibre intake. No significant differences were observed in the level of fibre intake either by gender ($p=0.84$) or by age of the respondents ($p = 0.36$) (Table 6). In the group of men, apart from Generation Z (where people with very low fibre intake predominated – 14.29%), people with inadequate levels of dietary fibre intake prevailed (from 24.14% in Generation Y to 46.43% in BB). Among women, generations Z and X had the highest prevalence of people with inadequate levels of dietary fibre intake: 44.05 and 30.16%, respectively. Generation Y was dominated by those with very low (31.03%) and baby boomers with adequate fibre intake (10.72%) (Table 6).

Table 6.
Level of dietary fibre intake

Dietary fibre intake	Generations	% of indications		<i>p</i>
		Men	Women	
Very low	BB	32.14	3.57	0.36* 0.84**
Inadequate		46.43	0.00	
Adequate		7.14	10.72	
Very low	X	15.87	12.70	
Inadequate		31.75	30.16	
Adequate		6.35	3.17	
Very low	Y	17.24	31.03	
Inadequate		24.14	20.69	
Adequate		6.90	0.00	
Very low	Z	14.29	27.38	
Inadequate		7.14	44.05	
Adequate		0.00	7.14	

Explanatory notes: *Chi² level of fibre intake v generation, **Chi² level of fibre intake v gender.

Based on the survey, it was found that the surveyed group of respondents overall identified vegetable salads and raw vegetables ($\bar{x} = 3.1$; $SD = 1.3$; $M = 3.0$) and cooked potatoes ($\bar{x} = 3.0$; $SD = 1.3$; $M = 3.0$) as the two primary sources of dietary fibre intake. Other products presented in the study, such as day-old fruit/vegetable juice, raw and frozen fruit, legumes (beans, peas, lentils), other vegetables (cooked, frozen, pickled), flour products made from graham flour, wholemeal flour, rye flour, bran or groats, and brown rice or quinoa, were consumed by the respondents quite frequently; however, they did not constitute a significant source of dietary fibre intake in their habitual diet (mean values range from 1.3 to 3.3).

Women and men differed significantly ($p \leq 0.05$) in the frequency of intake of most products considered as sources of dietary fibre. No differences were observed in the frequency of consumption of raw vegetable and vegetable salads ($p = 0.76$), potatoes ($p = 0.63$) and other vegetables ($p = 0.19$). When grouped by age (generations Z, Y, X and baby boomers), no significant differences were observed in the frequency of consumption of raw vegetables and vegetable salads ($p = 0.33$), potatoes ($p = 0.10$) and dark rye bread ($p = 0.14$).

Although daily fibre intake has been recommended for many years, analysis of the dietary behaviours of different population groups indicates low fibre intake in implemented dietary patterns in different population groups (Jarosz et al., 2020). Dietary fibre intake provides a number of health benefits, including a reduction in the incidence of cardiovascular disease (Satija, Hu, 2012), diabetes, obesity, colorectal cancer and some gastrointestinal disorders. Dietary fibre intake also appears to improve immune function (Maslowski, Mackay, 2011; Slavin, 2013). People who consume adequate amounts of dietary fibre are less frequently diagnosed with inflammatory diseases (De Filippo, Cavalieri, Di Paola, 2010; Maslowski, Mackay, 2011). Dietary fibre influences immune function, particularly through the production of short-chain fatty acids, which are produced by the fermentation of dietary fibre and exert many beneficial effects in the human body (Hooper, Littman, Macpherson, 2012; Maslowski, Mackay, 2011). Zhang et al. (2012) conducted a study showing that increasing dietary fibre intake by 10 g per day contributed to a reduction in cancer risk by up to 44%. The dietary standards for the Polish population recommend an intake of 25 g/day of dietary fibre in a group of women and men aged 19-65 years. However, in a group of women and men over 66 years of age, it is 20 g/day (Jarosz et al., 2020). Due to the inadequate intake of dietary fibre by the study group, it can be concluded that they may constitute a high-risk group for obesity, diabetes, cardiovascular disease or cancer in the future.

Assessing the frequency of fat intake – as a measure of unhealthy food consumption, especially when overconsumed

Very low levels of fat intake were reported by 38.24% of respondents, low by 25.98%, and moderately high by 17.65%. No significant differences were observed in the level of total fat intake between men and women ($p = 0.21$), as well as in the groups divided by age ($p = 0.17$). In the group of men, irrespective of age, those with a very low intake of total fats predominated

(ranging from 17.24% in Generation Y to 28.57% in the baby boomers). In the women's group, apart from Generation Z (in which 28.57% belonged to the group with low fat intake), those characterised by very low total fat intake also predominated (Table 7).

Table 7.

Level of intake of isolated fats and foods that are a significant source of total fat intake from the diet

Level of fat intake	Generations	% of indications		p
		Men	Women	
Very high	BB	7.14	0.00	0.17* 0.21**
High		17.86	0.00	
Moderately high		7.14	0.00	
Low		25.01	7.14	
Very low		28.57	7.14	
Very high	X	1.59	0.00	
High		7.94	7.94	
Moderately high		12.70	11.11	
Low		9.52	4.76	
Very low		22.22	22.22	
Very high	Y	6.90	3.45	
High		3.45	3.45	
Moderately high		10.34	3.45	
Low		10.34	20.69	
Very low		17.24	20.69	
Very high	Z	2.38	4.76	
High		4.76	4.76	
Moderately high		2.38	15.48	
Low		2.38	28.57	
Very low		9.52	25.01	

Explanatory notes: *Chi² level of fat intake v generation, **Chi² level of fat intake v gender.

Among the total respondents, as well as within the group of men and women, the highest arithmetic mean (2.9 points) of the frequency of consumption of products that are sources of total fats was determined for margarine or extra butter (SD = 1.3; M = 3.0) and eggs (\bar{x} = 2.8; SD = 1.2; M = 3.0). Other products presented in the survey, such as fried chicken or turkey, melted and yellow cheeses, and whole milk (3%), were consumed quite frequently by respondents but did not constitute a significant source of fat intake in their usual diet (mean values range from 1.3 to 3.3).

Men and women differed significantly in the frequency of consumption of fried chicken or turkey ($p < 0.01$), sausages, frankfurters and kabanos ($p = 0.04$), salad dressings, mayonnaise ($p = 0.01$), eggs ($p = 0.04$), melted and yellow cheeses ($p = 0.01$), whole milk ($p < 0.01$) and crisps and fries ($p < 0.01$). There were no significant differences between women and men in the frequency of consumption of pizza, casseroles, lasagne and burgers ($p = 0.20$), beef, steaks and roasts ($p = 0.19$), fatty meats, pâté, black pudding, mince, bacon ($p = 0.12$), margarine or extra butter ($p = 0.36$). In contrast, the groups for which age was a dividing criterion (generations Z, Y, X and BB) did not differ significantly in the frequency of consumption of pizza, casseroles, lasagne and burgers ($p = 0.64$), sausages, frankfurters and kabanos ($p = 0.10$), fatty cold meats, pâté, black pudding, mince, bacon ($p = 0.18$) and eggs ($p = 0.13$).

It is satisfactory that the level of total fat intake in the study group of respondents is at an acceptably low level. A study conducted among students (in Poland) (Głodek et al., 2012), similarly to our own study, showed that the most commonly consumed product as a source of fats in women's diets was butter or margarine. According to nutrition standards for the Polish population (2020), dietary fat should provide no more than 35% of energy (Jarosz et al., 2020). According to the Central Statistical Office (CSO), Poland, compared to other members of the European Union, is characterised by a relatively high intake of animal fats, especially butter, while the intake of vegetable fats is lower than in many EU countries (Rosiak, 2016). The impact of saturated fatty acid and dietary fibre intake on the risk of cardiovascular disease in people with type 1 diabetes has been compared (Schoenaker et al., 2012).

It was observed that a 5 g/day increase in dietary fibre intake resulted in a decrease in morbidity and mortality among the study respondents. It is important to remember that non-communicable diseases are the leading cause of death worldwide, and among these, cardiovascular diseases account for the largest number (Bennett et al., 2018; WHO, 2022). Cardiovascular diseases are multifactorial. Modifiable factors include smoking, alcohol consumption, physical inactivity, and poor dietary habits, including high salt and saturated fat intake and deficient vegetable and fruit intake (Riccardi et al., 2022; Vesnina et al., 2022). Non-modifiable factors include age, gender and ethnicity (Johansson et al., 2021). Among the modifiable factors, it is the reduction of fat intake, especially saturated fatty acids, that is the main issue that can and should be worked on.

4. Conclusions and future perspectives

The survey found that both women and men considered themselves to be engaged in work and study. Women and men tended to agree with the statement that they were pleasure-oriented people. Men did not explicitly respond to the statement that they were or were not health-conscious people, while women said they tended to consider themselves health-conscious people. Both women and men declared ambivalent eating behaviour regarding the importance of the naturalness of the food they consume (low processing). Women and men valued the convenience and speed of food preparation and tended to pay attention to the health benefits of the food they consumed. Both women and men stated that they valued tradition. It is satisfactory that the level of fat consumption among the surveyed group of respondents was at an acceptably low level. On the other hand, inadequate and very low intake of dietary fibre remains a concern. Generally, the women considered themselves to be health-conscious, while they consumed dietary fibre at a very low or insufficient level, which may indicate their overly high subjective self-esteem.

The present results are limited due to the small study sample and its scope. However, the analysis of respondents' consumption of selected food groups showed that gender and age influenced lifestyle and the type of selected consumed food products by adults, and therefore the attainment of individual nutrient requirements, and the risk of chronic non-communicable diseases.

According to the authors, research on the dietary choices made by Polish adults should be continued. If adults (in Poland) do not pay attention to the impact of the products they consume on their health, do not have a balanced diet, and consume products rich in simple carbohydrates and saturated fatty acids, the risk of their quality of life falling as a result of contracting metabolic diseases will increase significantly. In light of the challenges of the SDGs, conducting research that monitors the dietary behaviour of various population groups is useful and legitimate to ascertain whether it is necessary to take preventive measures related to ensuring health and taking greater care of the mental and physical condition of current and future generations. The conducted research is part of health risk management and health promotion in the Polish population.

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