

Consumer and Dietary Behaviour of Polish Silver Singles

Tomasz Zalega

dr hab., prof. ucz., Faculty of Management, University of Warsaw, Poland
<https://orcid.org/0000-0002-7488-1184>

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Abstract

Purpose: The goal of the study is to analyse food expenditure, dietary behaviour and the frequency of food purchases in Polish silver singles' households as well as key factors affecting their decisions in this respect.

Design/methodology: The analysis is based on a survey questionnaire administered between 1 February and 30 October 2018 in a sample of 2476 elderly people living alone in ten Polish cities of various populations and sizes. In accordance with the research assumptions, the sample included persons over 65 years of age who took independent consumer decisions in the market. This research method was chosen in view of the older age of respondents whose openness to new media often used in direct research is limited.

Findings: The survey shows that the level of consumption of most food products depends on the disposable income of silver singles. While shopping for food, most single seniors pay attention to whether food is healthy, make sure that their diet is rich in vitamins and minerals, and that the products consumed are fresh and do not contain preservatives. Yet, they attach the greatest importance to the price and quality of food as well as numerous promotions offered by shops whereas they care less about fashion and the wish to stand out.

Research limitations/implications: Given the limited financial capacity, the study of consumer and dietary behaviour of silver singles was confined to a survey conducted in the biggest Polish cities. It was not possible to carry out research among single seniors living in rural areas. Following the conclusions made, they should not be treated as representative of the population of Polish silver singles. They only provide some insight into actual consumer and dietary behaviours of this consumer segment.

Originality/value: This article is one of few publications in Poland that seek to provide some insight into consumer and dietary behaviour of Polish silver singles.

Keywords: silver singles, needs, consumer behaviour, dietary behaviour, food products.

JEL: D120, D190.

Correspondence address: Faculty of Management, University of Warsaw, 1/3 Szturmowa Street, 02-678 Warsaw, Poland.

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Zachowania konsumpcyjne i żywieniowe polskich srebrnych singli

Streszczenie

Cel: Celem opracowania jest przeanalizowanie wydatków na żywność, zachowań żywieniowych i częstotliwości zakupów produktów żywnościowych w gospodarstwach srebrnych singli żyjących w Polsce oraz kluczowych czynników wpływających na ich decyzje w tym zakresie.

Metoda: Podstawą analizy jest kwestionariusz ankiety przeprowadzony w okresie od 1 lutego do 30 października 2018 na próbie 2476 osób starszych żyjących w pojedynkę w dziesięciu miastach Polski o zróżnicowanej liczbie ludności oraz wielkości. Zgodnie z przyjętymi założeniami badawczymi, w próbie znalazły się osoby powyżej 65. roku życia, które podejmowały suwerenne decyzje konsumenckie na rynku. Wybór metody badawczej był podyktowany starszym wiekiem ankietowanych, których otwartość na nowe media, często wykorzystywane w badaniach bezpośrednich jest ograniczona.

Wyniki: Z przeprowadzonego badania wynika, że poziom spożycia większości produktów żywnościowych zależy od dochodów rozporządzalnych srebrnych singli. Przy zakupie żywności większość samotnych seniorów zwraca najczęściej uwagę na walory zdrowotne żywności, dba o to aby ich dieta zawierała dużo witamin i minerałów, a spożywane produkty były świeże i pozbawione konserwantów. Natomiast największą wagę przywiązują oni do ceny i jakości kupowanej żywności oraz licznych promocji organizowanych przez sklepy, natomiast są mniej wrażliwi na modę i chęć wyróżnienia się.

Ograniczenia badań i wnioski: Z uwagi na ograniczone możliwości finansowe, uchwycenie zachowań konsumpcyjnych i żywieniowych srebrnych singli ograniczyło się wyłącznie do badań przeprowadzonych w największych miastach Polski. Natomiast nie udało się przeprowadzić badań wśród samotnych seniorów żyjących na wsi. W efekcie poczynionych wniosków nie należy traktować ich jako reprezentatywnych dla populacji polskich srebrnych singli. Pozwalają one jedynie przybliżyć rzeczywiste zachowania konsumenckie i żywieniowe tego segmentu konsumentów.

Oryginalność/wartość: Niniejsza publikacja jest jedną z nielicznych w Polsce, która próbuje uchwycić zachowania konsumpcyjne i żywieniowe polskich seniorów żyjących w pojedynkę.

Słowa kluczowe: srebrni single, potrzeby, zachowania konsumenckie, zachowania żywieniowe, produkty żywnościowe.

1. Introduction

Ageing is common in all regions of the world and is particularly intensive in Europe and North America. This trend is accompanied by, among others, singlisation of the population, which is becoming ever more widespread. The growing percentage of single-person households in the Polish population is an increasingly noticeable market segment. Single-person households are set up by individuals of different ages and different social and economic status. Changes in the number and demographic and social structure of households run by singles depend on many factors of various nature. What is significant is marital status, age at the end of marriage due to the death of a spouse or divorce, and family status before deciding to establish a single-person household.

Singlehood is a sign of independence rather than a cause for shame, it offers the opportunity to build diverse relationships and acquaintances as

opposed to a sole focus on the family. There is, therefore, a chance of choice contrasting with the old, uniform pattern. Changes in mentality, distance from the institution of family, and the cult of independence make up the socio-cultural landscape of the 21st century (Allen et al., 2013, pp. 206–207; Band-Winterstein & Manchik-Rimon, 2014, p. 381).

Consumption of food products and a healthy diet of seniors, including those living alone, determine the proper functioning of the body and may also contribute to delaying the natural, ageing process. In recent years, many interesting changes can be noted as regards food products consumed by Polish seniors' single-person households. These developments evince the rationality of consumption, increased attention to health prophylaxis, well-being, comfort, including changes in lifestyle and nutrition.

The article addresses the consumption of food products and dietary behaviour of Polish silver singles. Its primary goal is to analyse food expenditure, dietary behaviour and the frequency of food consumption in silver singles' households as well as key factors affecting their decisions in this respect. The analysis is based on a survey questionnaire administered between 1 February and 30 October 2018 among silver singles in Poland.

The structure of the article is as follows. After briefly elucidating the phenomenon of singlehood and food consumption in households, the methodology and assumptions of the study and the characteristics of the research sample are synthetically discussed. The further part concentrates on examining food expenditure, consumption of selected food products, dietary behaviour in the households of silver singles, and key determinants considered by the respondents when making purchase decisions. Finally, a conclusion of the analysis and major findings end this article.

2. The Concepts of “Single” and “Silver Single”

The first attempts to define people living alone were made in the 1930s in American literature (Hillis, 1936). The definition of a single takes into account legal, social and individual aspects. A single is most often differentiated from a couple on the basis of three features: the presence or absence of a long-term close and intimate partner, self-definition in one of these roles, and age limits determining the legal possibility of getting married (Hertel et al., 2007, p. 141). Those actually living alone constitute an extreme case of social singles. They are also referred to as singletons. The classic American definition of a “single” assumes that it is a person who is not married or in an informal heterosexual or homosexual relationship (Stein, 1981). In English, “single” usually refers to all unmarried people, that is spinsters, bachelors, the divorced, widows and widowers (Stein, 1976). German literature most commonly defines a single as a person who lives without a lasting, deep relationship in a single-person household, regardless of the voluntary or enforced nature of such a lifestyle (Deml, 2009).

In Polish, in turn, given that the word “single” has been imported, it has acquired cultural connotations and refers only to some people living alone. Living alone is not only considered as an alternative form of married and family life but as a thought-out and ultimate life project for a growing group of women and men (Zalega, 2019, pp. 4–5).

The group of people living alone is not homogeneous. Singles can be unmarried, widowed or divorced. These are, therefore, people whom the Polish society terms unmarried or bachelors/spinsters. The diversity of singles makes researchers redefine them for their purposes in scientific research, referring to different variables (e.g. age, marital status, economic independence). However, social sciences lack a uniform conceptual framework for singlehood. The adoption of legal, economic and lifestyle-related criteria describing the category of singles should be considered necessary, yet, as previously demonstrated, insufficient. In this article, “silver singles” will mean people aged 65+, living alone by their own choice (in a single-person household or a separate flat) for reasons beyond their control (widow, widower) or those who live alone again (divorced, abandoned, forsaken). These people usually have no parental responsibilities, are economically independent, have most often completed higher or secondary education, have a large group of friends and acquaintances, are strongly focused on themselves and their needs, and lead a specific lifestyle in which they pursue individual values and relationship patterns. In addition, this study assumes that singles cannot remain in informal LAT or distant relationships and their possible romantic relationships cannot be lasting¹. This definition thus excludes elderly people who are in a permanent heterosexual or homosexual relationship and narrows the group of “silver singles”, allowing research uniformity.

3. Food Consumption in Households – Theoretical Background

Due to its universality in human life, consumption is the subject of interest of many scientific disciplines, from natural through technical to social science. This affects the terminology. Related literature lacks a clear interpretation of this notion. In the most synthetic approach, consumption is defined as all human activities and behaviours aimed at satisfying human needs while using available goods and services. The *sine qua non* condition for the human body to function properly is food consumption; therefore, food is a part of the product group that must be present in human consumption and in every household’s consumption as it caters for viscerogenic needs. It should be emphasised, however, that food does not have its substitutes, hence, regardless of a household’s income situation, it will always be a priority in the hierarchy of needs, though will not necessarily dominate the consumption structure. When their income situation deteriorates, households tend to first and foremost cater for their basic

(lower-order) needs including food needs (ratchet effect), simultaneously reducing their higher-order needs.

During the last two decades, food consumption in Poland has undergone substantial quantitative and qualitative changes. It can be supposed that the future will see further developments. It must be remembered, however, that food and nutrition essentially determine human health and well-being. It is recognised that lifestyle, along with its main component which is diet, determines up to 50% of human health.

Consumer needs in the food market are reflected as the purchasers' demand at particular market prices and disposable income. Consumers' food consumption patterns, on the other hand, reflect the actual level and structure of food consumption in given national socio-economic conditions. Food consumption patterns are markedly influenced by two groups of determinants: economic and non-economic. Economic factors including: disposable income of consumers, market prices of purchased products, savings, loans, and the supply of consumer goods play a crucial role. Non-economic determinants comprise geographical, cultural, social and professional, informational and educational factors, along with the impact of the various elements of food marketing such as product packaging, price, availability, etc. Undoubtedly, food consumption patterns are also being increasingly influenced by dietary recommendations leading to a balanced diet as well as by new patterns of consumer behaviour that are the result of emerging alternative consumer trends such as cocooning, ethnocentrism, homogenisation, sustainable consumption, and conscious consumption.

Food consumed in households comes from three main sources. First, it may come from a household's own farm or allotment garden, which is referred to as self-supply or natural consumption in the literature. Such consumption is among the key factors affecting dietary behaviour of today's households, especially farmers, while being of little importance in other groups of households. Another significant way of meeting food needs of the population is purchasing products in the market, also termed market or commodity consumption, financed from personal income of the population and covering only those food purchases that are made by consumers in the organised market. The third possible food supply source is social consumption, also called collective consumption, which is financed by the government. Funds for this purpose come from the central budget or financial resources of local authorities. Such assistance is usually entirely or partially free of charge (Zalega 2017, p. 167).

As independent market participants, silver singles themselves define the amounts and structure of their food expenditure that are an effect of their needs, aspirations and financial capacities. Changes in food spending are, in turn, reflected in the quantity of food products consumed. Nonetheless, it must be borne in mind that dietary behaviours are differentiated depending on gender, age, personality traits, indicators of social and financial position, and regional and cultural contexts.

With age, dietary recommendations are modified. Due to the changes in their bodies (slower metabolism, chronic diseases), silver singles often alter their eating habits and behaviours, which affects food purchases made by them.

4. Research Conceptualisation

The tool used to conduct the research was my original questionnaire comprising 35 closed-ended questions regarding consumer behaviour of Polish silver singles, including food expenditure and dietary behaviour of the respondents. In order to obtain information about the food consumed, a questionnaire concerning consumption frequency was used, covering basic groups of food products that are key from the point of view of a balanced diet such as: cereals, milk and dairy products, meat and cold cuts, fish, legume seeds, and fruit and vegetables. The survey also provided information on how silver singles learn about nutrition and food.

The first of three planned stages of the survey was carried out from 1 February to 30 October 2018. The empirical material contained in this article comes from direct research conducted in the form of a survey questionnaire in a sample of 2476 elderly people living alone. In accordance with the research assumptions, the sample included persons over 65 years of age who took independent consumer decisions in the market. Since the research was non-exhaustive, it was necessary to select the sample. In this case, the targeted quota sampling procedure was used.¹ The characteristics (quotas) covered by the research were: gender, age, and place of residence. Based on the known structure of the studied population, unit quotas were selected in relation to these characteristics.

This research method was chosen in view of the older age of respondents whose openness to new media (internet, smartphone, i-Pod) often used in direct research is limited.

The survey was conducted among participants of the University of the Third Age (UTA) at state universities in: Warsaw, Cracow, Łódź, Poznań, Gdańsk, Katowice, Lublin, Białystok, Toruń and Wrocław, as well as among members of parochial clubs in parishes located in the Archdioceses of Warsaw, Cracow, Łódź, Białystok, Gdańsk, Katowice, Lublin, Poznań, Wrocław and the Dioceses of Warsaw-Praga and Toruń.

During data processing, information from respondents was eliminated if the survey questionnaires were incomplete or incorrect (6 instances). From among 2482 initial questionnaires, 2476 were considered eligible, representing 99.76% of the total sample. Further, they were coded, and the data set thus created was processed by a statistical package. For the statistical analysis of data, the statistical package SPSS, version 25, was employed. Using Pearson's rank correlation test, Spearman's rho correlation and Cramér's V coefficient, relationships and correlations between selected

factors characterising silver singles, on the one hand, and the consumption of selected food product groups and dietary behaviour, on the other hand, were examined. The results were considered statistically significant at the significance level of $p < 0.05$, $p < 0.01$ and $p < 0.001$

The key goal of the article is to provide insight into consumer and dietary behaviour of silver singles and the frequency of food consumption. With this in mind, three research hypotheses were put forward:

- H_1 : The bad financial situation of silver singles is reflected in increased food expenditure, thus affecting the self-assessed satisfaction of their needs.
- H_2 : The diet of most silver singles deviates from the recommended model of balanced diet.
- H_3 : When buying food products, silver singles most often consider their price, quality and promotion, with the least frequent focus on the wish to stand out and fashion.

5. Selection and Characteristics of the Research Sample

“Silver singles” were chosen for the research in view of their growing importance and decision-making power in today’s societies, and because, as market participants, they respond to the changing environment, globalisation and its impact on consumption, lifestyle and emerging new consumer trends with more and more intensity. Undoubtedly, understanding their reasons, behaviours and market attitudes can help enterprises not only to decide on appropriate innovative marketing strategies but also to determine the right development path, allowing companies to remain in the market and make their product (service) offer attractive to new customers, especially the elderly, despite dynamic changes in consumption and ever faster development of mobile technologies and applications.

I divided elderly singles into:

- 1) young old – people aged 65–74;
- 2) old old – people aged 75–84;
- 3) the oldest old – people aged 85 and more.

The research covered 69.2% and 30.8% of women and men, respectively. Respondents were asked about the level of education. The survey questionnaire included four categories of education: primary, basic vocational, secondary and higher education. Respondents with secondary education formed the largest group. Every second silver single declared this level. Almost every fifth respondent had completed higher education. In the sample surveyed, people with primary (13.8%) and basic vocational (15.1%) education formed the smallest group. The average age of respondents was 74 years.

Only every eighth respondent was economically active. Within this small group of working silver singles, over 85% were under 75 years old, almost

every eighth represented the 75–84 age group, and only 2.5% of those living alone were the oldest old. It should also be noted that women accounted for almost 70% of all economically active singles. As regards the place of residence, most silver singles lived in cities of over 500 thousand inhabitants – mainly in Warsaw, Cracow and Wrocław, and the fewest lived in Białystok and Łódź.

Almost half of respondents described their economic situation as bad, while every third respondent as good. Nearly one in ten respondents described their economic status as very bad whereas every twentieth silver single assessed their material situation as very good. In this case, it can be noticed that a positive correlation exists between the size of the city where the surveyed singles lived and their self-perceived material situation. The bigger the city, the greater the percentage of silver singles who assessed their material situation as good (Pearson's rank correlation coefficient $r = -0.196$, $p < 0.01$) or very good (Pearson's rank correlation coefficient $r = -0.261$, $p < 0.01$).

The largest group of respondents included people whose monthly disposable income ranged from PLN 2001.00 to PLN 3000.00. For almost every third person surveyed, the monthly disposable income did not exceed PLN 2000.00, and for every tenth, the disposable income ranged from PLN 3001.00 to PLN 4000.00 per month. The smallest group of respondents included silver singles whose monthly disposable income exceeded PLN 4000.00.

6. Food Expenditure in the Households of Silver Singles

As regards the expenditure structure, the primary research showed that silver singles' households spent the most money on housing (23.7%). Food ranked second in total spending. This category accounted for 21.9% of the monthly disposable income of the surveyed single-person households.

The highest percentage of food expenditure is characteristic of the surveyed households in Białystok, Lublin and Cracow, while the lowest is noted for households in Warsaw, Wrocław and Katowice. More accurate shares of such expenditure in the monthly budgets of the singles' households are reported in Table 1.

The variation of the shares of silver singles' food expenditure is largely dependent on their monthly disposable income (Spearman's rho correlation coefficient $r = -0.247$, $p = 0.01$). The lowest share of such expenditure was spent by those whose monthly disposable income exceeded PLN 4000.00. In this income group, more than 3/5 of silver singles spent less than 1/5 of their disposable income on food each month (Table 1). On the other hand, the largest proportion of food spending in total expenditure was noted for those with disposable income not exceeding PLN 2000.00. In the income group earning PLN 3001.00–4000.00 and above PLN 4000.00 PLN, none of the

single-person households surveyed reported the share of food expenditure in excess of 30%. Food needs are among the most urgent and strongest needs and their share in disposable income affects the structure of consumption of other non-food needs. It can be claimed that the observation formulated in Engel's first law is empirically confirmed in the case of the surveyed single-person households.

Items		Up to 20%	21–25%	26–30%	More than 30%
Total		39.9	28.2	25.5	6.4
Disposable income	Up to PLN 2000.00	25.2	25.9	42.7	6.2
	PLN 2001.00–3000.00	25.8	29.3	38.3	6.6
	PLN 3001.00–4000.00	57.4	30.5	12.1	–
	More than PLN 4000.00	64.0	27.1	8.9	–
Place of residence	Warsaw	38.3	32.6	23.8	5.3
	Cracow	40.9	28.5	24.7	5.9
	Łódź	40.1	23.7	28.2	7.0
	Poznań	41.0	27.5	26.2	5.3
	Wrocław	39.1	29.8	24.8	6.3
	Gdańsk	39.8	27.1	26.0	7.1
	Katowice	39.1	29.2	24.9	6.8
	Lublin	40.8	26.3	25.8	7.1
	Białystok	40.6	26.1	26.1	7.2
	Toruń	39.3	30.2	24.5	6.0

Tab. 1. Shares of food expenditure in the monthly budget of silver singles (%). Source: The author's research.

In order to determine the hierarchy of consumer needs according to their importance, silver singles were asked to select, from among six groups of needs (food, housing and energy carriers, clothing and footwear, durable goods possessed, cultural needs, leisure), only two that they considered to be a priority in their households. The question so asked resulted in the concentration of responses on a specific group of needs regarded by the respondents as crucial at a given moment. Over 67% of silver singles pointed to food as the most important need. The indication of food as a fundamental need in the hierarchy of all consumption needs is natural because it is a basic need that simultaneously affects the human body, its general fitness, vitality and the length of life. As expected, statistically significant differences were noted between income levels and food needs (Cramér's V coefficient = 0.349, $p < 0.01$).

Place of residence slightly less differentiated the sample but it was a statistically significant relationship (Cramér's V coefficient = 0.149, $p < 0.01$). Taking into account the place of residence, the share of food expenditure was the biggest in the surveyed households in Łódź and Białystok whereas it was the smallest for silver singles living in Poznań and Cracow. In addition, in Poznań, there was the largest number of single silvers' households where the share of food expenditure in their budgets reached 20%.

7. Consumption of Selected Food Products in Silver Singles' Households

The level of consumption of most food products largely depends on the disposable income of silver singles. As wealth increases, their consumption increases. Compared with the lowest-income households (up to PLN 2000.00), silver singles' households earning a monthly income of more than PLN 4000.00 consumed over three times more fruit and vegetable juices, yoghurt and milk drinks, almost two and a half times more fish and vegetables, and nearly twice more fruit. On the other hand, households with the lowest incomes ate more bread, flour, potatoes, and sugar. Furthermore, regardless of household wealth, over 1/3 of those surveyed claimed that they successively abstained from consumption of animal fats, including butter, in favour of vegetable fats. Such behaviour is undoubtedly a manifestation of changes in eating patterns, whereby animal fats are being ever more frequently replaced by fats that do not contain the cholesterol that is harmful to the human body (Table 2). This thus testifies to greater nutritional awareness of the respondents, reflected in a positive change in their dietary behaviour. These changes are also a consequence of many consumption trends (e.g. sustainable consumption, conscious consumption, collaborative consumption, deconsumption) and environmental movements (e.g. Lifestyle of Health and Sustainability, Voluntary Simplicity or Slow Life).

Food consumption is correlated with the place of residence (Table 2). Differences can be spotted in the model of food consumption among silver singles living in various Polish cities. The survey reveals that silver singles living in Lublin consumed the most bread (4.69 kg) and those residing in Gdańsk the least of it (4.48 kg). The biggest amounts of groats and flakes were eaten by those living in Poznań (0.50 kg) whereas the smallest by silver singles living in Białystok (0.40 kg). The most fresh meat was consumed by silver singles from Katowice (4.82 kg) and the least by those residing in Lublin (4.32 kg). In turn, the biggest amount of fresh milk was drunk in Łódź (2.93 l) and the smallest in Gdańsk (2.53 l). Yoghurts were consumed in the greatest amounts by silver singles living in Warsaw (0.76 l) while the least amounts of this product were noted for Lublin (0.53 l). As regards fish, its intake was the biggest for respondents living in Warsaw (0.57 kg) and the smallest for those from Katowice (0.42 kg). The highest

Food products	Total	Place of residence									
		Warsaw	Cracow	Łódź	Poznań	Wrocław	Gdańsk	Katowice	Lublin	Białystok	Toruń
Bread (in kg)	4.58	4.49	4.62	4.53	4.57	4.53	4.48	4.71	4.69	4.63	4.52
Flour (in kg)	1.06	1.01	1.06	1.08	1.04	1.03	1.03	1.07	1.09	1.12	1.05
Groats and breakfast flakes (in kg)	0.44	0.46	0.43	0.48	0.50	0.41	0.43	0.45	0.42	0.40	0.41
Pasta (in kg)	0.44	0.43	0.45	0.43	0.47	0.42	0.41	0.43	0.44	0.43	0.44
Rice (in kg)	0.23	0.27	0.25	0.20	0.23	0.24	0.23	0.27	0.22	0.21	0.22
Fresh vegetables (in kg)	12.55	12.73	12.31	12.28	12.21	12.40	12.53	12.58	12.83	12.81	12.80
including: potatoes (in kg)	5.45	5.42	5.38	5.36	5.27	5.35	5.37	5.41	5.76	5.72	5.44
Fresh fruit (in kg)	4.85	5.17	4.96	4.41	4.76	4.85	4.92	4.62	4.95	4.93	4.90
Fresh meat (in kg)	4.62	4.80	4.65	4.72	4.35	4.50	4.68	4.82	4.32	4.63	4.73
Fish (in kg)	0.49	0.57	0.53	0.47	0.49	0.51	0.47	0.42	0.46	0.51	0.47
Margarine and other vegetable fat (in kg)	1.01	0.98	1.00	1.03	1.02	1.02	1.01	1.00	0.99	1.02	0.98
Fresh whole milk (in l)	2.73	2.63	2.90	2.93	2.71	2.68	2.53	2.68	2.73	2.83	2.71
Yoghurt (in l)	0.68	0.76	0.71	0.73	0.69	0.72	0.69	0.71	0.53	0.58	0.68
Curd cheese (in kg)	0.86	0.83	0.79	0.76	0.80	0.79	0.73	0.76	0.72	0.78	0.82
Ripened and processed cheese (in kg)	0.44	0.51	0.46	0.39	0.46	0.48	0.47	0.42	0.46	0.36	0.41
Animal fat (in kg)	0.57	0.50	0.51	0.54	0.67	0.53	0.61	0.59	0.60	0.58	0.57
Eggs (in units)	10.96	11.48	10.72	10.65	10.98	10.73	10.82	11.08	10.96	11.53	10.61
Tea (in kg)	0.09	0.08	0.07	0.08	0.09	0.09	0.09	0.09	0.08	0.10	0.09
Coffee (in kg)	0.23	0.25	0.24	0.19	0.22	0.23	0.26	0.25	0.21	0.20	0.21
Sugar (in kg)	1.49	1.49	1.52	1.63	1.55	1.47	1.51	1.43	1.44	1.51	1.43
Mineral and spring water (in l)	4.27	4.76	4.32	4.18	4.23	4.27	4.26	4.19	4.11	4.16	4.20
Fruit and vegetable juice (in l)	0.82	0.95	0.83	0.79	0.83	0.81	0.78	0.81	0.77	0.84	0.82

Tab. 2. Average monthly food consumption in silver singles' households. Source: The author's research.

consumption of fresh fruit was recorded in Warsaw (5.17 kg) and the lowest in Łódź (4.41 kg) while vegetables were consumed in the biggest amounts by respondents living in Lublin (12.83 kg) and the smallest by those residing in Poznań (12.21 kg). As for fruit and vegetable juices, silver singles living in Warsaw consumed the most (0.95 l) while those living in Lublin the least (0.77 l).

For many categories of food products, i.e. flour, fresh whole milk, fresh meat, margarine and other vegetable fats, curd cheese and eggs, the amount of the food consumed increased with the age of silver singles. When analysing the consumption of products such as bread, groats and breakfast flakes, yoghurt, ripened and processed cheese, fresh fruit and vegetables, fruit and vegetable juice, and mineral and spring water, it turns out that the intake of these products decreased with the age of respondents. Silver singles in the 65–74 age group more often ate fish, rice, yoghurt, ripened cheese, eggs, fresh fruit and vegetables, fruit and vegetable juice, mineral water, and coffee and tea. In households run by old old respondents (aged 75–84), the intake of groats and breakfast flakes, pasta, margarine and other vegetable fats, potatoes and fresh meat was bigger than in other groups. In turn, in the oldest old singles' (aged 85 and more) households, bread, flour, curd cheese, eggs and sugar were consumed in the greatest amounts. It was also noted that UTA students were more likely to consume groats and flakes, vegetables and fruit, yoghurt and milk drinks, fish, fruit and vegetable juices and less likely to consume bread, animal fats, eggs, fresh whole milk and potatoes than silver singles belonging to parochial communities.

Linear regression was used to identify the relationship between the age of respondents and their intake of food products (Table 3). The regression coefficient informs about the average change in the amount of the product consumed after moving to the next age group. It is positive (negative) when the intake of food products increases (decreases) with age.

Table 3 contains only those products the consumption of which is statistically significantly different among households run by young old, old old and the oldest old singles. The analysis of the survey results revealed that, with age, the consumption of bread increased by 0.03 kg, flour – by 0.17 kg, fresh vegetables – by 0.39 kg, fresh meat – by 0.55 kg, margarine and other vegetable fat – by 0.04 kg, fresh whole milk – by 0.03 l, curd cheese – by 0.04 kg, eggs – by 0.07 units, and sugar – by 0.23 kg. With age, silver singles' intake of groats and breakfast flakes decreased by 0.04 kg, yoghurt – by 0.09 l, mineral and spring water – by 1.40 l, and fruit and vegetable juices – by 0.44 l.

In the context of the survey, it can be concluded that the average monthly consumption of selected food products is not an expression of a satisfactory standard of living of those surveyed but rather a consequence of the need to spend more money on other purposes, chiefly housing (fixed costs). This holds true, in particular, for silver singles living in cities who depend on

Food products	Linear regression coefficient	<i>p</i> value	<i>R</i> ²
Bread (in kg)	0.034	0.0014	0.916
Flour (in kg)	0.168	0.0011	0.935
Groats and breakfast flakes (in kg)	-0.042	0.0004	0.549
Vegetables (in kg)	0.387	0.0283	0.599
including potatoes (in kg)	0.597	0.0411	0.583
Fresh meat (in kg)	0.546	0.0158	0.695
Margarine and other vegetable fat (in kg)	0.039	0.0005	0.872
Fresh whole milk (in l)	0.283	0.0003	0.648
Yoghurt (in l)	-0.094	0.0116	0.753
Curd cheese (in kg)	0.039	0.0031	0.845
Eggs (in units)	0.071	0.0217	0.611
Sugar (in kg)	0.232	0.0134	0.719
Mineral and spring water (in l)	-1.397	0.0198	0.684
Fruit and vegetable juice (in l)	-0.436	0.0113	0.735

Tab. 3. Linear regression of food consumption in silver singles' households depending on the age group. Source: The author's research.

the government policies for these charges. It should be noted here that the analysis of the average monthly food consumption in silver singles' households does not allow clear conclusions to be drawn as to food consumption patterns in individual cities.

8. Selected Dietary Behaviours of Silver Singles

Consumers' dietary behaviours fall within the category of consumer behaviour. These are human attitudes and behaviours that are directly related to satisfying food needs. For years, an upward trend has been observed in Poland as regards the average level of education of subsequent age groups entering old age. This phenomenon translates into a more active life of seniors who are increasingly aware of their responsibility for their health and mental and physical fitness. Proper dietary behaviours of the elderly are very important in the prevention of lifestyle diseases. Seniors, including silver singles, often do not associate diseases with improper dietary behaviours. A monotonous diet is their big mistake. Numerous diseases and medications increase the risk of undesirable interactions, making diet modifications necessary and limiting the free choice of food. The frequency of food consumption by many seniors, however, does not correspond to the capacities of their bodies. The problem of older age is also a general

reduction in food and fluid intake that results from poorer appetite or inappropriate texture of food that causes chewing problems. The typical consequences of nutritional mistakes of older people also ensue from excessive fat and cholesterol intake, accompanied by decreased nutrient density of the diet (i.e. the ratio of building and regulating nutrients to energy), leading to potential deficiencies, mainly of vitamins and minerals. Insufficient amounts of nutrients in the bodies of elderly people can be caused by digestion and absorption disorders due to a decrease in the secretion of saliva, stomach acids and enzymes (Athanasopuluou et al., 2018). It is important, therefore, that the diet contains components with the best possible assimilability. Understanding the attitudes of silver singles towards health and healthy food allows a more accurate definition of their dietary behaviours.

Statements	Always	Sometimes	Never
I pay attention to the qualities of food that I buy and eat	41.6	54.6	5.1
I try to eat low-fat foods	39.1	55.5	5.4
I don't care about the diet and I eat products that I like, regardless of whether they are healthy	7.9	22.3	69.8
I buy fresh, unprocessed products	28.1	52.7	19.2
I make sure that my diet is rich in vitamins and minerals	31.6	64.3	4.1
I refrain from buying food that raises cholesterol levels in the body	25.6	64.1	10.3

Tab. 4. Attitudes of silver singles towards healthy diet (%). Source: The author's research.

Following the survey, it can be concluded that more than 2/5 of silver singles pay attention to whether the food they consume is healthy (Table 4). This attitude was more often indicated by women than men (53.5% vs. 29.7%, $p < 0.01$). A similar percentage of respondents make sure that the diet is low-fat, i.e. easily digestible with fat reduction. This mainly concerns animal fat, which is a source of saturated fatty acids. Nonetheless, this reduction does not apply to foods that are a source of mono- and polyunsaturated fatty acids. Reducing the amount of fat in the diet will not have an effect if not accompanied by a decrease in the overall calorie content of the diet (Shai et al., 2008). Women much more often than men (58.6% vs. 19.6%, $p < 0.01$) eat products with reduced fat content (Table 4). Only every twentieth person participating in the survey does not pay attention to whether food is healthy and eats processed products with high fat content. Too much fat in the diet with the prevalence of fat containing trans-fatty acids exerts adverse effects on human health. Consumption of trans-fatty acids, mainly those derived from products containing industrially hardened vegetable fats, increases the risk of metabolic syndrome. Trans-fatty acids

increase the risk of cardiovascular diseases (Motard-Belanger et al., 2008; Mozaffarian & Clarke, 2009). In addition, trans-fatty acids contained in the diet lead to abdominal obesity, may raise the likelihood of type 2 diabetes and insulin resistance and contribute to the development of atherosclerosis and cardiovascular diseases.

In the context of the survey results, it is worth mentioning that every third respondent makes sure that their daily diet is rich in vitamins and minerals. Women much more often than men (39.8% vs. 23.4%, $p < 0.01$) exhibited this attitude (Table 4). In the surveyed single-person households, no quantitative assessment of nutrients was performed, yet it can be indirectly concluded that one of the causes of malnutrition may be insufficient money to buy the food needed and a small variety of the diet, as declared by some respondents (especially those with a monthly disposable income not exceeding PLN 2000.00). Every fourth respondent confirmed consuming the same products and dishes every day, which proves little variety of the diet. Every twelfth woman surveyed and only 4.5% of men admitted to consuming vitamin and mineral supplements. It is worth mentioning that vitamins are ingredients that regulate metabolic processes. It is very important that elderly people consume them in adequate amounts. Silver singles should, therefore, make sure that they eat recommended daily portions of vegetables and fruit as these contain fibre and vitamins. Too low content of fibre and antioxidant vitamins in human diet increases the risk of some diet-related diseases such as obesity, atherosclerosis and various forms of cancer (Platta, 2014).

Almost 1/3 of respondents always choose fresh, preservatives-free and unprocessed food (Table 4). Women far more frequently than men (31.8% vs. 24.4%, $p < 0.01$) exhibited this attitude (Table 4). Such behaviour of silver singles can be considered rational because unprocessed food has a higher nutritional value than processed food. Unprocessed food, due to its properties, i.e. a short shelf life, is often local food. Its characteristic can often be a short shelf life. Unprocessed products are not exposed to excessive heat which destroys water-soluble vitamins but also damages the structure of proteins, damages enzymes that facilitate digestion, and changes the structure of fats. Unprocessed food contains more fibre valuable for human health, which improves intestinal motility, supports normal metabolism, lowers blood sugar, protects against colon diseases, helps remove toxins and heavy metals from the body. It is also aromatic and contains natural flavours, thus allowing people to reduce the consumption of common salt or sugar. Examples of unprocessed food include products such as wholemeal and whole-grain bread, millet, raw olives, cold-pressed olive oil, Goji berries, acai and cocoa beans.

Silver singles try to avoid food (i.a. sweets, cakes, fatty meats and cheeses, sausages, pâtés, butter, palm oil products) that can increase cholesterol and triglyceride levels in the body (Table 3). Only a quarter of respondents

declared a significant reduction of cholesterol in their diet ($p < 0.001$). Too much of it can be dangerous as it contributes to atherosclerosis and can lead to coronary artery disease or stroke. Dietary behaviours eliminating food with high cholesterol content were more frequently exhibited by women than men (32.7% vs. 18.5%, $p < 0.001$).

The survey allows the conclusion that the respondents exhibit a moderately positive attitude towards healthy food products, deviating from the recommended model of balanced diet. However, it should be remembered that observed and declared attitudes only partially translate into specific consumer behaviour. An important complement to the attitudes declared by silver singles towards the consumption of food products is the frequency of their consumption, which is significant from the point of view of a balanced diet (Table 5).

Food products	Less than once a week	A few times a week	At least once a day
Cereal products	32.3	23.6	44.1
Milk and dairy products	16.3	19.5	64.2
Meat and cold cuts	23.1	39.3	37.6
Fish	76.8	18.4	4.8
Legume seeds	61.3	37.8	0.9
Vegetables	22.3	39.1	38.6
Fruit	20.4	36.5	43.1

Tab. 5. Frequency of consumption of selected food groups in silver singles' households (%). Source: The author's research.

The frequency of consumption of selected food products was statistically significantly dependent on the gender of respondents ($p < 0.01$). The analysis of the frequency of product consumption revealed that milk and dairy products were consumed at least once a day by 58.8% of men and 69.6% of women (Table 4). Although lactose synthesis decreases with age, which can cause milk sugar intolerance and troublesome conditions, frequent milk and dairy product consumption was observed among the silver singles surveyed. In the group of men, the percentage of respondents who ate dairy products a few times a day and the percentage of those who consumed them less than once a week was larger than among women (28.3% vs. 19.6%, $p < 0.05$). Consumption of milk and dairy products is very beneficial for older people, especially women. Research conducted by Włodarek et al. (2012) demonstrated low calcium supply in women over 65, which indicates too low consumption of dairy products being the main source of this nutrient. My research found that more than 3/5 of

silver singles consumed milk and dairy products at least once a day and every fifth respondent did so a few times a week.

The survey found moderate consumption of cereal products. Over 48% of women and 39.9% of men ($p < 0.01$) ate them at least once a day (Table 5), which is positive since cereal products are a source of complex carbohydrates which should cover 50–60% of daily energy requirements. In addition, they have a relatively high energy value (250–350 kcal/100 g) and low fat content (for wheat and rye flour, it varies within the range of 2–3%). Cereal products provide large amounts of vegetable proteins (from 5 to 15%) but these proteins do not have full biological value. Cereal products are also a good source of minerals (total content of 2–4%), mainly iron, magnesium, zinc, copper, potassium and phosphorus compounds, and B vitamins. Silver singles ate white and brown bread with the same frequency, i.e. once or a few times a week. The frequency of consumption of these products was dependent on gender ($p < 0.01$). Women ate brown bread a few times a week and men less than once a week. In turn, men consumed white bread a few times a week and women up to a few times a week.

The survey found frequent consumption of vegetables and fruit. Almost every second woman and every third man ($p < 0.01$) ate fruit and vegetables at least once a day (Table 5). Less often, i.e. up to a few times a week, boiled vegetables were consumed and also in this case women ate them more often than men ($p < 0.01$). Vegetables and fruit are a rich source of vitamins, fibre and minerals. They also contain antioxidants that support natural defence mechanisms of human cells. Given their very low energy content, they are recommended by dietitians to people who care about their appropriate body weight. WHO (2000) and nutrition experts recommend eating vegetables and fruit in an amount of not less than 400 g a day; in practice, this should be 2 portions of fruit and 3 portions of vegetables a day, added to each meal (Murawska, 2017, p. 263). The consumption of fruit and vegetables ensures well-being, health, physical and mental fitness. The ingredients that they contain regulate blood pressure and cholesterol levels, preventing heart and circulatory system diseases and strokes. They also counteract certain cancers, constipation and eye diseases. The content of chemical components in vegetables and fruit affects the nutritional value of raw materials and finished products. As regards the aforementioned recommendations by specialist doctors and dietitians, 43.1% and 38.6% of people follow them in the case of fruit and vegetables, respectively ($p < 0.001$). These results can be considered moderately satisfactory because they suggest that the respondents do not supply the body with the required daily dose of vitamin C and some minerals, e.g. potassium, but also fibre, which regulates the digestive tract and prevents unpleasant constipation.

The survey found that legume seeds are not often consumed. It was established that less than 1% of silver singles ate them at least once a day, which is a very negative phenomenon. The statistical analysis showed differ-

ences in the frequency of consumption of these seeds ($p < 0.05$). They were more often consumed by women than men (24.8% vs. 19.6%). In human nutrition, legume seeds are a significant source of protein, which accounts for 20–45% of the dry matter of these plants. Most legumes are low-fat. High content of carbohydrates and fibre makes legume seeds a product with a low glycemic index. This is crucial in the diet of people with obesity, diabetes or cardiovascular diseases. Flavonols, tannins, carotenoids and vitamins C and E contained in legume seeds make them highly antioxidant, which prevents many chronic diseases (Shana et al., 2016; Viguioliouk et al, 2017). Over 3/5 of respondents who did not consume legume seeds declared that they did not ate them due to their taste. Other most frequently indicated factors include bloating and discomfort after consumption (32.6%) and the inability to prepare them (6.2%).

Fish was not very popular among silver singles. The frequency of its consumption was determined by gender ($p < 0.05$). More fish was consumed by women than men (30.8% vs. 18.6%, $p < 0.05$). It was found that only every twentieth respondent ate fish at least once a day and every fifth did so less often than once a week (Table 4). Such low consumption of fish meat can be explained by its high market price. Fish meat contains high-quality and easily digestible protein, high content of polyunsaturated fatty acids such as eicosapentaenoic acid (20:5, n-3, EPA), docosahexaenoic acid (22:6, n-3, DHA) and docosapentaenoic acid (22:5, n-6, DPA); this is true especially of pelagic fish such as herring, sprat and mackerel (Lasocińska, 2006). These fatty acids have a hypolipemic effect and are recommended for primary and secondary prevention of ischemic heart disease. Among many valuable nutrients contained in fish meat, high iodine and vitamin D content in marine species should also be highlighted. According to FAO/WHO (2004) experts, regular consumption of fish (at least 1–2 times a week) is recommended for the prevention of ischemic heart disease.

The variation in the frequency of consumption of meat and cold cuts was confirmed by the statistical analysis ($p < 0.05$). The percentage of men consuming meat or cold cuts at least once a day was twice as high as that of women (Table 5). Men ate red meat more often than women (31.4% vs. 25.7%, $p < 0.05$). On the other hand, women more often than men chose poultry in accordance with dietary recommendations. There were no statistically significant differences in the frequency of consumption of poultry and cold cuts, taking into account the gender of respondents ($p > 0.05$). Poultry and cold cuts were eaten at least once a day or a few times a week while red meat was consumed once a week. Processed meat products, i.e. cold cuts, should be eaten in moderation because they contain additives that are harmful to health, e.g. preservatives. According to dietary recommendations, their consumption should not exceed one serving per day.

In the light of statistical analyses carried out, based on the results of Spearman's rho correlation analysis, it appears that the frequency of con-

sumption of vegetables and fruit was positively correlated with the consumption of milk and dairy products ($r = 0.536$, $p < 0.001$ and $r = 0.547$, $p < 0.001$) cereal products ($r = 0.489$, $p < 0.001$ and $r = 0.491$, $p < 0.001$) and legume seeds ($r = 0.173$, $p < 0.05$ and $r = 0.156$, $p < 0.05$). Cereal products were more often consumed by respondents often eating fish ($r = 0.321$, $p < 0.003$), milk and dairy products ($r = 0.247$, $p < 0.001$) and meat and cold cuts ($r = 0.247$, $p = 0.003$).

The study on the dietary behaviours of silver singles has shown some dietary mistakes manifested in the modest consumption of fish, legume seeds and cereal products, fruit and vegetables mainly in the cooked form and too high a proportion of red meat and cold cuts in the diet. A positive point is the preference of fresh, preservatives-free and unprocessed food, making sure that the daily diet contains big amounts of vitamins and minerals and the declared dominance of vegetable fats in the diet of the respondents, which increases the supply of unsaturated fatty acids that have a beneficial effect on the blood lipid profile. The conclusions of the survey concerning the dietary behaviours of silver singles are largely consistent with studies conducted among elderly people by Backer (2007), Liedberg et al. (2007), Locher et al. (2009), Suliga (2010), Tańska et al. (2013), Bahrami et al. (2016), Śmidowicz and Reguła (2016), Host et al. (2016), Bloom et al. (2017), Coa et al. (2018), Whitelock and Ensaff (2018), Yannakoulia et al. (2018) or Drywień and Kuć (2019).

Elderly people, including silver singles, are prone to develop not only diet-related diseases but also malnutrition, hence dietary prophylaxis is very important in this case. The survey shows that only 2/5 of silver singles were interested in gaining knowledge about food and nutrition, and health considerations determined the choice of food by every third respondent. The statistical analysis revealed that the respondents obtained information about health and dietary behaviours mainly from the internet (69.3%). Other sources of information were primary care physicians (11.3%), family members and friends (7.8%), public media – mainly television and radio (5.6%), brochures in health clinics (1.7%) and glossy magazines (1.2%) – mostly women's magazines such as: "Kobieta i życie" (Woman and Life), "Zdrowie" (Health), "Zdrowie i życie" (Health and Life), "Dbam o zdrowie" (I Care About Health), "Poradnik 50+" (Guide 50+) or "Przepis na zdrowie" (Recipe for Health). It was also noted that UTA students more often than members of parochial communities used other sources of information than doctors (44.6% vs. 17.2%, $p < 0.05$). Women much more frequently than men (60.1% vs. 26.4% $p < 0.01$) expressed interest in obtaining new information about food and nutrition. Age and place of residence, on the other hand, did not affect the sources of health information indicated by the respondents (in all cases $p > 0.05$). One should be aware that information resources can have a direct impact on the level of risk involved in consumer choices. A worrying fact that increases this risk is that the

sources of knowledge about food and nutrition also include promotion (3.1%) aimed not at promoting proper nutrition but at maximising the sales of manufactured food products.

9. Key Factors Determining Food Purchase in Silver Singles' Households

The findings reveal that while shopping for food, silver singles attach considerable importance to price, quality and promotion whereas they care less about fashion and the wish to stand out. Health considerations ranked only fourth in the hierarchy of factors (Table 6). In the light of the survey, such findings come as no surprise.

Items	Very important	Important	Not important
Price	82.6	13.5	3.9
Quality	65.8	29.4	4.8
Health	56.1	38.2	5.7
Brand	29.1	57.6	13.3
Fashion	11.5	42.1	46.4
Promotions	57.8	30.5	11.7
Shopping location	37.2	49.8	13.0
Product packaging	28.1	53.4	18.5
Habit	15.9	49.8	34.3
Wish to stand out	2.5	13.9	83.6
Advertising	28.0	54.2	17.8

Tab. 6. Determinants of food purchase in the households of the seniors surveyed (%). Source: The author's research.

The survey reveals that silver singles are primarily driven by the product price when buying food. It was indicated by over 4/5 of respondents ($p < 0.01$). This situation is not surprising, given that the financial situation of the elderly is difficult and that they spend a significant portion of their disposable income on food. Based on the empirical material collected, it was observed that women mentioned price as the fundamental factor in purchasing food products slightly more frequently than men (87.5% vs. 77.3%, respectively, $p < 0.05$). It was also noted that silver singles' opinions were influenced by their age ($p < 0.01$). The youngest respondents aged 65–74 (55.2%) agreed with this statement least frequently whereas those aged 85 and more (89.4%) did so most often. The level of education also varies the opinions of respondents about the impact of price on decisions to buy

food ($p < 0.01$). Silver singles with primary (93.5%) and basic vocational education (92.5%) most often declared that price was the most important aspect when they purchased food. The survey also noted that members of parochial communities (89.9%) paid the greatest attention to product price more often than UTA students (77.8%) ($p < 0.001$).

More than 3/5 of silver singles indicated product quality as a key factor when shopping for food products (especially organic food). The importance of product quality increases as disposable income rises ($p < 0.01$). Wealthier consumers, who are inherently more demanding, aspiring and curious, are interested in buying better product substitutes or more luxurious products. Indeed, this is confirmed by the direct research. The greatest interest in better quality goods was observed for the wealthiest households with monthly disposable incomes of more than PLN 4000.00, and vice versa: the lower the income, the less important the product quality (Spearman's rho coefficient was $r = 0.194$, $p < 0.01$). It should be pointed out here that quality is a set of advantages and disadvantages of a particular food product as viewed by consumers themselves. Hence, as a typical immeasurable feature, it is purely subjective and is assessed by a specific person. Age again proved to be a variable differentiating the respondents' opinions in this regard ($p < 0.05$). Quality as the fundamental factor in buying food products was most commonly mentioned by those in the 65–74 age group (71.6%) and least frequently by respondents aged 85 and more (37.1%). The level of education also varies silver singles' opinions on the quality of purchased food products ($p < 0.05$). This opinion was voiced most often by respondents with higher education (76.4%) and least frequently by those with primary education (23.9%). It was also noted that food product quality was indicated as the essential determinant by UTA students (74.7%). Only 56.9% of senior members of parochial communities pointed to it as a significant factor ($p < 0.05$).

For almost 2/3 of respondents, promotions are of great importance when buying food products ($p < 0.05$), while almost half of them point to utility ($p < 0.001$). Most often, these factors were indicated as key determinants of purchasing food products by people aged 65–74 (56.8%) who had completed secondary education (55.3%), earned a monthly income of up to PLN 4000.00 (54.1%), and actively participated in UTA courses (61.3%).

Almost every third respondent indicated brand, advertising and product packaging as factors that played a vital role when shopping for food. The distribution of answers varied depending largely on the singles' wealth (34.2% in the wealthiest households to 8.9% in the poorest households, ($p < 0.001$), educational level (35.8% of responses among singles with higher education and the smallest proportion of respondents with primary education – 6.7%, $p < 0.001$), age (brand was most frequently mentioned as the fundamental factor when shopping for food by respondents aged 65–74 and least often by those aged 85 and more, $p < 0.001$). It was also noticed that

it was UTA students (34.7%) rather than parochial community members (21.3%) who paid great attention to factors such as brand, advertising and product packaging when buying food ($p < 0.01$). Significantly fewer silver singles pointed to: habit (15.9%), fashion (11.5%) and the wish to stand out (2.5%).

Considering the survey results and the conclusions made, they should not be treated as representative of the Polish population of silver singles. They only provide some insight into actual consumer and dietary behaviours of this consumer segment.

This publication should contribute to a broader discussion and exchange of views on consumer and dietary behaviours of silver singles, thereby encouraging other Polish scholars and researchers from various scientific and research centres to carry out extensive research in this area. In turn, the lack of empirical understanding of opinions about the market preparedness for silver singles should provide the basis for further research for representatives of various scientific disciplines, in particular marketing specialists (Jeruszka-Bielak et al., 2018; Marseglia et al., 2018). Undoubtedly, research is needed on the interactions between dietary behaviours and other lifestyle behaviours of silver singles.

10. Conclusion

Food expenditure ranked second in the expenditure structure of silver singles' households. The variation of the shares of food expenditure is largely dependent on their monthly disposable income and place of residence. The identified scope of food expenditure may contribute to further research on the population of elderly people living alone in order to learn about their specific characteristics, consumption attitudes, market preferences, and mechanisms affecting their consumption behaviour in the market.

The level of consumption of most food products depends on the disposable income of silver singles. The wealthiest households consume more fruit and vegetable juices, yoghurt and milk drinks, fish and fresh vegetables and fruit while poorer households consume more bread, flour, potatoes and sugar.

Most silver singles declared that they paid attention to whether food was healthy, made sure that their diet contained big amounts of vitamins and minerals, and that the products consumed were fresh and did not contain preservatives.

The frequency of consumption of selected food products was statistically significantly dependent on the gender of respondents. Women more frequently ate brown bread, fresh vegetables and fruit, legume seeds, and fish. In contrast, men more often consumed white bread, milk and dairy products, and meat (especially red) and cold cuts.

The diet of most silver singles deviates from the recommended model of balanced diet. Bad eating habits of the majority of respondents included: too low a frequency of consumption of whole-grain bread, fish and legume seeds. At the same time, compared to men, women exhibit better habits as regards the frequency of eating selected food products since they more often consume brown bread, raw and cooked vegetables and fruit. Eating habits as regards the frequency of consumption of selected food products require changes and indicate the need to increase the awareness of silver singles, especially men, regarding the role of proper nutrition as an important element of disease prevention.

When buying food products, silver singles attach the greatest importance to their price and quality as well as promotion whereas they care less about fashion and the wish to stand out.

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Endnotes

- ¹ This definition of a silver single was presented to people participating in the survey before filling in the questionnaire.
- ² This method is based on the assumption that a sample is representative of the entire population if the sample structure is the same as the structure of the studied population from the point of view of key characteristics. It should also be mentioned that in the case of the targeted quota sampling method, there may, although do not have to, occur errors in the selection of units, in particular the so-called coverage error. This error arises when, due to a failure of the surveyor, some groups of the studied population could not be included in the sample. Due to limited funds and the nature of the research itself, no random sampling of units was carried out. In addition, the nature of the examined, predominantly qualitative, characteristics made representative sampling impossible.

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