

SUSTAINABLE CONSUMPTION AMONG CHILDREN IN THE FOOD MARKET

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Purpose: The aim of the study was to identify consumption patterns among children. It was also crucial to determine the conditions influencing the behaviour of young consumers in the market.

Design/methodology/approach: The paper uses a critical analysis of the literature and survey research based on a prepared questionnaire. The survey was conducted among 1326 children in age groups from 9 to 15 years old. The questionnaire consisted of two parts, i.e. the substantive part and the respondents' particulars. The first part of the questionnaire contained a set of questions concerning e.g. children's ability to identify products with better environmental parameters, behaviours related to nutrition, saving, shopping, spending free time, waste management and implementing pro-ecological solutions in their households.

Findings: The research showed a relatively good knowledge of the basic principles of sustainable consumption and labelling of organic products among children. This picture is somewhat simplified. The results of the study also showed that for many children healthy eating still means only eating fruit and vegetables (leaving aside the issues of regularity and portions of meals, drinking the right amount of water or maintaining a balanced diet).

Practical implications: Modification of curricula in primary school to a greater extent emphasizing content related to the principles of sustainable consumption. It is important to increase the amount of information provided on the principles of proper nutrition. This knowledge should be comprehensive and coherent, and not only refer to individual aspects of a healthy lifestyle. It is necessary to involve whole families in such activities through workshops, meetings and other events, because as shown by this research, but also the professional literature, attitudes and skills in children are transmitted and consolidated in this way.

Social implications: Shaping sustainable consumption patterns among children.

Originality/value: The article provides up-to-date knowledge on consumption patterns in the area of food products functioning among children. This is particularly important in the context of the need to build sustainable consumption patterns among the surveyed group of market participants.

Keywords: sustainable consumption, food products, a child as a consumer, food market, ecolabelling.

Category of the paper: Research paper.

1. Introduction

Young consumers play an important role in the processes taking place in the consumer market. Although they cannot fully participate in transactions made on it, due to numerous barriers related to e.g. legal conditions, age, or perception and understanding of market mechanisms. However, they constitute a significant group of consumers who have mostly their own funds, coming from various sources, i.e. pocket money, doing housework. They exert an increasing influence on purchasing decisions made in the household, taking various roles in it, becoming initiators, advisors, decision makers, as well as buyers and users of goods and services. Knowledge of the conditions influencing the decision-making process, recognizing the roles they play in these decisions not only allows for the appropriate shaping of the offer, affecting their market behaviour, but above all, it enables shaping the behaviour considered in the education process. The behaviour of young buyers is influenced by a number of factors, such as: psychological, socio-cultural, economic and demographic. A significant role is played by the family, which as the primary group shapes consumer behaviour and attitudes in the strongest way. It is worth emphasizing here that school plays an equally important role in the process of conscious and prudent purchasing decisions. Moreover, young people make acquaintances and friendships at school, create social groups, friends whose opinions they take into account when going shopping. It should also be mentioned that human consciousness is shaped throughout life, however, its basics are acquired from an early age, hence it is so important to focus on ecology, healthy lifestyle, shaping habits, patterns and activities that will be cultivated in adulthood.

2. The role of environmentally sustainable food consumption (ESFC) in the implementation of sustainable development goals - discussion

Sustainable development usually refers to activities that meet the needs of the present without compromising the ability of future generations to meet their own needs. The key idea of this concept is innovation and proactive decision-making to maintain a balance between ecological stability, economic growth, political justice and cultural vitality to make the world harmonious for all inhabitants (Purvis et al., 2019). There are three key dimensions of

sustainable development: environmental sustainability, economic sustainability and social sustainability (Moschis et al., 2020). These three dimensions are interdependent and influence each other. For instance, economic development leads to overconsumption in society, which has an impact on the environment and the level of social well-being.

One of the areas of sustainable consumption that has received much attention in research and public debate is sustainable food, which allows consumers to realize their environmental and ethical values (Halder et al., 2020). Despite the increased emphasis on sustainable food, there is a clear need for more research in this area. For example, it is crucial to understand how knowledge about sustainable food contributes to shaping consumer attitudes (Verain et al., 2015).

Environmental knowledge or knowledge on environmental issues refers to the information held by individuals on relevant environmental concepts, environmental problems and the ecological effects of consumption and production (Saari, Ulla et al., 2021). A lot of researchers agree that knowledge of the environment does not directly affect behaviour, but acts as an attitude modifier.

An attempt to define the concept of sustainable consumption allows determining the market activity of consumers contributing to the generation of positive economic, social and environmental effects through conscious and responsible purchase and consumption of goods and services (Kazmierczak-Piwko et al., 2022). The excessive consumption behaviour of the privileged twenty percent of the global community is considered unsustainable from an environmental and social perspective (Jackson, 2006), requiring drastic changes in collective consumption practices. Children adopt modern consumption practices from an early age, through the ubiquity of overt and covert marketing, and exposure to family consumption habits. From birth, they learn that spending time on related activities with consumption, for example through shopping, product selection or indirectly through branding on baby bottles, diapers, films and goods, is what they should spend their time on (Donavan, 2016).

An interesting approach to the issue of environmentally sustainable food consumption (ESFC) was indicated in the work of Vermeir et al. 2020 these authors indicated that „The proposed theoretical framework makes explicit the sequential steps or hurdles that need to be taken for consumers to engage in ESFC. Consumers need to positively value the environment, discern a discrepancy between the desired versus the actual state of the environment, opt for action to reduce the experienced discrepancy, intend to engage in behavior that is expected to bring them closer to the desired end state, and act in accordance with their intention” (Vermeir et al., 2020). Figure 1 shows these steps and roadblocks to ESFC.

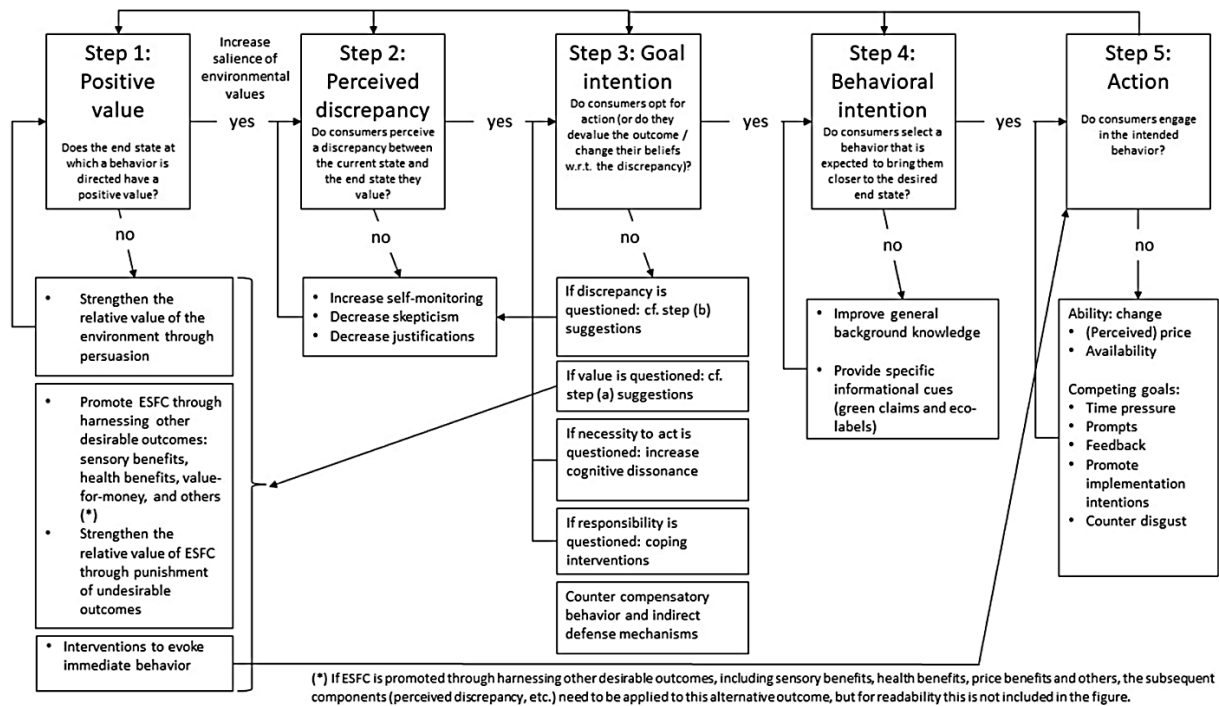


Figure 1. A Goal-Directed Framework Applied to ESFC.

Source: (Vermeir et al., 2020).

On the other hand, Halicka et al. (2019), analyzed food consumption among families with children in early school age. The authors conducted research in the context of sustainable consumption, paying particular attention to the level, frequency and conditions of consumption of products that significantly affect the environment, i.e. the so-called sustainable consumption markers such as fruits and vegetables, meat, milk and dairy products, and bottled mineral and spring waters. However, these studies, although they were also related to the consumption of children who made up the studied families, were more general in nature, being limited to the study of families with children, and not the young consumers themselves (Halicka et al., 2019).

Research on sustainable consumption among children was also carried out by Banerje J. et al. (2023). These authors focused on researching the importance of encouraging children to "sustainable" consumption. The conclusions of their research identified ten impulses that could be used to encourage the youngest to adopt a sustainable lifestyle. These authors observed that this influence was strongest in the school environment (Banerje et al., 2023). In this context, it can be considered that the selection of a group of young consumers of school age for further research is a logical continuation of this approach, aimed at gaining additional knowledge, allowing for the modification of curricula, treated as a set of impact tools that can effectively build sustainable consumption patterns among young consumers.

In the perspective of striving to build sustainable consumption patterns among children in relation to food products, extremely interesting research was conducted by Nazzaro C. et al. (2018). The aim of their research was to identify parental traits that can positively influence children in terms of healthier, more balanced and responsible eating habits (Nazzaro et al.,

2018). These studies confirmed the influence of parental characteristics on consumption patterns among the study children to promote more balanced and responsible eating habits. However, the selection of the research method (questionnaire) and cohort did not guarantee representativeness (including one age cohort, one school). Therefore, as the researchers themselves noted, future research could extend the study to a larger sample and different age cohorts (Nazzarro et al., 2018).

3. Research methodology

The aim of the study was to identify consumption patterns among children. It was also crucial to determine the conditions influencing the behaviour of young consumers in the market.

The paper uses a critical analysis of the literature and survey research based on a prepared questionnaire. The survey was conducted among 1326 children in age groups from 9 to 15 years old. The questionnaire consisted of two parts, i.e. the substantive part and the respondents' particulars.

The first part of the questionnaire contained a set of questions concerning e.g. children's ability to identify products with better environmental parameters, behaviours related to nutrition, saving, shopping, spending free time, waste management and implementing pro-ecological solutions in their households. The respondents' particulars sheet took into account such characteristics of the respondents as: gender, age, place of living. The question was open-ended, allowing the respondent to give a short answer.

The surveys were random-stratified. The strata reflected the different age groups of the respondents (7 successive years of students). The selection of students was random. As a result of the conducted research, 1326 correctly completed questionnaires were obtained in the electronic version. With the adopted confidence level of 99% and the standard error of 5%, the minimum sample size is 622 respondents, which is much lower than the number obtained as a result of the undertaken process of their collection.

4. Findings

Schoolchildren were asked to indicate the source from which they obtain information before making a decision to purchase a product. The results have been presented in Figure 2.

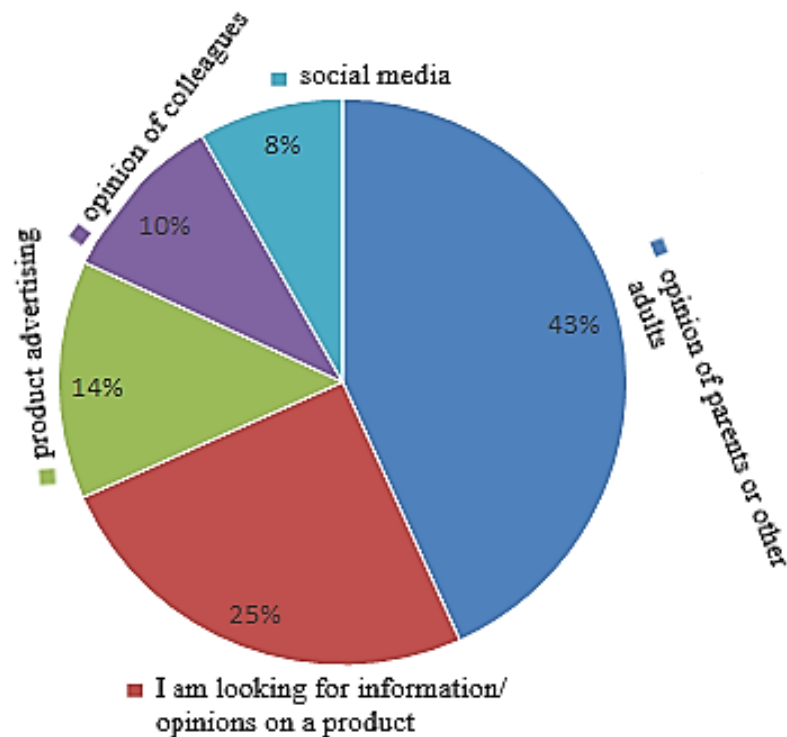


Figure 2. Making decisions on the purchase of food products by respondents in % of indications.

Source: own study based on research results.

When asked what guides them when making decisions about grocery shopping, schoolchildren mostly indicated the opinion of parents or other adults (43%). Every fourth schoolchild looks for information or product reviews on their own (25%). Advertising is also important, as it determines the decision to buy a product in the case of 14% of the surveyed schoolchildren. Some respondents are guided by the opinion of colleagues (10%) or the opinion found on social networks such as *Facebook*, *YouTube*, *TikTok* (8%).

With regard to sustainable consumption, the type of goods consumed is not without significance. Changes in the environment affect consumer behaviour, leading to a multiplicity of attitudes and changes in consumption trends (Kulyk et al., 2017), which is confirmed by this study. It can also be noticed that the awareness of sustainable consumption is weakening for older age groups in the surveyed population. Respondents were asked what they eat between main meals. The results have been presented in Figure 3.

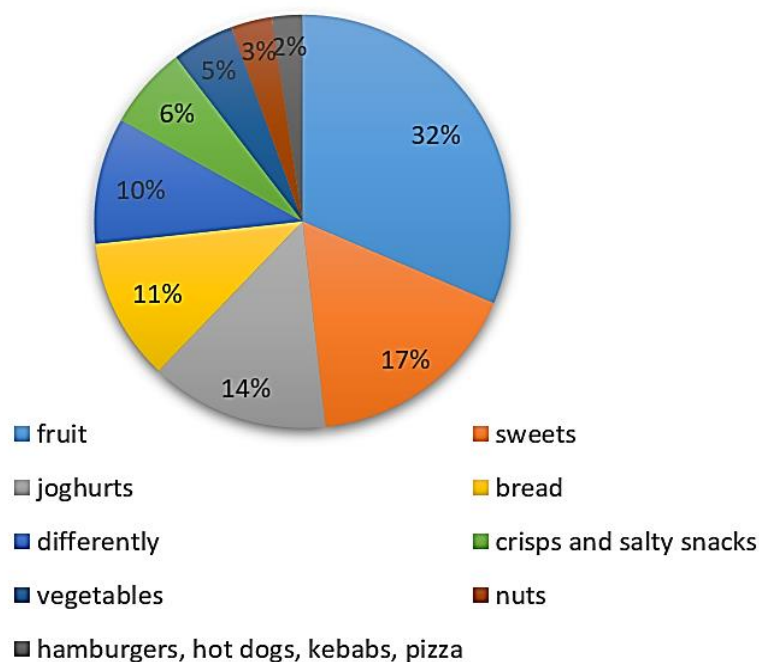


Figure 3. Snacks most often chosen by respondents in % of indications.

Source: own study based on research results.

Respondents mostly choose fruit (32%), sweets (17%) and yoghurts (14%). They also eat bread (11%), crisps and salty snacks (6%), nuts (3%), hamburgers, hot dogs, kebabs or pizza (2%). It should also be added that some people (10%) could not unambiguously indicate the snacks most often consumed between meals, most often making multiple choices, pointing to fruit and vegetables as well as sweets and fast food.

Another analysed aspect was the ability to identify ecolabels. Among them, the recognisability of the ecolabel for organic farming products, the so-called “Euroleaf”, was analysed. The EU organic production logo aims to help consumers identify organic products and help farmers to market them in the community. In practice, this label is to counteract consumers’ confusion and maintain their trust in organic food.

Table 1.

Identification of the “Euroleaf” ecolabel in particular age groups

Answer\age	9	10	11	12	13	14	15
incorrect	7,6	7,5	11,6	12,5	15,8	16,5	20,8
I don't know	16,5	13,9	15,8	14,7	12,7	15,7	4,2
correct	75,9	78,6	72,6	72,8	71,5	67,8	75,0

Source: own study based on research results.

The results of the conducted research showed that young consumers coped very well with the knowledge of this ecolabel. In the analysed age groups, the respondents indicated at least 67.8% of the correct answers - which means that in the process of purchasing food products they are able to correctly identify pro-ecological food products based on the “Euroleaf” ecolabel.

5. Conclusion

Children are recognized as a significant force in the market as consumers, influencers and as future customers. The research showed a relatively good knowledge of the basic principles of sustainable consumption and labelling of organic products among children. This picture is somewhat simplified. The results of the study also showed that for many children healthy eating still means only eating fruit and vegetables (leaving aside the issues of regularity and portions of meals, drinking the right amount of water or maintaining a balanced diet), therefore it is important to increase the amount of information provided on the principles of proper nutrition and make the meals served, including those available in the school canteen, more attractive. This knowledge should be comprehensive and coherent, and not only refer to individual aspects of a healthy lifestyle. It is necessary to involve whole families in such activities through workshops, meetings and other events, because as shown by this research, but also by the results of the professional literature, attitudes and skills in children are transmitted and consolidated in this way. It is also necessary to take care of their quality and the atmosphere in which they are eaten. It is also crucial to encourage schoolchildren to learn about various dishes, and an interesting solution, positively influencing the expansion of children's knowledge in this area, can be organizing culinary workshops, which can be successfully carried out as part of class activities. Encouraging children to prepare meals and snacks on their own will allow them to avoid consuming less valuable products, often easily available, e.g. *fast food*, and the development of appropriate attitudes will ensure that these patterns will be repeated in later life and passed on to subsequent generations.

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References

1. Bąk-Sosnowska, M., Gruszczyńska, M., Plinta, R. (2015). Zachowania zdrowotne jako istotny element aktywności życiowej człowieka. Stosunek Polaków do własnego zdrowia. *Hygeia Public Health*, nr 50(4), pp. 558-565.
2. Banerjee, J., Moorthy, V., Kiran, P., Krishna Kishore, S.V., Ekiz, E., Chatterjee, R. (2023). Visual encoding of nudge influencers and exploring their effect on sustainable consumption

- among children. *Cleaner and Responsible Consumption*, Vol. 9, 100111, ISSN 2666-7843, <https://doi.org/10.1016/j.clrc.2023.100111>.
3. Donovan, D. (2016). How children represent sustainable consumption through participatory action research and co-design of visual narratives. *Special Issue on Children as Consumers*, Vol. 40, Iss. 5.
 4. Halder, P., Hansen, E. N., Kangas, J., Laukkanen, T. (2020). How national culture and ethics matter in consumers' Green consumption values. *Journal of Cleaner Production*, 265, 121754.
 5. Halicka, E., Kaczorowska, J., Szczybyło, A. (2019). Zrównoważona konsumpcja żywności w wiejskich gospodarstwach domowych z dziećmi. *Wiś i Rolnictwo 1(182)*, ISSN 0137-1673, doi:10.7366/wir012019/03.
 6. Jackson, T. (2006). Readings in sustainable consumption. In: T. Jackson (ed.), *The Earthscan Reader in Sustainable Consumption*, pp. 1-23.
 7. Kazmierczak-Piwko, L., Kułyk, P., Dybikowska, A., Dubicki, P., Binek, Z. (2022). Sustainable consumption among children and adolescents. *Production Engineering Archives*, Vol. 28, Iss. 3, pp. 257-267.
 8. Kułyk, P., Michałowska, M., Patelska, M. (2017). Consumer attitudes in the light of the concept of sustainable consumption in Lubuskie voivodeship against the background of trends in consumption in Poland. *Oeconomia Copernicana*, 8(2), 181-198.
 9. Moschis, G.P., Mathur, A., Shannon, R. (2020). Toward Achieving Sustainable Food Consumption: Insights from the Life Course Paradigm. *Sustainability*, 12, 5359.
 10. Nazzaro, C., Lerro, M., Marotta, G. (2018). Assessing parental traits affecting children's food habits: an analysis of the determinants of responsible consumption. *Agric. Econ.*, 6, 23, <https://doi.org/10.1186/s40100-018-0119-z>.
 11. Patrzalek, W. (2017). Determinanty stylu życia młodych konsumentów. *Marketing i Zarządzanie*, nr 2(48), pp. 63-71.
 12. Purvis, B., Mao, Y., Robinson, D. (2019). Three pillars of sustainability: In search of conceptual origins. *Sustain. Sci.*, 14, 681-695.
 13. Saari Ulla, A., Damberg, S., Frömbling, L., Ringle, C.M. (2021). Sustainable consumption behavior of Europeans: The influence of environmental knowledge and risk perception on environmental concern and behavioral intention. *Ecological Economics* 189, 107155.
 14. Verain, M.C., Dagevos, H., Antonides, G. (2015). Sustainable food consumption. Product choice or curtailment? *Appetite*, 91, 375-384.
 15. Vermeir, I., Weijters, B., De Houwer, J., Geuens, M., Slabbinck, H., Spruyt, A., Van Kerckhove, A., Van Lippevelde, W., De Steur, H., Verbeke, W. (2020). Environmentally Sustainable Food Consumption: A Review and Research Agenda From a Goal-Directed Perspective. *Frontiers in Psychology*, vol. 11, ISSN: 1664-1078, DOI=10.3389/fpsyg.2020.01603.