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A Study on Evaluating Psychological Factors Influencing Plant-Based Diet Among Gen Z

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Abstract

Purpose: This paper explored the psychological determinants of adoption of plant-based diet in Generation Z. The study aimed at empirically evaluating the role of internal decision-making processes in determining willingness, consistency, and involvement into plant-based dietary practices within the cohort of the youth.

Design/Methodology/Approach: The research design applied in the study is quantitative research design based on Structural Equation Modelling (SEM) in SmartPLS. The sample was non-random purposive in nature, and the researcher used 215 Generation Z respondents to gather primary data. The proposed model consists of five unobservable variables that are evaluated with the help of nineteen observable measures that make it possible to assess both measurement and structural relationships between psychological variables and adoption of plant-based diet.

Findings: The findings indicate that the impact of environmental concern, ethical beliefs, health consciousness, and social influence on the adoption of a plant-based diet in Generation Z is positive and statistically significant. The results indicate that dietary adoption is produced by an integration of individual values and health-related perception and social situations as opposed to an individual motivating variable.

Implications: The findings can provide quality information to teachers, policymakers, medical practitioners working in the field of public health, and food industry stakeholders by determining the psychological motivators that affect the adoption of plant-based diets among the youth. The awareness of these factors can aid the creation of specific awareness programs and behavioral change interventions to promote sustainable and healthy eating habits.

Originality: This research adds to the body of literature because it empirically studies the adoption of plant-based diets through the lens of psychology based on structural equation modelling framework. The generation Z-oriented study offers evidence-based understanding of a under-investigated population target group and contributes to the research of the modern dietary habits.

Keywords: *Plant-Based Diet, Structural Equation Modelling, Vegan Food Products.*

Introduction

Eating habits in the world have been experiencing significant changes as people start doubting the traditional food eating habits and start experimenting with other eating habits. Of these new trends, plant-based diets have become particularly popular in the academic literature and consumer discourse as they are becoming increasingly popular on the food markets and lifestyle discourse. The growing popularity of plant-based foods, however, does not mean that it is uniform and widespread. Although the level of awareness and availability has increased, the reality of what people eat remains significantly different between age groups and social groups. This discrepancy shows that dietary change cannot simply be a matter of information or access, but a complicated behavioral process that is determined by inner decision-making processes. Food decisions are intricate in nature in that they are rooted in individual perceptions, beliefs, and daily habits, thus making plant-based consumption an act of such a behavior that is more psychologically motivated than it is a nutrition act (Rickerby and Green, 2024).

Generation Z is one of the most significant population groups in regard to the current changes in diet. Gen Z, being one of the most socially networked and exposed information generations, is often described as progressive and not afraid of lifestyle experimentation, such as alternative diets. Nevertheless, there is empirical evidence to suggest that although positive perceptions on plant-based eating are observed, the adoption among this group is varied and fragmented (Raptou

et al., 2024). A good number practice interest or partial involvement that is not entirely committing or maintaining eating habits that are plant-based. This disjuncture between intention and action implies that there are more psychological processes involved. The current literature has focused mostly on the external results or overall consumer patterns, which has provided insufficient information on how the Gen Z generation interprets, assesses, and react to the concept of plant-based eating internally. Consequently, existing theories do not explain the whole phenomenon of adoption in some individuals and non-adoption in others even though they are exposed and be aware of it (Yang et al., 2025). The necessity of the current work is conditioned by the fact that the existing research on the topic of plant-based diets has a small psychological component, especially concerning younger generations. The majority of existing literature discusses plant-based diets in the prism of nutritional science, sustainability campaigning, or market innovation and tend to believe that theoretically rational benefits must automatically lead to changes in behavior. Food decisions, however, are routine, emotionally based, socialized and need a thorough study of the psychological factors that drive adoption. It is not possible to understand these internal processes, and therefore efforts to promote plant-based diets could be ineffective in reaching the underlying causes of reluctance, inconsistency or rejection. This is particularly applicable to Generation Z whose eating habits are still developing, and they will most likely shape the consumption tendencies of the future and food systems in the future (Jezewska-Zychowicz et al., 2024).

Moreover, a plant-based diet is an ongoing behavioral change and is not one-time, which is why it is necessary to study the motivating and limiting factors underlying this change. The dietary behavior of Gen Z is complicated, and contradictory effects of online media, peer groups and lifestyle demands highlight the need to explore the psychology of this age group in more depth. The current literature does not tend to isolate Generation Z as an analytical group, which makes generalized results, which do not necessarily represent generational differences in thinking and behavior. Thus, the psychological aspects that affect the adoption of plant-based diets by Gen Z must be analyzed to fill this gap in the research and add to the deeper comprehension of modern dietary behavior (Meixner et al., 2024).

The objective of the research is to analyze the psychological factors that guide the embrace of plant-based diet by Generation Z. Since dietary habits among the youth are predetermined by multifaceted internal decision-making, the study aims at comprehending why some people are predisposed to plant-based diets, and some ones are reluctant to switch to this type of eating despite increasing awareness and exposure. The research aims to find out about the perceptions of Gen Z regarding plant-based diets and how they are reflected in their real diet. The study tries to go beyond the superficial explanations on food choice and offer a more in-depth understanding of the behavioral patterns in the adoption of a plant-based diet by drawing on the psychological aspect of the issue. The purpose of the paper is also to determine the most important psychological determinants and limitations influencing willingness, consistency, and commitment to plant-based dietary habits among the Gen Z. The proposed study should be used to help advance the current academic literature and provide significant insights to educators, policymakers, and stakeholders in the food industry to support the adoption of knowledgeable and sustainable dietary habits among younger populations.

Research Questions

RQ1: What are the psychological factors that can condition a shift to a plant-based diet in Generation Z?

RQ2: What is the role that perceptions and attitudes play in influencing the willingness of Generation Z to embrace the idea of plant-based dietary practices?

RQ3: How do the psychological barriers impact the consistency and persistence of the plant-based diet adoption among Generation Z?

Review of Literature

Environmental concern

The current body of evidence shows an ongoing connection between environmental concern and greater intentions to decrease meat and switch to more plant-based food- specifically by younger generations who describe a choice in favor of food as a climate action. Experimental studies indicate that information about emissions (e.g., food labeling with CO2) can enhance the intention to change to plant-based food by enhancing climate-related attitudes and acceptance of policy instruments that help make the impact of foods more apparent (Maier, 2024). Sustainability-related perceptions are also regarded as a recurring component of the motivational package of following plant-based trends in Gen Z samples, along

with the perceived obstacles such as lack of satisfaction with product features or fears of dietary insufficiency (Raptou et al., 2024). Quantitative studies also demonstrate the pro-environmental orientations and associated ideas are predictive of eating less meat/more plant-based, which also demonstrates that environmental concern is an important value (why change) and a cognitive frame that influences the perceived benefits of eating plant-based food (Jezewska-Zychowicz et al., 2024). Overall, the new literature indicates that concern about the environment is one of the factors that influence plant-based adoption by enhancing perceived moral/collective relevance of the change in dieting and by reinforcing positive attitudes towards plant-based substitutes and sustainable dietary norms (Maier, 2024; Raptou et al., 2024).

H_1: Environmental Concern has a significant positive effect on the Adoption of a Plant-Based Diet.

Ethical beliefs

The moral principles, especially animal welfare and harm reduction, are still a key psychological force behind plant-based adoption, which can easily be a moral motivation independent of (and not necessarily alongside) environmentalism. Individuals who are adopting or considering adopting plant-based lifestyles are often using animal welfare as a fundamental motivating factor, which is occasionally referred to as a non-negotiable moral justification that grounds long-term compliance (Yang et al., 2025). There is also empirical evidence suggesting that animal welfare concerns are linked to increased chances of eating plant-based alternatives, in which young adults are found to be more inclined to ethical beliefs when it comes to daily product decisions (Luong et al., 2024). Notably, all these ethical beliefs do not operate in a vacuum: according to recent synthesies and primary research, ethical motives interplay with taste expectations, identity and perceived inconvenience: these factors may either support or hinder ethical intentions in the real world (Rickerby and Green, 2024; Yang et al., 2025). In case of Gen Z-oriented research designs, it means that ethical beliefs can be represented as a value-related predictor of intention (and persistence), at the same time acknowledging that adoption remains a condition that requires enablers to occur (Raptou et al., 2024; Yang et al., 2025).

H_2: Ethical Beliefs have a significant positive effect on the Adoption of a Plant-Based Diet.

Health consciousness

Health consciousness is a reason that drives plant-based uptake due to perceived personal gains (e.g., weight gain, disease prevention, clean eating), although the recent literature indicates that it is not necessarily a simple straight-forward predictor, in particular, among younger generations. The willingness to adopt plant-based diets has a significant relationship with perceived health benefits and self-reported knowledge on healthy eating in Gen Z samples, but issues with adequate protein intake and product satisfaction may moderate this relationship (Raptou et al., 2024). Health is another phenomenon that is supported by broader evidence as a widely mentioned reason in qualitative descriptions of adoption, in which participants explain their motivation to adopt plant-based diets as a means to regulate their energy levels, digestion, cardiometabolic risk perception, or overall wellness objectives (Yang et al., 2025). Nevertheless, systematic reviews of adoption barriers note that the perception of nutritional risk (e.g. protein/iron/B12 concerns), misunderstanding regarding what is considered healthy (processed plant-based foods) and a lack of practical skills to make balance plant-based meals all can degrade health consciousness (Rickerby and Green, 2024). Combined, current studies indicate that health consciousness is more usefully viewed as multi-faceted (preventive orientation + nutrition confidence) with nutrition literacy and perceived competence potentially mediating the transformation of the health motivation into actual adoption (Rickerby and Green, 2024; Raptou et al., 2024).

H_3: Health Consciousness has a significant positive effect on the Adoption of a Plant-Based Diet.

Social influence

The social influence (subjective norms, descriptive norms, peer/family modeling, and social identity cues) is demonstrated repeatedly as able to determine the intentions and behavior toward plants- very applicable to Gen Z due to peer visibility and identity signaling regarding food. The controlled and field findings demonstrate that social norms have the power to change the plant-based/vegetarian preferences, though the impact is determined by how strong intentions of people are and how salient the norm is in the environment (Hammami et al., 2023). In the studies based on reasoned-action and TPB, perceived norms are predictive of intentions to switch to vegetarian/vegan diets, but normative impact may also depend on the population and the presentation of the behavior as vegetarian vs. vegan (Zaal et al., 2023). Subjective norms among young adults also correlate with increased consumption of plant-based meat alternatives, which means that supportive

social groups can reduce psychological friction and make experimental consumption normal (Luong et al., 2024). Practical examples of supermarket interventions also indicate that norm messaging in isolation might not be effective in a situation where the environment is filled with strong competing norms (habitual meat buying, default options) and the context provides evidence of the context-dependency of social influence (Wolfswinkel et al., 2025). In the context of Gen Z research, the results are useful in modeling the social influence of perceived pressure/support and observed prevalence with consideration of the source of norms (online/offline), and their compatibility with identity (Hammami et al., 2023; Luong et al., 2024).

H_4: Social Influence has a significant positive effect on the Adoption of a Plant-Based Diet.

Research Methodology

The size of the sample used in the study was 215 Generation Z's which is more than the minimum sample of 188 to be able to achieve adequate statistical power. The model with "5 latent variables was used to measure the effect size of 0.3 and test statistical power of 0.9 and reject 0.05 using 19 observable indicators". The sampling was a non-random purposive method. Both the primary as well as secondary data were utilized. The methodology involved a Structural Equation Modelling using SMART PLS, to test the measurement and structural relationships among the constructs. The ethical considerations that were made during data collected adhered to the principles as described by Pirani (2024).

Table No: 1 Demographic Profile of the Respondents

Demographic Variable	Category	Frequency	Percentage
Gender	Male	104	48.4
	Female	111	51.6
Age Group	18–20 years	69	32.1
	21–23 years	89	41.4
	24–26 years	57	26.5
Educational Status	Undergraduate	126	58.6
	Postgraduate	72	33.5
	Other	17	7.9
Duration of Following a Plant-Based Diet	Less than 6 months	61	28.4
	6 months – 1 year	54	25.1
	1 – 2 years	58	27.0
	More than 2 years	42	19.5

There were 215 respondents out of which 111 (51.6) females and 104 (48.4) males implying balanced gender representation. Most of the respondents achieved 89 (41.4) respondents of 21-23 years' age group, 69 respondents (32.1) in 18-20 years group and 57 respondents (26.5) in 24-26 years category. Regarding the educational status, 126 respondents were undergraduates (58.6), 72 respondents were postgraduates (33.5), and 17 respondents were the representatives of other educational groups (7.9). Concerning the period of adherence to a plant-based diet, 61 respondents (28.4%) said that they have adhered to it less than six months, 54 respondents (25.1%) six months to a year, 58 respondents (27.0%) one to two years, and 42 respondents (19.5%) more than two years. Such distribution indicates a range of experience with plant-based eating in case of Generation Z respondents.

Data Analysis and Interpretation

Table No: 2 Reliability and validity

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Adoption of Plant-Based Diet	0.790	0.792	0.561
Environmental Concern	0.869	0.869	0.626
Ethical Beliefs	0.848	0.848	0.588
Health Consciousness	0.857	0.856	0.599
Social Influence	0.852	0.853	0.595

The outcomes of the reliability and validity test reveal that each construct has an appropriate internal consistency and convergent validity. The Alpha values of Cronbach are 0.790 to 0.869 which is higher than the required value of 0.70 which shows good reliability. All constructs also have Composite Reliability values that are over 0.70, which is another indicator of the internal consistency of the measurement model.

In addition, the values of the Average Variance Extracted (AVE) of all the constructs are above the minimum value of 0.50, meaning that each one of them accounts more than half the variance in the indicators. All in all, the results reveal that the measurement model is accurate and valid thus suitable to further analysis in the form of a structural model.

Table No: 3 Discriminant validity

Constructs	Adoption of Plant-Based Diet	EC	EB	HC	SI
Adoption of Plant-Based Diet	**0.749**				
Environmental Concern (EC)	0.744	**0.791**			
Ethical Beliefs (EB)	0.709	0.694	**0.767**		
Health Consciousness (HC)	0.711	0.753	0.722	**0.774**	
Social Influence (SI)	0.733	0.740	0.733	0.759	**0.772**

The Fornell-Larcker test was used to evaluate the discriminant validity of the constructs. The diagonal factors are the square root of the AVE of individual constructs and the off-diagonal factors are the correlation coefficients between constructs. The findings indicate that square root of AVE, in relation to each construct is higher than the inter-construct correlations.

Particularly, the diagonal values of Adoption of Plant-Based Diet (0.749), Environmental Concern (0.791), Ethical Beliefs (0.767), Health Concsciousness (0.774), and Social Influence (0.772) are all greater than the correlations of these constructs with others. This proves that all constructs are empirically different and represent a unique element of the model. All in all, the results have created sufficient discriminant validity, which is in favour of the specificity of the constructs involved in the study.

Table No: 4 Hypothesis testing

Path	Beta Coefficient	T-Statistics	P-Value
Environmental Concern → Adoption of Plant-Based Diet	0.257	6.224	0.000
Ethical Beliefs → Adoption of Plant-Based Diet	0.306	7.709	0.000

Health Consciousness → Adoption of Plant-Based Diet	0.176	4.495	0.000
Social Influence → Adoption of Plant-Based Diet	0.160	3.834	0.000

The results of the hypothesis testing show that all of the factors under investigation produce a positive and statistically significant impact on the use of a vegetarian diet. Environmental Concern has a strong impact on adoption (b = 0.257, t = 6.224, p < 0.001), which shows the importance of environmental awareness. The most influential one is Ethical Beliefs (b = 0.306, t = 7.709, p < 0.001), which focuses on moral concerns when choosing a diet. There is also a positive influence of Health Consciousness (b = 0.176, t = 4.495, p < 0.001), which implies that health-related motivations have a positive impact on the adoption of a plant-based diet. On the same note, it can be seen that Social Influence had a positive relationship that was significant (b = 0.160, t = 3.834, p < 0.001). On the whole, all suggested hypotheses are confirmed.

Figure No: 1 SEM model

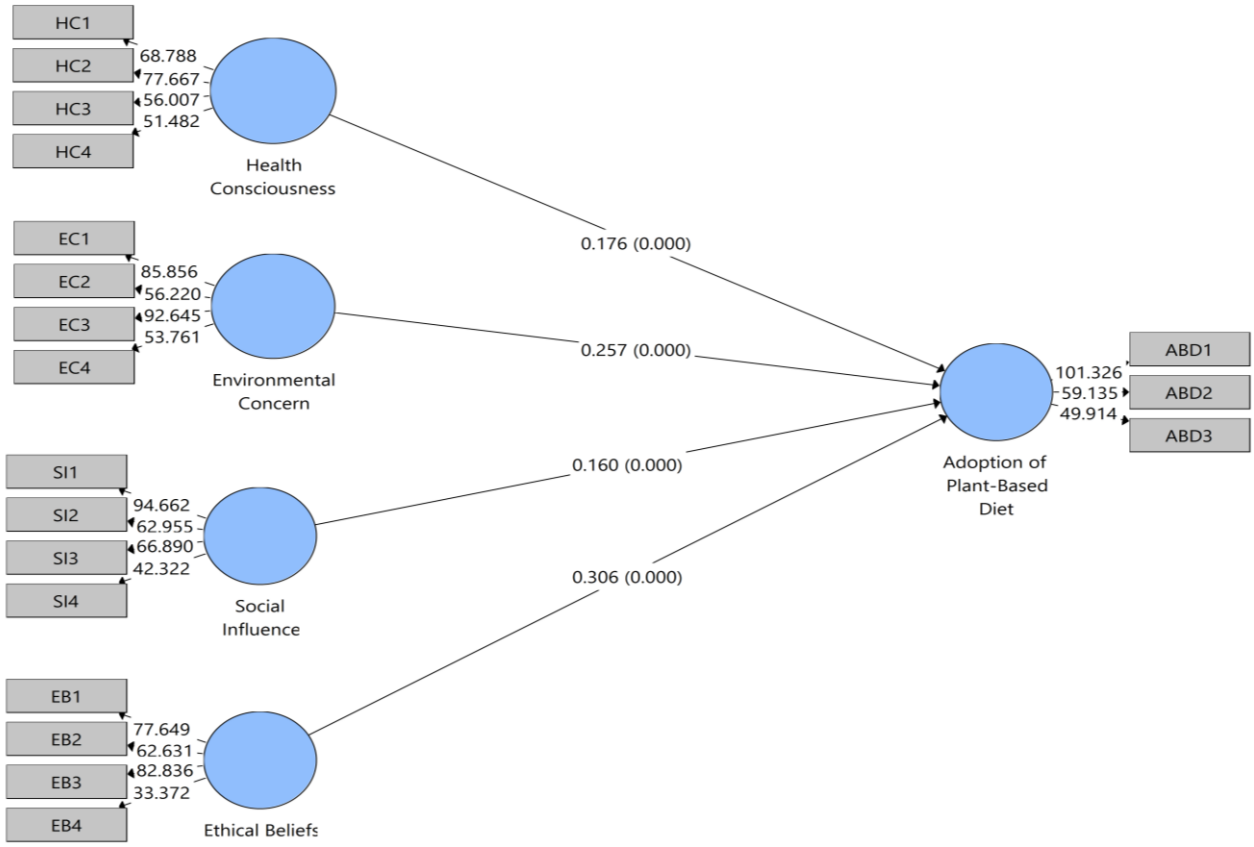
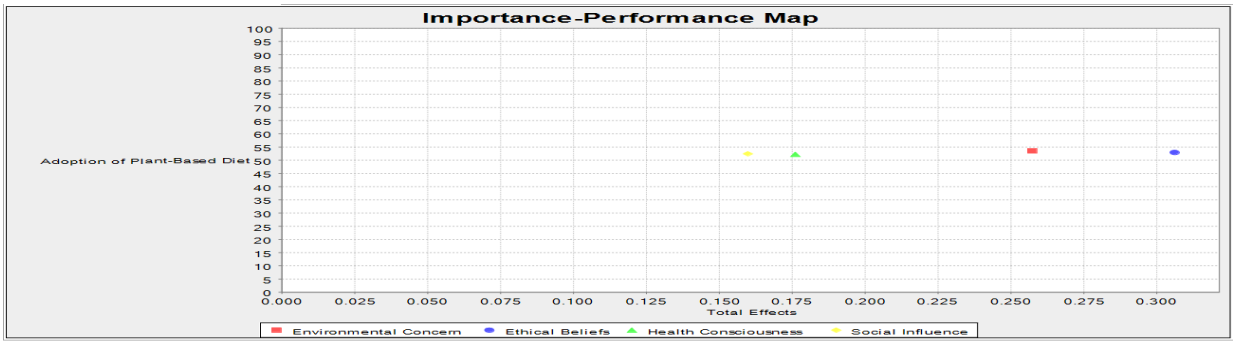


Figure No: 2 IPMA MODEL



The Importance-Performance Map indicates the relative significance (overall effects) and performance of the most notable predictors that affect the Adoption of a Plant-Based Diet. Ethical Beliefs are the most important and high performance, which suggests that the most significant driver is the consideration of ethics and should be the key priority to encourage the adoption of a plant-based diet. The importance and good performance of Environmental Concern also have a positive impact on the role of environmental awareness in the formation of dietary preferences.

Health Consciousness proves to be moderate with similar performance that health-related motivations have an impact, but it can be improved by additional efforts. Social Influence, though not as significant, demonstrates moderate results which means that social factors are supportive as well. Altogether, the IPMA indicates that the reinforcement of ethical and environmental communications would induce the prevalence of a plant-based diet most effectively, and enhancement of health and social influence factors can further support the adoption behavior.

Conclusion

The current paper has discussed the psychological predictors affecting the uptake of a plant-based diet among the generation Z. It is possible to say that the preference to plant-based dieting among Gen Z is highly influenced by environmental concern, ethical beliefs, health consciousness, and social influence, as the findings have shown. The findings suggest that there is no individual motive that causes dietary adoption in young individuals but a combination of individual values, thinking that is health-conscious, and social environment leads to its development. Generation Z interviewees proved to be sensitive to the extended implications of their food preferences but at the same time, they take personal and social well-being and acceptance into consideration. Another point that is made in the study is that the implementation of the plant-based diet is a behavioral change and not a one-time choice, which means that motivation and reinforcement are necessary. The trait of psychological conformity to the concept of plant-based eating enhances the chances of readiness and persistence in the diet. The study adds value to the existing body of literature by empirically validating their associations between these variables using Structural Equation Modelling to provide a comprehensive psychological approach towards the adoption of plant-based diets in a specific generational group. Altogether, the results highlight the significance of knowledge on internal decision-making processes in explaining why Generation Z either adopts or opposes the idea of plant-based diets, thus offering valuable information to the stakeholders who seek to promote the idea of sustainable diets. Marketers and food brands can develop communication strategies, which can appeal to the values, perceptions of health, and peer influence of Gen Z to increase the level of acceptance and long-term interest in plant-based products. Policy makers could package nutrition and sustainability measures that would consider psychological factors leading to dieting behavior, as a way of facilitating the issue of plant-based diets among the youth population to be adopted voluntarily. The results underline the importance of social environments in determining dietary behaviors and that social norms can be used to promote healthier and more sustainable food decisions in society.

Discussion

The results of the current research correspond mostly with available previous empirical findings related to investigating the use of plant-based diets among younger generations. The high impact of environmental concern coincides with the previously conducted studies that documented how people, especially the younger consumers, would embrace plant-based dietary habits when they felt that their food choices positively affected the sustainability of the environment and climatic conditions (Maier, 2024; Jezewska-Zychowicz et al., 2024). Likewise, ethical beliefs as it has been evidenced in the current study can be utilized as the factor that contributes to the existing studies that have called on the importance of animal welfare and moral responsibility as the influential factors in adopting plant-based diets, particularly in the groups of ethically conscious youth (Yang et al., 2025). The fact that health consciousness is positively correlated with the adoption of a plant-based diet is also supported by recent research that points out that perceived health and wellness-oriented attitudes are the primary factors that drive a dietary shift towards a plant-based diet, even though the latter can be accompanied by concerns about nutritional adequacy (Raptou et al., 2024; Rickerby and Green, 2024). Moreover, the impact of the social factors found in the study corresponds to the previous literature, which emphasizes the role of peer norms, social approval, and common eating habits in developing food-related behaviors in the generation Z (Luong et al., 2024; Hammami et al., 2023). Generally, the fact that the current results align with the previous ones supports the position that the adoption of a vegetarian diet is a complex behavioral process that is influenced by intersecting psychological factors as opposed to being motivated by single factors. The validation of these relationships in a Generation Z context with the help of Structural

Equation Modelling makes the study an extension of the existing literature and empowers the results on the empirical basis of the study of the generational patterns of dietary behavior.

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