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Determinants of salt intake in young females

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Abstract

Salt is an essential nutrient required for maintaining physiological functions such as nerve transmission, muscular contractions, and fluid balance; however, excessive consumption has become a growing public health concern. Increasing urbanization and reliance on consumption of processed foods have significantly increased the salt intake, particularly among young females, making them a vulnerable group for associated health risks. The current study aims to investigate the levels of salt intake among young females and identify the key factors influencing their consumption patterns. A total of 100 females aged 20-30 years were selected using random sampling technique. A self-constructed questionnaire was used in the study to collect data comprising 22 items across five domains: emotional and situational triggers, taste preferences, social norms and peer influence, cultural and structural determinants, and cognitive and behavioral patterns. Responses were recorded on a three-point Likert scale and analyzed using frequency, percentage, and mean scores. The findings revealed that only 13% of participants had satisfactory salt intake, while 62% exhibited moderately high and 25% very high intake levels. Among the influencing factors, cognitive and behavioral patterns had the highest impact (mean= 12.78), followed by emotional triggers (10.81), indicating a strong gap between awareness and actual behavior. Social norms and peer influence (8.60) also contributed notably, whereas taste preference showed the least influence. Hence, the study shows that complex interaction of psychological, social, and behavioral factors plays a major role for the excessive salt consumption among young females. The study also highlights the alarming need for targeted, behavior-focused interventions to promote healthier dietary practices and reduce long-term health risks.

Keywords: Salt, processed foods, salt consumption, young females, factors

Introduction

Salt is a necessary nutritional component required for the proper functioning of the human body which is commonly consumed in the form of sodium chloride. Sodium plays an essential role in regulating blood pressure, supporting muscle function, maintaining fluid balance, and transmitting nerve impulses (Institute of Medicine, 2013; He & MacGregor, 2010) ^[5, 6]. Appropriate sodium levels are necessary for homeostasis, and its deficiency can lead to symptoms such as fatigue, muscle cramps, dizziness, and impaired neurological functioning. Thus, salt is indispensable for survival and its physiological importance cannot be understated. While minimal amount is necessary for healthy functioning of human body, modern dietary patterns have led to excessive consumption far beyond the recommended level, i.e., 5 grams per day according to World Health Organization (World Health Organization, 2025) ^[2].

Dietary transitions associated with urbanization and globalization have significantly influenced eating patterns in recent years, particularly among young populations. The younger generation is heavily exposed to convenience and processed foods, which are generally high in salt, especially females. These includes packaged snacks, fast food, processed meats and, ready-to-eat meals, which substantially contribute to daily salt intake (Monteiro *et al.*, 2013; Powles *et al.*, 2013) ^[12, 20]. According to research by WHO majority of dietary sodium is not derived from discretionary salt use but from processed and industrially prepared foods (World Health Organization, 2025) ^[2]. Factors such as busy lifestyles, increased academic and occupational demands, social influences, and marketing strategies targeting young customers are majorly responsible for this shift in food consumption patterns (Swinburn *et al.*, 1999; Harris *et al.*, 2009) ^[19, 22].

Young females represent a crucial demographic for examining high salt intake due to unique

Physiological, psychological, and sociocultural factors. Studies suggest that high salt intake in young adults could be the reason for poorer hydration and unhealthy dietary behaviors (Zhang *et al.*, 2022) ^[3, 9]. Furthermore, consuming too much salt has been linked to elevated blood pressure, which is significantly a cardiovascular disease risk factor, as well as kidney disorders, osteoporosis, and gastric cancer (Hunter *et al.*, 2022; WHO, 2025) ^[2, 4, 8]. Along with physical health, emerging evidence also points to the negative impact of high-salt diets on mental and cognitive health of an individual. Diets high in sodium, often linked with ultra-processed foods, have been associated with reduced cerebral blood flow, impaired cognition, and increased risk of anxiety and depression-like symptoms (Hunter *et al.*, 2022) ^[4, 8].

The issue becomes more concerning when considering behavioral and psychosocial influences among young females. Emotional eating, body image concerns, peer pressure, and stress-related coping mechanisms often lead to increased consumption of salty snacks and fast food (Dallman, 2010; Oliver *et al.*, 2000) ^[16, 17]. Moreover, taste preference for salty foods, which can develop early and become reinforced over time, contributes to habitual high salt intake (Liem, 2017) ^[11]. Social environments, including college life and peer groups, also play an important role in shaping dietary patterns and habits, which is often normalized by frequent consumption of high-sodium foods (Story *et al.*, 2002; Robinson *et al.*, 2014) ^[18, 21]. If these patterns are established in early adulthood, it may persist into later life, increasing and affecting long-term health risks.

Given the rising prevalence of high salt consumption among young females and its associated health consequences, there is an urgent need for early intervention and awareness. Educating young individuals about the recommended dietary limits of salt and the hidden sources of sodium in processed foods is crucial. Public health initiatives should focus on promoting healthier food choices, encouraging home-cooked meals, and improving nutritional labeling to help individuals make informed choices (Grimes *et al.*, 2009; Sarmugam *et al.*, 2014) ^[10, 14]. Additionally, addressing psychosocial factors such as stress management and emotional eating behaviors can play a crucial role in reducing excessive salt intake (Khalesi & Vandelandotte, 2022) ^[1].

This present study is undertaken with the aim of assessing the level of salt intake among young females and identifying the key factors that are highly responsible and trigger their consumption patterns. The aim of this study is to give a thorough understanding of the factors that contribute to this population's high salt intake by exploring dimensions such as lifestyle habits, emotional and stress-related eating, peer and social influences, and the role of processed food consumption. The findings are expected to contribute to the development of informed strategies for early intervention, awareness, and behavioral modification that will ultimately promote healthier dietary practices and reduce the long-term health risks among young females.

Literature review

According to the World Health Organization (2012, 2023), global salt consumption levels exceeded the recommended daily limit of 5 grams per day, which makes it a crucial public health concern. In the support of this study by Mozaffarian *et al.* (2014) ^[7] concluded that high sodium intake resulted in millions of deaths annually due to CVDs.

The shift towards processed and ultra-processed foods has significantly raised the sodium intake worldwide which is shown in the study of Monteiro *et al.* (2013) ^[20] that ultra-processed foods that usually include a lot of sodium, sugar, and unhealthy fats, have become dominant in modern diets, especially among adolescents and young adults.

Study by Zhang *et al.* (2022) ^[3] shows that higher salt intake among young adults is directly associated with poorer hydration status and overall unhealthy eating pattern and behaviors.

Furthermore, excessive sodium intake has also been linked to emerging concerns of mental and cognitive health as reported by Hunter *et al.* (2022) ^[4, 8] that high salt consumption may impair vascular function and contribute to broader systemic health complications, alarming the need for early dietary interventions.

Psychological and behavioral factors such as emotional eating, often triggered by stress, anxiety, or negative mood states, has also been identified as key determinants in shaping salt consumption patterns. Study by Dallman (2010) ^[16] states that as a coping strategy, stress can lead to and increased consumption of appetizing foods and meals, including those rich in salt. Similar study by Oliver *et al.* (2000) ^[17] concluded that individuals those who experience stress include high-sodium options as under stress they tend to prefer energy-dense foods. These findings could particularly be relevant for young females as they experience higher emotional sensitivity and stress due to academic, social, and personal pressures.

Study by Story *et al.* (2022) ^[18] highlighted that individual, societal, and environmental factors all contribute to shape eating patterns that often include peer influence, family habits, and food availability. In addition to it Robinson *et al.* (2014) ^[21] showed that in social settings, people are more likely to consume unhealthy meals, as they tend to modify their dietary preferences in response to perceived social norms. Whereas, advertisement and media also play crucial role in shaping unhealthy dietary patterns especially among young consumers as demonstrated by Harris *et al.* (2009) ^[22].

Another important aspect is the knowledge and behavior gap discussed in the study by Grimes *et al.* (2013) ^[10] that reported while consumers may have sufficient knowledge about salt intake recommendation, still fail to apply knowledge in their daily lives. This finding is further supported by Khalesi *et al.* (2017) ^[15], showing that lifestyle habits and environmental factors tend to overcome nutritional knowledge.

Existing literatures demonstrate that high salt intake among young females is a multifactorial issue which is influenced by physiological needs, dietary transitions, psychological factors, and social environments. While existing researches have explored the health impacts and general determinants for it, there remains a need for more focused studies examining on specific age groups having specific triggers and behavioral patterns influencing them. In order to create targeted treatments meant to encourage better eating habits and lower long-term health risks, it is crucial to understand and bridge this gap.

Objectives

- To study salt consumption level in young females.
- To study factors influencing salt consumption pattern in young females.

Methods

Participants

A total of 100 young females lying between age ranges of 20-30 participated in the study. This group allows a variation of age, cultural and social background, perception towards individual health and managing stress. Purpose of

choosing this age group was to bridge the knowledge gap as youths have better understanding towards changing environments and its consequences towards individual health and hence would make better choices to avoid long-term health risks.

Materials

A self-constructed questionnaire, 'Factors Responsible for Salt Consumption Pattern in Young Females', with 22 questions categorized in 5 sub-parts was used in the study. Statements were framed on the basis of the triggers such as emotional and situational triggers, taste preference, social norms and peer influence, cultural and structural determinants, and cognitive and behavioral patterns. Since it is a self-constructed tool hence it was validated by medical as well as subjective experts and was pilot tested on 10 females for reliance. Participants rated each item on a 3-point Likert scale with higher scores showing the factor to be more responsible and lower with less.

Procedure

The study was conducted among young females aged between 20-30 with educational background as undergraduate, graduate, post-graduate and research scholars and were selected by random sampling technique.

Since there were no personal aspects included in the demographics, they willingly and actively participated in the study. Participants were contacted directly and data was administered individually by pen and paper mode.

Statistical Analysis

There were 22 items categorized into 5 sub parts as Emotional and Situational Triggers, Taste Preference, Social Norms and Peer Influence, Cultural and Structural Determinants, and Cognitive and Behavioral Patterns. Each item was recorded against 3-Point Likert scale where 1 represents lower frequency and 3 represents higher while 2 represents occasional. Based on this frequency scores were counted for each participant and total scoring was sub-divided into three parts. For 22 items maximum possible score could be 66 and least could be 22. Sub-dividing the scores in the difference of 15 we get 3 sub-division with score of <38 representing satisfactory intake of salt, scores 38-52 representing moderately high intake whereas highest intake of salt is represented by score of >52. Counting scores of individuals on the basis of these divisions given the frequency of salt intake depending on various situational and emotional triggers as well as societal and parental influences.

Table 1: Frequency and percentage distribution of respondents on salt intake

Score	Category	Frequency (n=100)	Percentage
22-37	Satisfactory Intake	13	13%
38-52	Moderately high	62	62%
53-66	Very high	25	25%

To analyze which factors highly influenced salt consumptions of female, mean distribution of each category

of trigger was calculated individually by counting scores of respondents against each category.

Table 2: Mean distribution of respondents for the factors responsible for salt intake

Item No.	Factors responsible for salt intake	Mean
A	Emotional and Situational Triggers	10.81
B	Taste Preference	6.59
C	Social Norms and Peer Influence	8.60
D	Cultural and Structural Determinants	9.10
E	Cognitive and Behavioral Patterns	12.78

Result

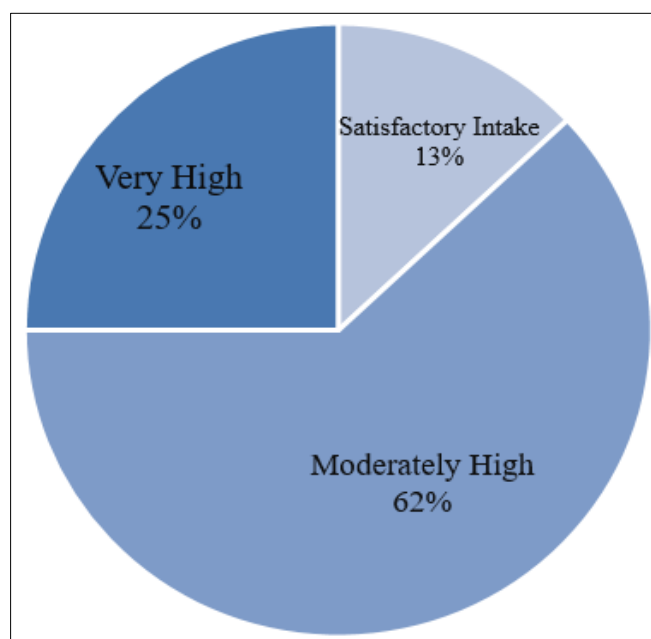


Fig 1: Distribution of Salt Intake among Respondents

The result of this study revealed that 13% of the total population was having satisfactory intake of salt. While 25% of the population was on higher intake of salt

comparatively moderate salt intake population which was 62% of the total population.

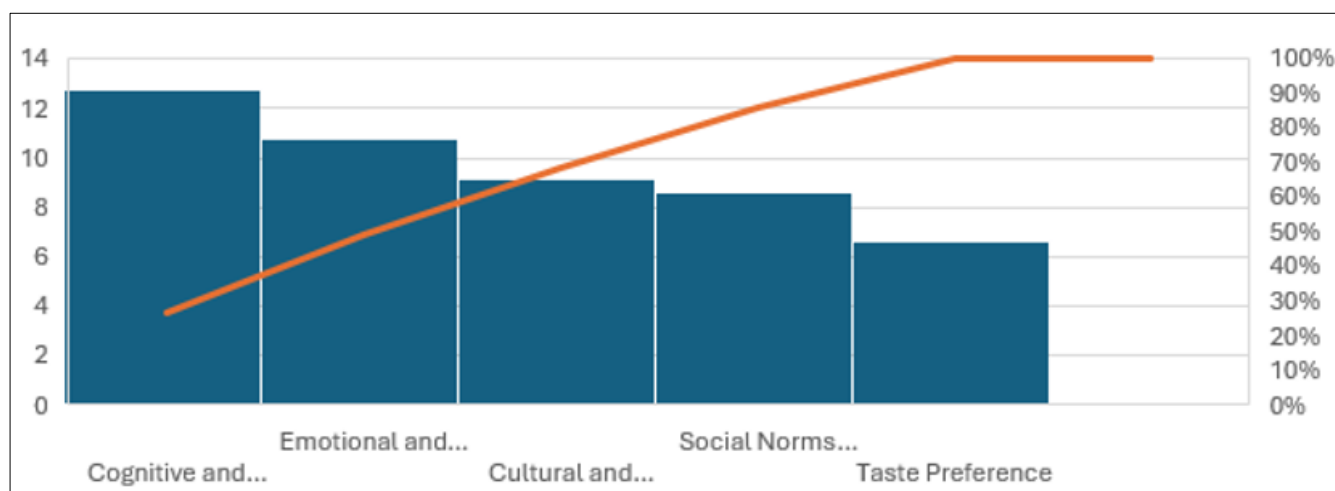


Fig 2: Mean Distribution of Salt Intake among Respondents

Since the responses were recorded against variation of triggers, mean calculated for all sub-parts indicated that cognitive and behavioral patterns mostly affected the salt intake levels in young females with a mean score of 12.78 as they find it difficult to shift their dietary choices to low salt diet even after well knowledge of the consequences. Some females reported about having the feeling of guilt still repeating the same eating patterns and choose to opt for munching salty snacks as other healthier options were not easily accessible to them. This results also shows that with growing age females have adapted themselves for higher salty food consumption although, believing that reducing salt will improve long-term health.

Taste preference has the lowest impact on food consumption patterns of females with mean of 10.81 as compared to other underlying triggers as reportedly they don't reward themselves with salty foods all the time and hence they generally don't have cravings for salt and are able to enjoy meals without added salt.

Social norms are influencing salt intake in females with mean score of 8.60 where they reported of consuming slightly high salty foods because of the preference of family and society. Peer influence also has larger impact on their food choices as they reported it difficult to say no to salty snacks and fast foods while socializing with their friends and hence results in high consumption of salt. Also, they are much influenced with the advertisement of newly launched snacks and are generally attracted to it if their favorite celebrity is endorsing the food item.

Cultural determinants also have slightly lower impact on salty food consumption patterns which could be due to increasing diseases in family members where they have been advised to not to take salty and spicy food and hence youngsters and teenagers living together are advised to follow the same. Their cultural practices and celebrations not always include salty foods and talking about the structural determinants their socioeconomic status not always allow them to afford processed or instant foods which could be a great savior to them. Non-availability of processed food or ready-to-eat food also contributes to opt for homemade foods rather than to rely on snacks. Emotional and situational triggers could be a reason for

females to have moderately high salt intake levels as females are generally emotional and sensitive towards handling stress or feel low very often due to various reasons. Also, it gets difficult for them to keep up to their busy schedules which makes them to rely on processed foods for the quick fix after skipping regular meals. Several other reasons such as instant satisfaction and craving also contributes majorly for their high consumption of salt.

Discussion

The results of this study offer significant new information about the trends and factors influencing salt intake in young girls between the ages of 20 and 30. The findings make it abundantly evident that a substantial fraction of the participants fall into the categories of moderately high (62%) and very high (25%) salt intake, while just 13% continue to consume at a level that is appropriate. This reveals a worrying pattern of excessive salt intake in this group, which is consistent with research that indicates young individuals are more frequently exposed to high-sodium dietary situations as a result of consuming more processed and convenience foods (Monteiro *et al.*, 2013; Powles *et al.*, 2013) [12, 20].

The study's main finding is that behavioral and cognitive patterns play a major influence in determining salt consumption, as seen by the highest mean score across all trigger categories. Despite being aware of the detrimental effects of high salt consumption on one's health, several individuals reported they had difficulty shifting their dietary habits. This shows a disconnect between behavior and knowledge, implying that awareness might not be enough to effect significant dietary change (Grimes *et al.*, 2009; Khalesi *et al.*, 2017) [10, 15]. Unhealthy eating habits seem to be highly reinforced by ease, habit development, and the availability of healthier options. Participants' reported feelings of guilt highlight the internal struggle between real behavior and health consciousness, which is an important area for behavioral intervention.

Increased salt intake was also found to be significantly influenced by situational and emotional triggers. Emotional eating and coping strategies are reflected in the capacity to eat salty foods when under stress, depressed, or pressed for

time. This is in line with earlier studies showing that stress and unpleasant emotions frequently cause people to favor appealing, high-energy foods, especially those that are high in salt (Dallman, 2010; Oliver *et al.*, 2000) ^[16, 17]. Female teenagers' demanding lifestyles, which include erratic schedules and academic expectations, may make this habit worse by promoting a reliance on fast foods and ready-to-eat processed foods.

Dietary decisions were found to be somewhat influenced by peer pressure and social norms (Story *et al.*, 2002; Robinson *et al.*, 2014) ^[18, 21]. The importance of group dynamics and the need for social conformity was highlighted by the fact that several individuals reported having trouble avoiding salty foods in social situations. Furthermore, the impact of advertising and celebrity endorsements implies that food preferences are significantly influenced by external environmental factors (Harris *et al.*, 2009) ^[2]. These results highlight how crucial it is to consider both the larger social context and individual actions when developing solutions.

It's interesting to see that taste preference had the least impact on patterns of salt use. This implies that external and situational factors like availability, habit, and social context may be the driving forces behind excessive salt intake rather than innate needs. Additionally, cultural and structural factors had a relatively smaller influence, maybe as a result of growing family health consciousness and restricted access to processed meals in some socioeconomic contexts. This suggests that family health behaviors and environmental restrictions can serve as protective factors against consuming too much salt (Drewnowski & Specter, 2004) ^[23].

Overall, the study highlights excessive salt consumption in females is a complex problem impacted by various environmental, social, and psychological components (Swinburn *et al.*, 1999) ^[19]. These results highlight the need for broad approaches that go beyond awareness campaigns and incorporate behavioral modification methods, easier access to healthier food options, and encouraging social settings.

Conclusion

Analyzing the current study, it can be concluded that only a small percentage of females consume a diet and food containing salt at recommended level, indicating a worrying incidence of moderately high to extremely high intake. The results show that emotional triggers, social influences, behavioral and cognitive patterns, and environmental factors all have a major impact on how people consume salt (Dallman, 2010; Story *et al.*, 2002) ^[16, 18].

The study emphasizes that although people are aware of the negative consequences of consuming excessive amounts of salt, this information does not always translate into healthy behavior, highlighting the need for more useful and behavior-focused treatments (Grimes *et al.*, 2009; Khalesi & Vandelanotte, 2022) ^[1, 10]. Reducing excessive salt consumption requires addressing emotional eating, expanding access to healthier options, and encouraging supporting social norms.

As a result, this study advances our knowledge of the causes of young female's excessive salt consumption and emphasizes the critical need for early, focused, multifaceted intervention techniques. Such initiatives can be extremely important in encouraging better eating practices and

averting the long-term health hazards linked to excessive salt intake (He & MacGregor, 2010; Appel *et al.*, 2011) ^[6, 13].

References

1. Khalesi S, Vandelanotte C. Reducing salt intake: a systematic review and meta-analysis of behavior change interventions in adults. *Nutrition Reviews*. 2022;80(4):723-740.
2. World Health Organization. Sodium reduction [Internet]. 2025 [cited 2026 Apr 22]. Available from: <https://www.who.int/news-room/fact-sheets/detail/salt-reduction>
3. Zhang J, Zhang N, Liu S, Du S, Ma G. Young adults with higher salt intake have inferior hydration status: a cross-sectional study. *Nutrients*. 2022;14(2):287-287.
4. Hunter RW, Dhaun N, Bailey MA. The impact of excessive salt intake on human health. *Nature Reviews Nephrology*. 2022;20(5):321-335.
5. Institute of Medicine. Sodium intake in populations: assessment of evidence. Washington (DC): National Academies Press; 2013.
6. He FJ, MacGregor GA. Reducing population salt intake worldwide: from evidence to implementation. *Progress in Cardiovascular Diseases*. 2010;52(5):363-382.
7. Mozaffarian D, Fahimi S, Singh GM, Micha R, Khatibzadeh S, Engell RE, *et al.* Global sodium consumption and death from cardiovascular causes. *New England Journal of Medicine*. 2014;371(7):624-634.
8. Hunter RW, Dhaun N, Bailey MA. The impact of excessive salt intake on human health. *Nature Reviews Nephrology*. 2022;18(5):321-335.
9. Zhang J, Zhang N, Liu S, Du S, Ma G. Young adults with higher salt intake have inferior hydration status: a cross-sectional study. *Nutrients*. 2022;14(2):287-287.
10. Grimes CA, Riddell LJ, Nowson CA. Consumer knowledge and attitudes to salt intake and labelled salt information. *Appetite*. 2009;53(2):189-194.
11. Liem DG. Infants' and children's salt taste perception and liking: a review. *Nutrients*. 2017;9(9):1011-1011.
12. Powles J, Fahimi S, Micha R, Khatibzadeh S, Shi P, Ezzati M, *et al.* Global, regional and national sodium intakes in 1990 and 2010: a systematic analysis of 24 h urinary sodium excretion and dietary surveys worldwide. *BMJ Open*. 2013;3(12):e003733-e003733.
13. Appel LJ, Frohlich ED, Hall JE, Pearson TA, Sacco RL, Seals DR, *et al.* The importance of population-wide sodium reduction as a means to prevent cardiovascular disease and stroke: a call to action from the American Heart Association. *Circulation*. 2011;123(10):1138-1143.
14. Sarmugam R, Worsley A, Flood V. Development and validation of a salt knowledge questionnaire. *Public Health Nutrition*. 2014;17(5):1061-1068.
15. Khalesi S, Irwin C, Sun J. Dietary patterns, nutrition knowledge, lifestyle, and health-related quality of life: associations with anti-hypertension medication adherence in a sample of Australian adults. *High Blood Pressure & Cardiovascular Prevention*. 2017;24(4):453-462.
16. Dallman MF. Stress-induced obesity and the emotional nervous system. *Trends in Endocrinology & Metabolism*. 2010;21(3):159-165.

17. Oliver G, Wardle J, Gibson EL. Stress and food choice: a laboratory study. *Biopsychosocial Science and Medicine*. 2000;62(6):853-865.
18. Story M, Neumark-Sztainer D, French S. Individual and environmental influences on adolescent eating behaviors. *Journal of the American Dietetic Association*. 2002;102(3):S40-S51.
19. Swinburn B, Egger G, Raza F. Dissecting obesogenic environments: the development and application of a framework for identifying and prioritizing environmental interventions for obesity. *Preventive Medicine*. 1999;29(6):563-570.
20. Monteiro CA, Moubarac JC, Cannon G, Ng SW, Popkin B. Ultra-processed products are becoming dominant in the global food system. *Obesity Reviews*. 2013;14(S2):21-28.
21. Robinson E, Thomas J, Aveyard P, Higgs S. What everyone else is eating: a systematic review and meta-analysis of the effect of informational eating norms on eating behavior. *Journal of the Academy of Nutrition and Dietetics*. 2014;114(3):414-429.
22. Harris JL, Bargh JA, Brownell KD. Priming effects of television food advertising on eating behavior. *Health Psychology*. 2009;28(4):404-404.
23. Drewnowski A, Specter SE. Poverty and obesity: the role of energy density and energy costs. *The American Journal of Clinical Nutrition*. 2004;79(1):6-16.