SILESIAN UNIVERSITY OF TECHNOLOGY PUBLISHING HOUSE

SCIENTIFIC PAPERS OF SILESIAN UNIVERSITY OF TECHNOLOGY 2025
ORGANIZATION AND MANAGEMENT SERIES NO. 218

DETERMINANTS OF NATURAL FOOD CHOICE – STUDIES AMONG POMERANIAN CONSUMERS

Anna PLATTA[1*], Anna MIKULEC[2], Agnieszka RYBOWSKA[3], Monika RADZYMIŃSKA[4]

[1] Faculty of Management and Quality Science, Gdynia Maritime University; a.platta@wznj.umg.edu.pl, ORCID: 0000-0002-7963-1889
[2] Faculty of Engineering Sciences, University of Applied Science in Nowy Sącz; amikulec@ans-ns.edu.pl, ORCID: 0000-0002-2737-5967
[3] Faculty of Management and Quality Science, Gdynia Maritime University; a.rybowska@wznj.umg.edu.pl, ORCID: 0000-0002-6716-4726
[4] Faculty of Economic Sciences, Institute of Management Science and Quality, University of Warmia and Mazury in Olsztyn; mradz@uwm.edu.pl, ORCID: 0000-0003-0531-268X
* Correspondence author

Purpose: The purpose of the study was to identify variables influencing consumer interest in natural foods among a selected group of Pomeranian consumers.
Design/methodology/approach: The research instrument was a survey questionnaire administered through the CAWI method using Google forms. The survey was conducted in a group of 403 respondents in Pomerania, northern Poland. The research tool used covered the following topics: attitudes towards natural food, attitudes towards health and nutrition, and lifestyle elements. Spearman's rank correlation analysis was applied, and a multinomial ordered logit model was constructed, in which the dependent variable was the variable exploring attitudes towards health and nutrition.
Findings: An extended statistical analysis of the empirical data, with the construction of a multivariate logit model, showed that only a change in the attitudes of Pomeranian consumers towards health from negative and ambivalent to positive, would lead to a change in their eating behaviour by increasing the purchase and consumption of natural foods. It is interesting to note that Pomeranian consumers who value the convenience and speed of meal preparation want to make conscious, rational (beneficial to their health) food choices.
Research limitations/implications: The research has certain limitations. Despite the large size of the study group, the results obtained are not representative and cannot be generalised to the population of adult consumers in Poland.
Practical implications: An analysis of respondents' attitudes towards health issues and consumption of natural foods showed that gender and lifestyle have a differential impact on consumers' attitudes towards health and willingness to purchase natural foods (in Northern Poland).
Social implications: Extended statistical analysis of empirical data by building a multivariate logit model showed that only a change in the attitudes of Pomeranian consumers towards health from negative and ambivalent to positive would lead to a change in their eating behaviour by increasing the purchase and consumption of natural foods.

Originality/value: The presented modelling approach extends the knowledge of the determinants of natural food consumption.
Keywords: natural food, health concern, sustainable behaviour, consumers, Northern Poland.
Category of the paper: Research paper.

1. Introduction

The Lifestyle is a variable that determines human behaviour in various aspects of life and has therefore become a subject of analysis for researchers from different scientific disciplines. This has resulted in diversity in its interpretation and definition (Syrek, 2022; Siciński, 1980; WHO). Lifestyle is defined as a configuration of attitudes and behaviours, choices and habits that condition an individual's daily life (Rogo, 2016). This approach has been found to be particularly important in the context of studying generational differences (Syrek, 2022). Hence, lifestyles are determined by the choices and behaviours of individuals, which are determined by their attitudes. An attitude is defined as a positive or negative attitude towards attitude objects, which can be persons, groups of people, situations or other objects (foods, objects, institutions, symbols, phrases, slogans, ideals) (Thurstone, 1946; Eagly, Chaiken, 1993; Engel et al., 1993; Jeżewska-Zychowicz, Pilska, 2009; Meiselman 1996; Reber, Reber, 2001; Wojciszke, 2000). Attitudes are located between two extremes: a strongly positive attitude and a strongly negative attitude (Wojciszke, 2000). The literature also defines attitude as a cognitive-behavioural structure oriented towards the attitude object, constituted by three components: cognitive, emotional and behavioural (Gutkowska, Ozimek, 2005; Stasiuk, Maison, 2014). An attitude can also be described in a wider sense, namely as a reaction that expresses itself in: a) beliefs, consisting of an individual's knowledge, perceptions and beliefs about an object; b) feelings, which are reduced to liking or disliking an object; c) intentions, which are the readiness to behave in an appropriate manner (Wosińska, 2004).

The influence of attitude on intention to behave and behaviour itself has been analysed in numerous scientific papers (e.g. Ajzen, Fishbein, 1975, 1980, 2000; Bagozzi, 1981; Bagozzi et al., 2000; Eagly, Chaiken, 1993; Leone et al., 1999; Itzchakov, Reis, 2021). There are four types of attitudes: negative, positive, indifferent and ambivalent. The last of these is characterised by the simultaneous presence of positive and negative attitudes towards an object and often applies to food products and certain behaviours (e.g. contraceptive use, cigarette smoking) (Stasiuk, Maison, 2014). Due to their complex nature, ambivalent attitudes are more easily changed than their other types. An ambivalent attitude is very often adopted towards an unfamiliar food (Van Harreveld et al., 2015) and results from an aversion towards the attitude object while at the same time feeling the importance of this object, which causes the individual to feel internally torn and indecisive. Because such an attitude poses a kind of threat to the

individual, people are motivated to resolve their ambivalent beliefs in order to restore cognitive coherence (Van Harreveld et al., 2009).

Environmental problems and their adverse impacts on humans have become an important issue to be analyzed by academics (researchers), governments and organizations, and their managers, especially when organic foods are considered (Eberle et al., 2023). Economic development has generated environmental degradation. The environment has changed considerably worldwide because of factors such as climate change, air and water pollution, waste generation and natural disasters (Maichum et al., 2016). Following this reality, the consumer begins to demonstrate this concern with the environment, opting for environmentally friendly, sustainable or green products (Yadav, Pathak, 2016; Qi, Ploeger, 2021). Consumers buy organic food, mostly because of health concerns, to avoid contamination by chemical waste, concern about the sustainability of the environment, and because these foods are associated with greater nutritional value (Seufert, Ramankutty, 2017; Eberle et al., 2022). Environmental awareness is increasingly shaping consumption patterns, especially in developed markets, influencing purchasing habits and decisions in the organic food segment (Wierzbinski et al., 2021). Responsible consumers are influenced by the environment in which they live and demographic, socioeconomic and cultural characteristics combined with the personality and voluntary attitudes directed to environmentally correct aspects (Zhang et al., 2019; Melovic et al., 2020). In this sense, it appears the consumer's ecological awareness positively influences the consumer's attitude toward the consumption of organic food (Rana, Paul, 2020; Jäger, Weber, 2020). Conscious consumption can be defined as the act of consuming, simultaneously optimizing the environmental, social and economic consequences of the acquisition, use and willingness to meet the needs of current and future generations (Phipps et al., 2013; Lira et al., 2022). The attitude of choosing and buying organic foods is guided by the health benefits that this type of food can bring (Bian, Forsythe, 2012; Farias et al., 2019) and promoting the good living and quality of life (Balderjahn et al., 2018). The attitudes of consumers, with concerns regarding ecological aspects, are influenced by their knowledge and principles, and they expect from green or ecologically correct products the satisfaction of their needs and environmental benefits, which are additional values (Rana, Paul, 2017). Some studies have suggested the need to test the influence of consumer attitude in the purchase intention of organic foods (Aitken et al., 2020; Dangi et al., 2020; Zaremohzzabieh et al., 2021).

The aim of the study was to identify variables influencing consumer attention to natural foods among a selected group of Pomeranian consumers. The following research hypotheses were formulated:

H1. Consumer attitudes towards natural products may be related to health and nutrition attitudes.

H2. Variables describing lifestyle may influence attention to health and nutrition.

2. Research methodology

The survey was conducted in spring 2024 among 410 Pomeranian consumers living in Gdynia, Sopot and Gdansk (northern Poland). Respondents were recruited using a snowball technique. Information was collected on the demographics of the respondents: gender, age, monthly income. The study group was dominated by people describing their financial situation as "I/we can afford some, but not all expenses" (36.63%) and "It allows me/us to satisfy only elementary needs" (22.28%). The detailed characteristics and structure of the research sample are presented in Tables 1-2.

Table 1.
Study sample characteristics

Parameters	Number of Respondents [n]	Percentage [%]
Gender		
Female	201	49.87
Male	202	50.13
Age [years]		
19-24	158	39.21
25-29	108	26.80
30-34	44	10.92
35-39	46	11.41
40-44	25	6.20
45-49	12	2.98
50-54	7	1.74
55-59	3	0.74

Source: own elaboration based on survey results.

Table 2.
Self-assessment of financial situation

Income	Women		Men	
	[n]	[%]	[n]	[%]
Is totally inadequate	3	1.49	2	0.99
Allows me/us to meet only elementary needs	13	6.47	45	22.28
I/we can afford some but not all expenses	86	42.79	74	36.63
I/we can afford everything	67	33.33	39	19.31
I/we can afford everything and I/we can still save	32	15.92	42	20.79

Source: own elaboration based on survey results.

The empirical material consisted of results obtained using the CAWI (Computer-assisted web interview) survey technique (via Google Forms). All respondents gave their free, informed consent to participate in the study and were assured of its anonymity.

The survey instrument consisted of the following scales:

- Lifestyle**.** It measured 10 statements: "I am a person committed to work" (1), "I am a person committed to study" (2), "I am a pleasure-oriented person" (3), "I value convenience and short preparation time of the meals I eat" (4), "I am a person who pays attention to the consumption of food with high nutritional value" (5), "I am a person who values the culinary traditions of the region I come from" (6),

"I am a person with high health awareness" (7), "I am a person with high physical activity" (8), "I pay attention to the state of my health" (9), "I pay attention to what food I eat" (10). The first, fifth, sixth, and seventh items were adapted from Arvola et al. (2007) and the others (2, 3, 4, 8, 9, 10) were additional.

- Health and Nutrition Attitudes Scale. The scale developed by Roininen and Tuorila (1999) was used in this study. The scale consists of 10 statements: "I am afraid that I will get fat" (1), "I am afraid that I will develop hypertensive disease" (2), "I am afraid that I will develop coronary heart disease" (3), "I am concerned that my diet provides a lot of energy" (4), "I am concerned that my diet provides a lot of fat" (5), "I am concerned that my diet provides a lot of cholesterol" (6), "I am concerned that my diet provides a lot of sugar" (7), "I am concerned whether my diet provides enough energy" (8), "I am concerned that I consume foods containing additives" (9), "I am not concerned that my diet provides a lot of salt" (10). In line with the methodology, reverse scoring of the respondents' answers to statement number 10 was used: "I am not concerned that my diet provides a lot of salt".
- Attitudes Towards Natural Products Scale. The study used a scale developed by Roininen and Tuorila (1999). The scale consists of 6 statements: "I don't pay attention to the additives present in the food I eat every day" (1), "I try to eat food that does not contain additives" (2), "Food with artificially enhanced taste is harmful to my health" (3), "I don't eat processed food because I don't know what it contains" (4), "Organically produced food is no better for my health than conventionally produced food" (5), "I would like to eat only organically produced vegetables" (6). In accordance with the methodology, reverse scoring was used for the respondents' answers to statements numbered: 1 – "I don't pay attention to additives present in the food I eat every day", and 5 – "Organically produced food is not better for my health than conventionally produced food".

During the survey, the respondent expressed his or her level of approval or disapproval of all posted items using a 5-point Likert scale, where the values 1 and 2 mean "definitely no" and "mostly no"; the value 3 means "don't know/don't have an opinion"; and the values 4 and 5 mean "mostly yes" and "definitely yes" (Likert, 1932).

After recoding the statements, the answers were summed and the following two indicators were calculated: mean value (X) and standard deviation (SD). In addition, three categories of attitudes were distinguished, corresponding to negative, ambivalent and positive attitudes.

In addition, the empirical material collected was presented in the form of a percentage distribution of the answers given regarding attitudes and lifestyle determinants (the answers were aggregated and presented for 3 groups: "no" (the number of "definitely no" and "mostly no" responses were aggregated); "don't know/don't have an opinion" and "yes" (the number of "definitely yes" and "mostly yes" responses were aggregated).

Spearman's rank correlation analysis was used to establish the relationship(s) between lifestyle and attitudes towards health and nutrition, and lifestyle and interest in natural products.

A multinomial ordered logit model was fitted in which the dependent variable was a variable examining attitudes towards health and nutrition. The explanatory variables were concern for health and nutrition, and attitudes towards natural products. The objective variable was selected lifestyle attributes: "I am a pleasure-oriented person", "I am a person who values the culinary traditions of the region I come from", "I value convenience and short preparation time of the meals I eat", "I am a person with high health awareness", "I am a person with high physical activity". A validity table was used to check the quality of the model. The calculated R^2 was 54%.

A significance level of $p < 0.05$ was assumed for all statistical analyses. Calculations were performed using Excel 2000 and Statistica 13.3 (Tibco Software, Palo Alto, USA).

3. Results and discussion

3.1. Attitude towards health and nutrition and natural foods

The study group was dominated by people with ambivalent (37.22%) and positive (36.97%) attitudes towards health and nutrition. In the women's group, a similar proportion of people with negative to positive attitudes was observed, while in the men's group, almost three times fewer people with negative attitudes (16.83%) towards health and nutrition were observed, compared to those with ambivalent and positive attitudes (Table 3).

For attitudes towards natural foods, ambivalent attitudes were observed as the dominant attitude both in the whole group (56.33%) and among women (56.72%) and men (55.94%) (Table 4).

Table 3.
Attitude towards health and nutrition

Attitude	Whole group		Women		Men	
	[n]	[%]	[n]	[%]	[n]	[%]
negative	104	25.81	70	34.82	34	16.83
ambivalent	150	37.22	65	32.34	85	42.08
positive	149	36.97	66	32.84	83	41.09

Source: own elaboration based on survey results.

Table 4.
Attitude towards natural foods

Attitude	Whole group		Women		Men	
	[n]	[%]	[n]	[%]	[n]	[%]
negative	81	20.10	36	17.91	45	22.28
ambivalent	227	56.33	114	56.72	113	55.94
positive	95	23.57	51	25.37	44	21.78

Source: own elaboration based on survey results.

Environmental problems and their negative impact on people have become an important issue analysed by scientists, governments and organisations and their managers, especially as regards organic food. Environmental awareness, healthy consumption, consumer attitude and price consciousness are the most important determinants of purchasing organic food. An important aspect of stewardship is the promotion of ecological behaviour focusing on the ecological development of the environment (Parashar et al., 2023).

3.2. Health and nutrition and the attitudes of Pomeranian consumers towards natural foods

Based on the analyses of the empirical data, significant positive and negative correlations were observed for a number of statements from the Health and Nutrition Attitudes Scale and the Attitudes Towards Natural Products Scale, which differed between women and men. The highest correlations were observed between the statements "I am concerned that my diet provides a lot of sugar" and "I am not concerned that my diet provides a lot of salt" and statements from the Attitudes Towards Natural Products Scale (Table 5). The strongest correlations were observed in the group of women afraid that "I will develop coronary heart disease", including a significant negative correlation (-0.61) for the statement "I don't pay attention to the additives present in the foods I eat every day". Thus, the less concerned women are about the potential occurrence of coronary heart disease, the more they definitely do not pay attention to additives present in food. For comparison with the male study group, it was found that among men a low negative correlation was observed for this question (-0.33). Significant moderate correlations were observed for women stating "I am worried that I will develop hypertensive disease" (positive correlation 0.54) and the desire to "eat only organically produced vegetables" and for women stating "I am not concerned about them providing a lot of salt in my diet" (negative correlation -0.54) versus the desire to 'consume only organically produced vegetables'. Significant moderate correlations were also observed for men stating "I am concerned that they provide a lot of sugar in my diet" (positive correlation 0.54) and the statement "Food with artificially enhanced taste is harmful to my health" (Table 5). Interestingly, for the statement "I don't pay attention to the additives present in the food I eat every day", almost twice as weak correlations were observed among men, compared to women, for most of the statements on the Attitudes Towards Natural Products Scale. Furthermore, for two statements of the Health and Nutrition Attitudes Scale - "I am afraid that I will get fat" and "I am concerned that my diet provides a lot of energy" – significant correlations were observed only for men (Table 5). For the statement "I don't pay attention to the additives present in the food I eat every day" (Attitude Towards Natural Products Scale), significant correlations with the statements of the Health and Nutrition Attitudes Scale were observed mainly for women. Only for the statement "I am concerned that my diet provides a lot of sugar" was a similar correlation observed for women and men (0.49 and 0.46 respectively), and for the statement "I am not concerned that my diet provides a lot of salt" a significant negative

correlation (-0.20) was observed for women and a significant positive correlation (0.17) for men (Table 5). The statement "Food with artificially enhanced taste is harmful to my health" was more often observed to have significant (mostly negative) correlations with the statements of the Health and Nutrition Attitudes Scale for men (Table 5). Some interesting differences were observed between women and men. For example, for the statements "I don't eat processed foods because I don't know what they contain", "I am concerned that I will develop coronary heart disease", "I am concerned that my diet provides a lot of fat" and "I am concerned that my diet provides a lot of cholesterol", a significant positive correlation was observed in women and a significant negative correlation in men (Table 5). Interesting differences were also observed between women and men for the statement "Organically produced food is not better for my health than conventionally produced food". More significant correlations were observed in the female group than in the male group. Furthermore, for the statements "I am concerned whether my diet provides enough energy" and "I am concerned that my diet provides a lot of sugar", negative correlations were observed in women, while positive correlations were observed in men (Table 5). For the statement "I would like to eat only organically produced vegetables", slightly higher correlation coefficient values were observed among women than among men. Also, for two statements – "I am afraid that I will get fat" and "I am concerned that my diet is providing a lot of sugar" - significant negative correlations were observed in women and positive correlations in men (Table 5).

Table 5.
Correlations of statements of the Health and Nutrition Attitudes Scale and the Attitudes Towards Natural Products Scale by gender of respondents

Statements on the scales	*I don't pay attention to the additives present in the food I eat every day		I try to eat food that does not contain additives		Foods with artificially enhanced taste are harmful to my health		I don't eat processed foods because I don't know what they contain		Organically produced food is no better for my health than conventionally produced food		I would like to consume only organically produced vegetables	
	W	M	W	M	W	M	W	M	W	M	W	M
**I am afraid of getting fat	0.02	**-0.25**	**-0.23**	0.13	**0.17**	0.06	-0.09	0.01	**0.27**	0.09	**-0.17**	**0.27**
I am afraid I will develop hypertensive disease	**-0.47**	**-0.31**	**0.15**	-0.12	**-0.19**	**-0.30**	0.14	**-0.24**	**-0.51**	-0.05	**0.54**	**0.35**
I am concerned that I will develop coronary heart disease	**-0.61**	**-0.33**	0.11	-0.07	-0.14	**-0.33**	**0.15**	**-0.25**	**-0.49**	-0.08	**0.51**	**0.36**
I am concerned that my diet provides a lot of energy	**-0.47**	**-0.25**	**0.24**	-0.04	-0.04	**-0.20**	0.14	**-0.37**	**-0.42**	**0.16**	**0.51**	**0.34**
I am concerned that my diet supplies a lot of fat	**-0.51**	**-0.34**	**0.26**	-0.11	-0.04	**-0.33**	**0.21**	**-0.29**	**-0.44**	0.07	**0.53**	**0.30**

Cont. table 5.

I am concerned that my diet provides a lot of cholesterol	**-0.49**	**-0.35**	**0.23**	-0.09	-0.05	**-0.36**	**0.22**	**-0.27**	**-0.44**	-0.09	**0.48**	**0.38**
I am concerned my diet provides a lot of sugar	**-0.30**	**0.28**	**0.49**	**0.46**	**0.40**	**0.54**	**0.34**	0.11	**-0.26**	**0.22**	**0.25**	**-0.29**
I am concerned that my diet provides a lot of energy	-0.01	**-0.21**	**-0.16**	-0.04	**-0.25**	-0.10	0.00	**0.15**	**-0.19**	**-0.19**	0.13	0.13
I am concerned that I am consuming foods containing additives	0.00	-0.02	**-0.15**	-0.04	0.00	-0.06	**-0.19**	**-0.15**	**0.14**	0.09	-0.12	-0.07
I am not concerned that my diet provides a lot of salt	**0.41**	**0.22**	**-0.20**	**0.17**	**0.29**	**0.35**	**-0.20**	-0.14	**0.68**	**0.41**	**-0.54**	**-0.16**

Explanatory notes: *Statements included on the Attitudes Towards Natural Products Scale; **Statements included on the Health and Nutrition Attitudes Scale; W – women; M – men; numbers in bold are statistically significant at $p < 0.05$.

Source: own elaboration based on survey results.

According to the literature, consumers show interest in consuming more organic food due to its alleged positive health effects, lower content of harmful substances and organoleptic qualities (Gundala, Singh, 2021). In addition, characteristics of food information-seeking consumers have been found to strengthen the relationship between attitudes towards consuming organic food and behavioural intention to consume organic food (Sadiq et al., 2021). Following relevant national guidelines would be beneficial for public health and the environment, and that alternative diets such as plant-based diets offer even less environmental impact. In order to promote sustainable dietary habits globally, the authors of the publication recommend revising the guidelines to prioritise sustainability, while taking into account regional contexts and cultural preferences. Such an approach may be key to promoting a dietary shift towards sustainability globally (Nguyen et al., 2016; Nguyen et al., 2017; De Groot, Steg, 2008). While controlling for cultural values, the findings show that personal values, specifically biospheric values, predict sustainable consumer patterns and that consumers' worldview moderates this relationship. Such findings may help practitioners to develop strategies to influence consumer intentions and behaviours concerning green products (Caniëls et al., 2021).

3.3. Extended data analysis using a multivariate ordered logit model

In the course of the research procedure, the target variable was assumed to be an ordinal variable: health and nutrition attitudes (categories: negative, ambivalent, positive), so a multinomial ordered logit model was constructed. The explanatory variables were lifestyle elements describing the surveyed group of Pomeranian respondents:

- "I am a pleasure-oriented person";
- "I am a person who values the culinary traditions of the region I come from";
- "I value convenience and short preparation time of the meals I eat";
- "I am a person with high health awareness";
- "I am a person with high physical activity".

The independent variables were unbalanced, so the following response categories were combined: 1. mostly no and definitely no; 2. mostly yes and definitely yes. This resulted in 3 response categories: disagree, I don't know/ I have no opinion, agree (Table 6).

Table 6.
Multivariate ordered logit model

Variable	Category	Coef.	Std. Err.	t-value	*p*-value	95% confidence		OR
I am a pleasure-oriented person	I don't know, I have no opinion	0.074	0.583	0.127	0.899	-1.089	1.215	1.077
I am a pleasure-oriented person	I agree	-0.413	0.527	-0.785	0.433	-1.468	0.619	0.661
I am a person who values the culinary traditions of the region I come from	I don't know, I have no opinion	0.105	0.256	0.408	0.683	-0.398	0.609	1.110
I am a person who values the culinary traditions of the region I come from	I agree	0.320	0.273	1.172	0.241	-0.213	0.858	1.377
I value convenience and short preparation time of the meals I eat	I don't know, I have no opinion	3.729	0.538	6.938	**0.000**	2.701	4.814	41.645
I value convenience and short preparation time of the meals I eat	I agree	2.428	0.362	6.701	**0.000**	1.736	3.162	11.341
I am a person with high health awareness	I don't know, I have no opinion	-0.711	0.317	-2.244	**0.025**	-1.337	-0.093	0.491
I am a person with high health awareness	I agree	0.382	0.258	1.482	0.138	-0.123	0.888	1.465
I am a person with high physical activity	I don't know, I have no opinion	-1.137	0.246	-4.616	**0.000**	-1.625	-0.658	0.321
I am a person with high physical activity	I agree	-0.345	0.328	-1.051	0.293	-0.990	0.301	0.708
negative | ambivalent		0.634	0.583	1.087	0.277	-1.089	1.215	1.077
ambivalent | positive		2.596	0.598	4.340	**0.000**	-1.468	0.619	0.661

Explanatory notes: values in bold are significant at $p < 0.05$.

Source: own elaboration based on survey results.

Although the *p*-values suggest that some independent variables are statistically significant, the 95% confidence interval was also checked. If the confidence interval includes or crosses a value of 1, a statistically significant effect of the variable cannot be confidently stated (Figure 1).

Assuming a significance level of 5%, the statistically significant variables were: I think I am a person who values convenience and speed of food preparation (categories: don't know, agree), I think I am a person with high health awareness (category: don't know), I think I am a person with high physical activity (category: don't know).

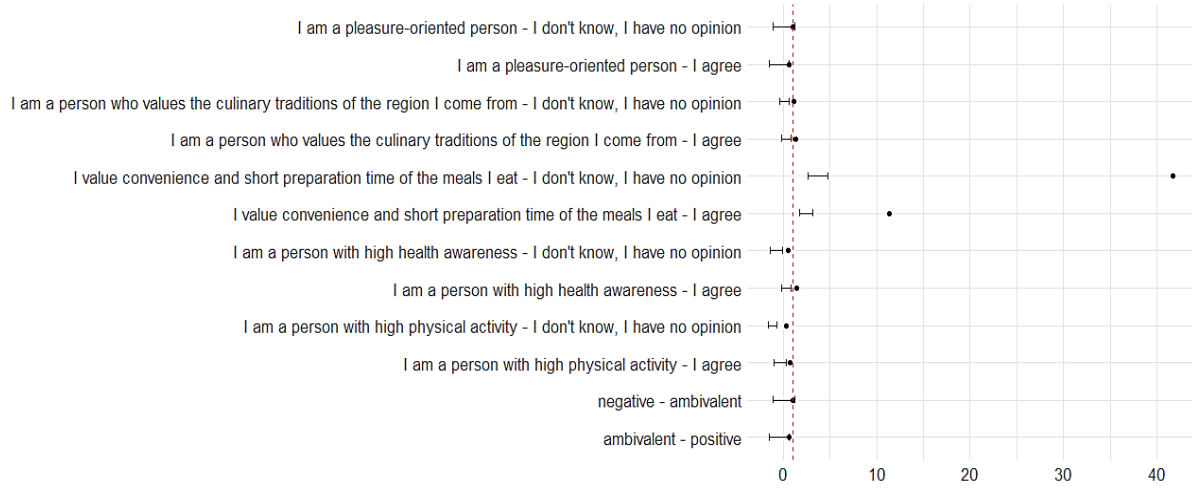

Figure 1. Odds ratio with 95% confidence interval.

Source: own elaboration based on survey results.

In interpreting the individual variables, the odds ratio was used. The interpretations were as follows:

- Those unable to specify whether they value convenience and speed of food preparation are 41 times more likely to have a more positive attitude regarding health and nutrition than those who do not value convenience and speed of food preparation, all else being equal.
- Those who value convenience and speed of meal preparation are 11 times more likely to have a more positive attitude regarding health and nutrition than those who do not value convenience and speed of meal preparation, all else being equal.
- Those unable to identify whether they are health-conscious are 50% less likely to have more positive attitudes about health and nutrition than those who disagree with the statement that they are health-conscious, all else being equal.
- Those unable to identify whether they are health-conscious are 68% less likely to have a more positive attitude about health and nutrition than those who disagree with the statement that they are health-conscious, all else being equal.

It is interesting to note that Pomeranian consumers who value convenience and speed of food preparation want to make informed, rational (beneficial to their health) food choices. According to Carfor (2021), attitude and perceived behavioural control are the strongest determinants of intention to purchase natural foods, followed by trust and personal norm. Consumers' intention to purchase natural foods is also related to their assessment of the consequences and opportunities associated with their purchasing behaviour, as well as their moral judgement attributed to pro-environmental determinants. The literature emphasises the role of intention in organic food purchasing decisions through the managerial implications for effective packaging design that promotes sustainability values and generates positive attitudes and behaviours towards organic food (Margariti, 2021). Changing respondents' attitudes from

ambivalent to positive towards organic foods will lead to an expansion of the range of foods consumed (Mikulec et al., 2023). It is also important to skilfully capture the potential of both individuals and communities to engage with climate change and their readiness for change, thereby promoting sustainable behaviour (Duradoni et al., 2024).

The study results show that the group of Pomeranian consumers have ambivalent attitudes towards natural food. Consumers in Poland and India cite the availability and price of organic food as the main barriers to increasing purchases (Smoluch-Sikorska, 2024; Vyas, 2019). It should be highlighted that measures to maintain organic market development should be carried out with particular emphasis on the continued participation of retail chains in the distribution of organic food and the increased involvement of large companies in processing organic food (Smoluch-Sikorska, 2024). Pang et al. (2021) show that perceived vulnerability, response efficacy, self-efficacy, subjective norms, and attitudes influence the intention to purchase organic food. Malaysian consumers were more likely to have a positive attitude towards organic food when they have adequate information on the vulnerability of food production risks and its consequences (Pang et al., 2021). For Europe, shifting toward more plants, including those from organic crops diets would be healthier and simultaneously reduce the per capita environmental footprints. Dietary changes can lead to win outcomes for human society and the planet. Dietary change strategies should consider diverse needs (e.g., undernutrition vs. diet-related-non-communicable diseases) and regional captive solutions (e.g., local food availability, regional production condition, food preferences, trade partnerships) (Chen et al., 2022; Tucci et al., 2024).

4. Conclusion and future perspectives

The study showed that both women and men reported positive and ambivalent attitudes towards concern for health and nutrition and ambivalent attitudes towards the consumption of natural foods (low-processed foods). Women who expressed concern for their health in terms of hypertension prevention declared a willingness to consume organically produced vegetables. The surveyed group of Pomeranian food consumers (men) reported anxiety about consuming a lot of sugar and salt in their diet and that they would get fat. Despite the anxiety stated, the men did not express a readiness to change their eating behaviour in terms of health concerns. In contrast, women, who feared that they would develop ischaemic heart disease and were concerned that they were consuming a lot of total fats and cholesterol in their diet, stated that they did not consume processed foods because they did not know their composition.

Extended statistical analysis of empirical data by building a multivariate logit model showed that only a change in the attitudes of Pomeranian consumers towards health from negative and ambivalent to positive would lead to a change in their eating behaviour by increasing the

purchase and consumption of natural foods. It is interesting that Pomeranian consumers who value the convenience and speed of meal preparation want to make conscious, rational (beneficial to their health) food choices.

The results of the survey are limited due to the narrow survey sample and their scope. However, the analysis of the respondents' attitudes towards health issues and natural food consumption showed that gender and lifestyle have differential effects on the attitudes of consumers (in northern Poland) towards health and willingness to purchase natural foods.

The authors are of the opinion that research on the dietary choices made by food consumers in Poland should be continued. The study will also be helpful for governments, strategists and practitioners in achieving sustainable consumption goals through natural foods.

Acknowledgements

The publication was financed from a subsidy granted to the Maritime University of Gdynia - Project number: WZNJ/2025/PZ/01.

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