

Influence of Family Behaviour on Adolescents' Eating Habits in Karbala City, Iraq

Marlen Hashem Salloum*, Nuhad Mohammed Aldoori

Department of Pediatric Health Nursing, College of Nursing, University of Babylon, FC66+9MC, Hillah, Babylon Governorate, Iraq

*Corresponding Author's Email: marlen.salloum@gmail.com

ABSTRACT

Background: Teenagers in the age range of 10 to 19 years are in a developmental stage where they experience significant physical and mental growth as they transition from puberty to adulthood. Examining the interpersonal effects that influence health behaviours in the context of parent-adolescent relationships is especially significant and rich. **Objectives:** To identify the family behaviours concerning adolescents' eating habits in Holy Karbala city, specifically to find-out the differences in family behaviours and adolescents' eating habits according to their demographic characteristics. **Methods:** The study design is cross-sectional and stratified sampling method which was conducted at 373 teenagers aged 10 to 19 years, to assess the "Influence of Family Behaviours on Eating Habits among Secondary School Students" in Holy Karbala city center at 20 governmental secondary schools in education directorate. Students in secondary schools filled out Eating Habits Questionnaires (EHQs) to provide the data. The questionnaire format comprising two sections was designed to cover all aspects of the study; the section one includes demographic characteristics and section two includes family behaviours. The data collected during May 2024. **Results:** It revealed that most of adolescents (98.9%) live with their families and less than half of adolescents (48.3%) strongly agrees that they enjoy eating meals with their family, and vast majority of them (92.8%) have good level of family behaviours regarding eating habits. Also, the findings indicated a significant impact of family behaviours on the eating habits of adolescents, particularly in relation to the father's level of education. As well, it demonstrated that the occupation of the father had a significant impact on the family behaviours of adolescents. **Conclusion:** The investigation reveals that elevated levels of positive family behaviours improve the quality of adolescents' eating habits. Recommendations through the nurse's role in educating the families' adolescents to promote healthier food choices.

Keywords: Adolescent; Eating Behaviours; Family; Nursing Education

INTRODUCTION

Teenage years ultimately serves as the transitional phase between childhood and adulthood (Yahia *et al.*, 2025). It generally commences with puberty and concludes when an individual attains constitutional autonomy from their parents or guardians, or "adulthood" (Heslin & McNulty, 2023). The age range of adolescence (10–19 years), it is a stage of fast maturation and growth where there are last growth spikes. High levels of energy and nutrition are needed to keep up with the teens' rapid intellectual and physical development (Herdiansyah, Setiawan & Tanziha, 2025). Eating habits through adolescence age are also influenced by their desire to attain the perfect body image (Okab & Jawad, 2024). During these years of fast development and change, parents' views and behaviours toward teenagers also shift, where the parents make an effort to meet their teenagers' needs as they grow and change on the inside and outside (Liu *et al.*, 2025). Examining the interpersonal effects that influence health behaviours in the context of parent-adolescent relationships is significant and rich, as well as, parents frequently attempt to regulate their children's health-related habits and act like role models regarding behaviours that promote health (Maia *et al.*, 2025). The arrangement of meal preparation, snack intervals, and food accessibility at home may promote action cues. Encouragement, child engagement, and nutritional education can enhance children's autonomy, thereby improving their self-efficacy and outcome expectations (Alaslani *et al.*, 2025). Moreover, teenagers who grow up with strict and controlling parents tend to eat poorly

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and drink more sugar-sweetened beverages (Ardakani *et al.*, 2024; Hübner & Bartelmeß, 2024). According to literatures, studies should focus on adolescents' eating habits because the rapid physical changes that occur during adolescence have an impact on their quality of life. In addition, eating disorders are therefore severe mental illnesses that often manifest in adolescence and have substantial psychological and physiological aftereffects (Ispas *et al.*, 2025).

Examining the interpersonal effects that influence health behaviours in the context of parent-adolescent relationships is especially significant and rich. Parents frequently attempt to regulate their children's health-related habits and act like role models regarding behaviours that promote health. In addition, children's and adolescents' eating habits are influenced by elements of the home eating environment, including the frequency and caliber of family meals as well as the accessibility and availability of both good and unhealthy foods. The home food environment is directly influenced by parents, who frequently serve to be the nutritional gatekeepers in a household (Sohail *et al.*, 2024).

Nurses have an important role in addressing the impact of family actions on teenagers' eating habits, through health education, family-centered interventions, and community advocacy. Nurses can educate families and adolescents about balanced nutrition, emphasising the risks of poor dietary habits such as obesity and diabetes (Lupu *et al.*, 2025). By conducting workshops in schools and community centers, nurses raise awareness about how family behaviours shape adolescent eating patterns (Baral *et al.*, 2025; López-Gil *et al.*, 2024). Additionally, nurses can work directly with families to modify unhealthy food environments at home, promoting the availability of wholesome foods including vegetables, fruits, and whole grain products and offering parents guidance on how to set a good example (Oudat & Okour, 2025; Rathi *et al.*, 2025). In schools, nurses can collaborate with health teams to implement nutrition programs, conduct dietary screenings, and refer at-risk adolescents to specialists (Talens *et al.*, 2025). Beyond individual and family interventions, nurses can advocate for policies that improve access to healthy foods in Karbala and address socioeconomic barriers to proper nutrition (Ibrahim & Said, 2023).

Significance of the Study

There are an estimated 1.3 billion teenagers in the world today, accounting for 16% of the total population. There are differences in how the adolescent period is defined; the UN defines it as the time between 10 and 19 years of age, while the WHO broadens the definition to include those from 10 to 24 years of age (Heslin & McNulty, 2023). Although adolescence is seen as a healthy stage of life, there is a considerable amount of disease, damage, and mortality throughout this time. A large portion of this is treatable or avoidable. Furthermore, adolescence is a time of increased nutritional needs, the majority of which are greater than those of adults in proportion to body weight and energy requirements. Despite the importance of the adolescent stage of life, there is still a degree of disregard towards adolescent health concerns, and global health and nutrition policies typically overlook their needs. Adolescent nutrition has been called a "hidden crisis" by the Lancet Commission on Adolescent Health and Wellbeing, calling attention to this issue (Heslin & McNulty, 2023; Talukdar *et al.*, 2024).

Moreover, consuming at least five different servings of fruit and vegetables each day is recommended by current UK recommendations, making it one indicator of a healthy diet. But according to research, only 8% of children aged 11 to 18 are fulfilling this recommendation; this percentage has not changed much over the previous nine years. Similar to physical activity, dietary habits developed in youth can persist into adulthood (Allcott-Watson *et al.*, 2024; Baral *et al.*, 2025).

Besides, adolescence is a critical time for the growth of healthy behaviours, and developing healthy habits during this time can have long-lasting impacts on a person's general welfare (Majid *et al.*, 2011; Zhang *et al.*, 2024).

METHODOLOGY

Study Design and Setting

This study utilised a cross-sectional design and employed stratified sampling to ensure representative participation. The target population consisted of secondary school students enrolled in governmental secondary schools located within the city centre of Holy Karbala, under the jurisdiction of the Education Directorate.

Study Sample

The study population comprised teenagers aged 10–19 years enrolled in government secondary schools in Holy Karbala, encompassing a total of 20 schools. The Steven Thompson equation was employed to determine the sample size for a population with a known quantity, utilising a probability simple random stratified sampling procedure at a 95% confidence level and a standard deviation of 0.5. Upon using the equation, the sample size was determined to be 373 teenagers.

The Instrument of Study

A questionnaire format comprising two sections was designed to cover all aspects of the study:

Section One: Demographic Characteristic

Consisting of numerous items classified as adolescent's demographic information include age, sex, adolescent's parents' age, educational level of adolescent's parents, and parents' occupation.

Section Two: Family behaviour:

Assessment the family behaviours include 2 parts to assess family behaviours comprising 21 items. The content validity of the questionnaire is determined by a committee of experts who assessed its appropriateness and clarity in relation to the study's objectives. The reliability was assessed using Cronbach's alpha test, yielding values exceeding the critical threshold of 0.70, thereby indicating that the questionnaire is reliable for measuring these variables.

Data Collection

After the administrative approval, data was gathered during May 2024 through filling the Eating Habits Questionnaires (EHQs) by secondary school students (Neumark-Sztainer *et al.*, 2010).

Scoring System

The total score with family behaviours classified as good, moderate, or poor according to the following distribution (Facina *et al.*, 2023; Islam *et al.*, 2024):

Poor family behaviours with total score between 21 and 34.

Moderate family behaviours with total score between 35 and 48.

Good family behaviours with total score between 49 and 63.

Consideration

This research received ethical approval from the Nursing College Domestic Committee, College of Nursing, University of Babylon, Iraq with reference number 27 on 23rd April, 2024.

RESULTS

The results of the data analysis presented systematically in tables and figures, and are in accordance with selected study objectives:

Demographic Data:

Table 1: Sample Distribution According to their Demographic Characteristics (n= 373)

	Variables		N= 373	
			f	%
1.	Age (Years)	10-15	175	46.9
	M± SD: 15.5 ± 1.957	16 - 18≤	198	53.1
	Total		373	100
2.	Sex	Male	161	43.2
		Female	212	56.8
	Total		373	100

N = Number; % = Percentage

Table 1 Demonstrate the highest percentage of them (53.1%) are teenagers (16 - 18≤ years old). Females (56.8%) outnumber males (43.2%).

Table 2: Sample Distribution According to their Parents' Age (n= 373)

Father's Age	Min	Max	M	SD
	30	78	47.3	8.546
	Categories		f	%
	30 – 35		14	3.8
	36 – 50		250	67.0
	51 – 65		97	26.0
	66 – 80		12	3.2
	Total		373	100
Mother's Age	Min	Max	M	SD
	25	65	41.6	6.998
	Categories		f	%
	20 – 35		81	21.7
	36 – 50		248	66.5
	51 – 65		44	11.8
	Total		373	100

Table 2 shows the highest percentage fathers' ages range from 36-50 years (67%). Similarly, the highest percentage mothers (66.5%) are within the same 36-50-year range. In addition, the fathers have a broader age distribution (30-78 years) compared to the mothers (25-65 years).

Family Behaviours of Adolescents

Table 3: Distribution of the Sample According to their Behaviours in their Home (n= 373)

	To what extent are the following behaviours present in your home?	Never		Sometimes		Always present	
		<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
A.	Fruits and vegetables are available	173	46.4	156	41.8	44	11.8
B.	Vegetables are served for dinner	8	2.1	107	28.7	258	69.2
C.	The presence of “fast food”	23	6.2	160	42.9	190	50.9
D.	Availability of fruit juice	65	17.4	227	60.9	81	21.7
E.	Milk is served at meals	14	3.8	72	19.3	287	76.9
F.	Provide chips or other meals light salty	59	15.8	161	43.2	153	41.0
G.	Availability of chocolate or other sweets	59	15.8	161	43.2	153	41.0
H.	Use bread (such as whole wheat)	59	15.8	161	43.2	153	41.0

The Table 3 illustrate that the highest percentage of them 46.4% never have Fruits and vegetables available, but 69.2% always served vegetables for dinner, is quite prevalent 50.9% indicating its always present fast food, 60.9% sometimes have fruit juice available, while 76.9% always serve milk during meals. In addition, 43.2% sometimes present chips or other meals light salty, chocolate or other sweets and use bread (such as whole wheat).

Table 4 presents the distribution of the study sample regarding their family's mealtime behaviours, revealing some notable trends. The highest proportion (48.3%) strongly agreed that they enjoy eating meals with their family. Additionally, 56.6% agreed that they are expected to be at home for dinner. Conversely, 52.3% disagreed with the statement that teenagers should eat every food offered to them, even if they do not like it.

Table 4: Distribution of the Sample According to their Answers about Family's Behaviour Around Mealtimes

Q12. What is Your Family's Behaviour Around Mealtimes?	Disagree		Agree		Strongly Agree	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
It is important that the family addresses at least one meal together a day	68	18.2	133	35.7	172	46.1
There are rules at mealtimes which must adhere to	115	30.8	175	46.9	83	22.3
It is often difficult to find the time when family members can sit together to eat a meal.	162	43.4	156	41.8	55	14.7
Dinner time is more than just eat the food; all the family member talk to each other	68	18.2	141	37.8	164	44.0
We often watch television during having dinner	142	38.1	127	34.0	104	27.9
I enjoy eating meals with my family	44	11.8	149	39.9	180	48.3
We are expected to be at home for dinner	55	14.7	211	56.6	107	28.7
I'm often so busy that I can't have dinner with my family	194	52.0	115	30.8	64	17.2
Different timelines constitute we have difficulty eating meals together	154	41.3	155	41.6	64	17.2
During mealtime, family members sit together in an enjoyable way	62	16.6	144	38.6	167	44.8
The teenager should eat every offered food even if he doesn't like them	195	52.3	110	29.5	68	18.2
It is okay for teenager to make something else to eat if he doesn't like the food which is offered	69	18.5	154	41.3	150	40.2

Table 5: The Differences in Family Behaviours of Adolescents According to Fathers and Mothers' Age and Education

Variables		F	Family Behaviours		T or F/ P value	Assessment
			M	SD		
Father's Age	30 – 35	14	42.3	3.451	F: 0.333 0.801	NS
	36 – 50	250	42.8	3.815		
	51 – 65	97	42.9	3.760		
	66 – 80	12	41.9	4.461		
Mother's Age	20 – 35	81	42.6	3.754	F: 0.271 0.763	NS
	36 – 50	248	42.9	3.772		
	51 – 65	44	42.6	4.094		
Father's Educational Level	He/ She does not read and does not write	31	41.9	3.506	F: 4.317 0.002	HS
	Primary school graduate	106	42.1	4.074		
	Preparatory school graduate	87	42.4	3.457		
	Institute graduate	34	44.6	3.524		
	College graduate or higher	115	43.4	3.724		
Mother's Educational Level	He/ She does not read and does not write	45	42.3	3.548	F: 1.730 0.143	NS
	Primary school graduate	119	42.8	3.791		
	Preparatory school graduate	89	42.8	4.002		
	Institute graduate	27	41.5	4.389		
	College graduate or higher	93	43.5	3.475		

T: Independent sample (t) test, F: One Way ANOVA test NS: P-value >0.05, HS: P-value <0.01, S: P-value <0.05

Table 5 displays that there is a high statistically significant differences ($P=0.002$) in family behaviours according to father's educational level. Nonetheless there was NO statistically significant differences in family behaviours ($P>0.05$) according to all other variables.

Table 6: Differences in Family Behaviours of Adolescents According to Fathers and Mothers'

		F	Family Behaviours		T or F/ P value	Assessment
			M	SD		
Father's Occupation	Government/ Military Position	45	43.4	3.869	F: 4.449 0.002	HS
	Worked in a specific profession (teacher, employee, doctor, engineer .)	82	43.5	3.891		
	Craft or trade	8	41.5	3.901		
	Freelance	223	42.6	3.410		
	Not working	15	41.4	3.234		
Mother's Occupation	Government/ Military Position	106	42.4	4.151	F: 0.970 0.424	NS
	Worked in a specific profession (teacher, employee, doctor, engineer)	91	43.0	3.822		
	Craft or trade	59	41.1	3.357		
	Freelance	89	42.9	3.736		
	Not working	28	41.7	3.731		

T: Independent sample (t) test, F: One Way ANOVA test NS: P-value >0.05, HS: P-value <0.01, S: P-value <0.05

Table 6 shows a statistically significant difference ($P=0.002$) in adolescents' family behaviours based on their father's occupation. However, no statistically significant differences ($P > 0.05$) were observed in family behaviours with respect to all other variables.

Table 7: The Association between Family Behaviours and Eating Habits of Adolescents

Variables	M	Std	R	Sig.	Assessment
Family behaviours	42.8	3.800	0.335	0.000	HS
Eating habits	82.4	7.482			

M: mean score, SD: standard deviation R: person test, HS: P-value <0.01

Table 7 display a significant moderate positive correlation ($r = 0.335$, $P < 0.01$) exists between the two variables, indicating that higher levels of family behaviours among adolescents enhance the quality of their eating habits.

DISCUSSION

Findings from the present study, as shown in Table 1, indicated that more than half of the adolescents were aged between 16 and ≤ 18 years, and over half were female. This may be linked to Iraqi cultural norms that allow males to stay late at work, potentially increasing their likelihood of dropping out of school. Furthermore, as adolescence is a critical period for identity formation and self-assertion, males are often more inclined than females to rebel, particularly regarding parental decisions. These results are consistent with the study by Selman, Hussain, and Mera (2024) on the nutritional status of adolescents in Babylon Province, Iraq, which reported a mean age of 16.4 ± 0.4 years among 500 high school students.

The findings as demonstrated in Table 3 related to a family's eating behaviour at home and its impact on adolescents' eating behaviour indicate that two-fifths of them never have fruits and vegetables available, and more than two-thirds always serve vegetables for dinner, in addition, half of them always present fast food and three quarters always serve milk during meals. For a variety of reasons, teenagers frequently choose fast food. It's practical, simple to get to, and frequently accommodates the busy times of adolescents between social events, other interests, and school. Perhaps the taste and flavour of fast food are among the many factors that attract adolescents to it. As well, fast food is often heavy in fat, sugar, and salt, making it attractive to them. The fast food may be pleasurable because these components have the ability to cause pleasure reactions in the brain. Moreover, teenagers enjoy having milk with their meals, possibly because the protein and other nutrients it contains support healthy growth and development. Also, dairy products include high-quality protein, which is necessary to power muscles and keep adolescents active (Sharobidinovna, Baxtiyor & Muslimbek, 2025).

Therefore, child's behaviour is greatly influenced by the family's everyday behaviours (Wu, 2024). Children can learn to form lifelong good eating habits with the assistance of their parents. In the line, Braune

Adams and Winpenny (2024) found in study that there was a significant correlation between parental and teenage fruit vegetable intake across the board. Additionally, this supported by a different study (Liu 2023), that was carried out in Hong Kong, China, this study found that parental practices may have an impact on adolescents' knowledge of healthy eating. Also, revealed that the perceived value of eating healthily and the relevance of health in food matters are generally viewed favourably by parents. Similarly, the research by Kontele *et al.* (2023) illustrates a correlation between the increased prevalence of eating disorder behaviours in adolescents and the presence of similar behaviours in their parents, which considered as evidence exists regarding the influence of family eating behaviours on adolescents' dietary habits.

Furthermore, the researchers discovered according to Table 4, some interesting trends regarding adolescents' family's behaviours around mealtimes, where it showed that the highest percentage of participants strongly agree that they enjoy eating meals with their families and more than half of them they are expected to be at home for dinner. Correspondingly, it showed that most adolescents have good level of family behaviours regarding eating behaviours. Mealtime is an excellent opportunity to teach basic manners, foster communication, and avoid behavioural eating disorders. When families have meals together, their children feel more supported, comfortable, and protected, and this family cohesion is protective for both physical health and mental wellbeing (Spaumer & Mavhandu-Mudzusi, 2025).

The outcome aligns with the research that demonstrated how frequent family dinners might offer teenagers tangible examples of portion control and balanced nutrition in an organised setting, this may relate to the family meals may help prevent disordered eating behaviour's chaotic eating patterns while also promoting the establishment of regular eating habits, additionally, having meals together could serve as a forum for candid conversation, offering a chance to voice worries and encourage constructive criticism of eating patterns skill that can be particularly helpful during adolescence. Even though it has been widely acknowledged that family meal participation helps reduce disordered eating behaviours among teenagers (López-Gil *et al.*, 2024). Moreover, in the line with another study identified family actions that could influence adolescents' knowledge, attitudes, and practices regarding healthy eating, positive perspectives from parents concerning the availability of nutritious food, oversight in dietary choices, and the promotion of healthy eating habits (Liu *et al.*, 2023). Furthermore, these results are consistent with a study conducted in the United Arab Emirates by Sohail which presents new research on the Home Food Environment (HFE) among adolescents in the country and its impact on their eating habits and family meal patterns, this study showed that HFE has a major influence (Sohail *et al.*, 2024).

According to the outcome of the existing research as shown in Table 5 regarding parents' level of education, parents' eating patterns and their children's eating behaviours, the findings indicated a significant impact of family behaviours on the eating habits of adolescents, particularly in relation to the father's level of education. This aligns with the findings of studies conducted by (Yasin, Hassan & Ateye, 2024), which demonstrated that additional factors, such as the education level of parents, can significantly influence adolescents' eating habits, where those with higher education levels are better equipped to acquire and apply the knowledge necessary for maintaining a healthy diet. Conversely, the present study showed that there were no statistically significant differences in family behaviours related to adolescents' eating habits based on the educational level of mothers. In contrast to the same study which indicated that adolescents with mothers lacking formal education were considerably more prone to malnutrition.

Regarding parents' occupation, the findings of the current study as clarified Table 6 demonstrated that the occupation of the father had a significant impact on the family behaviours of adolescents. Whereas may related to what is known that the vocations of parents or fathers are closely linked to the family's socioeconomic standing, which can significantly affect adolescents' eating habits by affecting the availability and consumption of fruits, vegetables, and foods high in energy. Therefore, healthier eating habits in teenagers are typically associated with higher parental financial standing (Svolos *et al.*, 2025). Similarly, Zaborskis *et al.*, (2021) conducted a study across 41 countries, revealing that family income had a significant effect on the eating habits of teenagers, extensive studies have shown that adolescents from low-income households consume fewer nutritious meals compared to their peers from high-socioeconomic status families.

Concerning association between family behaviours and eating habits of adolescents, the present study results in Table 7 indicated that higher levels of family behaviours among adolescents enhance the quality of their eating habits. Thus, it is evident that there is a noteworthy connection between the eating habits of teenagers and the behaviours exhibited within their families, the eating habits and attitudes of adolescents regarding health are significantly shaped by their parents. As children mature, the dynamics within the parent-child relationship evolve, influencing the ways in which parents guide their young children's behaviours (Kalogirou & Gentaz, 2025).

Research conducted by Braune, Adams and Winpenny, (2024) indicates a significant correlation between the eating habits of adolescents and those of their parents, suggesting that parents maintain a positive influence on their children. Another study (Liu *et al.*, 2023) assessed 48 qualitative studies regarding the home food environment and the role of parents, revealing that numerous investigations have explored how families foster healthy eating over the past few years (2016–2020), these studies highlighted the importance of educating adolescents about the benefits of nutrition, promoting cooking skills, and engaging in discussions about food during mealtimes, additionally, it was disclosed how guardians impart knowledge about nutritious eating habits to their descendants through their understanding. In addition, another investigation reinforced the findings that the home food environment and parental role modelling significantly influence teenage eating patterns, elucidating the ways in which these elements shape adolescents' KAP (Knowledge, Attitude, and Practice) concerning their eating behaviours, the significant relationship between family behaviours and the eating habits of adolescents is evident (Liu *et al.*, 2021).

Limitation

The cross-sectional methodology used in the study makes it difficult to determine a causal link between adolescent eating habits and family behaviours. The evidence of behavioural influences over time might be more robust in longitudinal research. In addition, the study was limited to Karbala, where the family dynamics and eating habits, which may be influenced by cultural norms; its conclusions might not hold true for other countries with distinct nutritional, cultural, and economic customs.

CONCLUSION

The study reveals that the elevated levels of positive family behaviours on teenagers improve the quality of their eating habits. Long-term longitudinal designs may be used in future studies to monitor the changes in family impacts on eating habits as teenagers grow into adults. This would make it easier to comprehend how dietary habits change or endure overtime. Moreover, Future nursing research can examine the effects of authoritative, authoritarian, permissive, and uninvolved parenting styles on adolescents' food preferences, portion control, and nutrition-related attitudes.

Recommendation

The study recommends the importance of nurses' role to serve as key figures in promoting long-term healthy eating behaviours among adolescents by combining education, counselling, advocacy, and evidence-based strategies, as well as to improve awareness concerning appropriate preventive measures that can change their unhealthy habits.

Conflict of Interest

The authors declare that they have no competing interests.

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REFERENCES

- Alaslani, K., Alroqi, H., Almohammadi, A., Aljahlan, Y., Alsulaiman, R., Albeeshi, A., ... & Alnema, F. (2025). A national study on knowledge of child language development, self-efficacy, and the professional development of childcare providers in Saudi Arabia. *Discover Education*, 4(1), 1-28. <https://doi.org/10.1007/s44217-025-00460-3>
- Allcott-Watson, H., Chater, A., Troop, N., & Howlett, N. (2024). A systematic review of interventions targeting physical activity and/or healthy eating behaviours in adolescents: practice and training. *Health Psychology Review*, 18(1), 117–140. <https://doi.org/10.1080/17437199.2023.2173631>
- Ardakani, A., Monroe-Lord, L., Wakefield, D., & Castor, C. (2024). Enhancing dietary adherence among African-American adolescents: the role of parenting styles and food-related practices. *Frontiers in Nutrition*, 11. <https://doi.org/10.3389/fnut.2024.1254338>
- Baral, S., Singh, A. K., Aryal, A., Subedi, J., Dhakal, U., & Khanal, A. (2025). Food habit, physical activity and nutritional status of adolescents in selected schools of Madhyapur Thimi municipality, Nepal: A cross-sectional study. *PLoS Global Public Health*, 5(1). <https://doi.org/10.1371/journal.pgph.0004136>
- Braune, T., Adams, J., & Winpenny, E. M. (2024). Exploring the changing association between parental and adolescent fruit and vegetable intakes, from age 10 to 30 years. *International Journal of Behavioral Nutrition and Physical Activity*, 21(1). <https://doi.org/10.1186/s12966-024-01604-8>
- Facina, V. B., Fonseca, R. da R., da Conceição-Machado, M. E. P., Ribeiro-Silva, R. de C., Dos Santos, S. M. C., & de Santana, M. L. P. (2023). Association between socioeconomic factors, food insecurity, and dietary patterns of adolescents: A latent class analysis. *Nutrients*, 15(20). <https://doi.org/10.3390/nu15204344>
- Herdiansyah, D., Setiawan, B., & Tanzhiha, I. (2025). Comparison of food security and nutritional status among adolescent girls aged 15-19 in highland and coastal areas of Garut Regency, West Java. *BIO Web of Conferences*. <https://doi.org/10.1051/bioconf/202517103012>
- Heslin, A. M., & McNulty, B. (2023). Adolescent nutrition and health: characteristics, risk factors and opportunities of an overlooked life stage. *Proceedings of the Nutrition Society*, 82(2), 142–156. <https://doi.org/10.1017/S0029665123002689>
- Hübner, H. L., & Bartelmeß, T. (2024). Associations of sugar-related food parenting practices and parental feeding styles with prospective dietary behavior of children and adolescents: A systematic review of the literature from 2017 to 2023. *Frontiers in Public Health*, 12. <https://doi.org/10.3389/fpubh.2024.1382437>
- Ibrahim, I., & Said, Y. H. (2023). Food security policy in Iraq and the challenges of response after 2003. *Tikrit Journal for Political Science*, 3(pic4), 287-314. <https://doi.org/10.25130/tjfps.v3pic4.238>
- Islam, R., Hasan, A. B. M. N., Ferdous, N. J., Sharif, A. Bin, & Hasan, M. (2024). Factors influencing food preferences and eating behaviour among the Forcibly Displaced Myanmar Nationals (FDMN) adolescents in Cox's Bazar, Bangladesh: A cross-sectional survey. *BMJ Public Health*, 2(1). <https://doi.org/10.1136/bmjph-2023-000237>
- Ispas, A. G., Forray, A. I., Lacurezeanu, A., Petreuş, D., Gavrilăş, L. I., & Cherecheş, R. M. (2025). Eating disorder risk among adolescents: The influence of dietary patterns, physical activity and BMI. *Nutrients*, 17(6). <https://doi.org/10.3390/nu17061067>
- Kalogirou, E., & Gentaz, E. (2025). A scientometric review of the scientific literature on child effects on adults: Topics of interest and areas for development in psychological research. *Acta Psychologica*, 255. <https://doi.org/10.1016/j.actpsy.2025.104897>
- Kontele, I., Sariapanagiotou, S., Papadopoulou, A. M., Zoumbaneas, E., & Vassilakou, T. (2023). Parental dieting

- and correlation with disordered eating behaviours in adolescents: A narrative review. *Adolescents*, 3(3), 538–549. <https://doi.org/10.3390/adolescents3030038>
- Liu, K. S. N., Chen, J. Y., Ng, M. Y. C., Yeung, M. H. Y., Bedford, L. E., & Lam, C. L. K. (2021). How does the family influence adolescent eating habits in terms of knowledge, attitudes and practices? A global systematic review of qualitative studies. *Nutrients*, 13(11). <https://doi.org/10.3390/nu13113717>
- Liu, K. S. N., Chen, J. Y., Sun, K.-S., Tsang, J. P. Y., Ip, P., & Lam, C. L. K. (2023). Family facilitators of, barriers to and strategies for healthy eating among Chinese adolescents: Qualitative interviews with parent–adolescent dyads. *Nutrients*, 15(3). <https://doi.org/10.3390/nu15030651>
- Liu, X., Zhang, Y., Zeng, J., Jiang, Z., & Liu, Y. (2025). Development of father-and mother-child intimacy and their association with internalizing and externalizing problems among early and Middle Chinese adolescents. *Journal of Youth and Adolescence*, 54(5), 1326–1339. <https://doi.org/10.1007/s10964-025-02139-2>
- López-Gil, J. F., Victoria-Montesinos, D., Gutiérrez-Espinoza, H., & Jiménez-López, E. (2024). Family meals and social eating behavior and their association with disordered eating among Spanish adolescents: The EHDLA Study. *Nutrients*, 16(7). <https://doi.org/10.3390/nu16070951>
- Lupu, C. E., Scafa-Udriște, A., Matei, R. S., Licu, M., Stanciu, T. I., Stanciu, G., Hashemi, F., Mihai, A., Lupu, S., & Ene, R. (2025). Adolescent nutritional patterns and health behaviors in Romania: A cross-sectional analysis. *Nutrients*, 17(9). <https://doi.org/10.3390/nu17091448>
- Maia, C., Braz, D., Fernandes, H. M., Sarmiento, H., & Machado-Rodrigues, A. M. (2025). The impact of parental behaviors on children’s lifestyle, dietary habits, screen time, sleep patterns, mental health and BMI: A Scoping Review. *Children (Basel, Switzerland)*, 12(2). <https://doi.org/10.3390/children12020203>
- Majid, S., Foo, S., Luyt, B., Zhang, X., Theng, Y.-L., Chang, Y.-K., & Mokhtar, I. A. (2011). Adopting evidence-based practice in clinical decision making: Nurses’ perceptions, knowledge, and barriers. *Journal of the Medical Library Association (JMLA)*, 99(3). <https://doi.org/10.3163/1536-5050.99.3.010>
- Neumark-Sztainer, D., Larson, N. I., Fulkerson, J. A., Eisenberg, M. E., & Story, M. (2010). Family meals and adolescents: what have we learned from Project EAT (Eating Among Teens)? *Public Health Nutrition*, 13(7), 1113–1121. <https://doi.org/10.1017/S1368980010000169>
- Okab, A. A., & Jawad, A. K. (2024). Assessment of the nutritional status and associated factors among adolescent girls in preparatory schools at Al-Kut City. *Medical Journal of Babylon*, 21(4), 858–864. https://doi.org/10.4103/MJBL.MJBL_696_23
- Oudat, Q., & Okour, A. (2025). Utilizing the social ecological model to inform nursing practice for improved childhood eating behaviors. *Research and Theory for Nursing Practice*. <https://doi.org/10.1891/RTNP-2024-0169>
- Rathi, N., Tiwari, P., Kanwar, M., Patel, A., Singh, M., Gupta, K., & Worsley, A. (2025). What influences Indian primary school children’s food behaviors? - Perceptions of children, mothers and teachers. *BMC Public Health*, 25(1). <https://doi.org/10.1186/s12889-025-22660-0>
- Selman, N. A., Hussain, A. M. A., & Mera, N. A. A. (2024). The prevalence of nutritional status and obesity in adolescents in Babylon Province, Iraq. *Medical Journal of Babylon*, 21(1), 174–178. https://doi.org/10.4103/MJBL.MJBL_1360_23
- Sharobidinovna, A. D., Baxtiyor, S., & Muslimbek, R. (2025). The importance of vitamins and minerals for athletes. *Ethiopian International Journal of Multidisciplinary Research*, 12(03), 150–153. <https://www.eijmr.org/index.php/eijmr/article/view/2741>
- Sohail, R., Hasan, H., Saqan, R., Barakji, A., Khan, A., Sadiq, F., Furany, S., AlShaikh, Z., Mahmoud, O. A.A., &

- Radwan, H. (2024). The influence of the home food environment on the eating behaviors, family meals, and academic achievement of adolescents in schools in the UAE. *International Journal of Environmental Research and Public Health*, 21(9). <https://doi.org/10.3390/ijerph21091187>
- Spaumer, A., & Mavhandu-Mudzusi, A. H. (2025). Pentecostal church leaders' support to children in need of care and protection. *HTS Theological Studies*, 81(1), 1–10. <https://doi.org/10.4102/hts.v81i1.10173>
- Svolos, V., Strongylou, D. E., Argyropoulou, M., Stamathioudaki, A. M., Michailidou, N., Balafouti, T., Roussos, R., Mavrogianni, C., Mannino, A., & Moschonis, G. (2025). Parental perceptions about energy balance related behaviors and their determinants among children and adolescents living with disability: A qualitative study in Greece. *Healthcare*, 13(7). <https://doi.org/10.3390/healthcare13070758>
- Talens, C., da Quinta, N., Adebayo, F. A., Erkkola, M., Heikkilä, M., Bargiel-Matusiewicz, K., ... & Meinilä, J. (2025). Mobile-and web-based interventions for promoting healthy diets, preventing obesity, and improving health behaviors in children and adolescents: systematic review of randomized controlled trials. *Journal of Medical Internet Research*, 27. <https://doi.org/10.2196/60602>
- Talukdar, R., Ravel, V., Barman, D., Kumar, V., Dutta, S., & Kanungo, S. (2024). Prevalence of undernutrition among migrant, refugee, internally displaced children and children of migrated parents in lower-middle-income countries: a meta-analysis of published studies from last twelve years. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 18(3). <https://doi.org/10.1016/j.dsx.2024.102976>
- Wu, S. (2024). The Influence of Family Nurturing Environment on Children's Emotions and Behaviors. *International Journal of Education and Humanities*, 14, 274–278. <https://doi.org/10.54097/ca4kqt80>
- Yahia, S., Salem, N. A., Tobar, S., Abdelmoneim, Z., Mahmoud, A. M., & Laimon, W. (2025). Shedding light on eating disorders in adolescents with type 1 diabetes: insights and implications. *European Journal of Pediatrics*, 184(4). <https://doi.org/10.1007/s00431-025-06081-0>
- Yasin, N. D., Hassan, S. M., & Ateye, M. D. (2024). Understanding Adolescent Nutritional Status: A Comprehensive Literature Review. *Journal of Food Chemistry & Nanotechnol*, 10(1), 26–31. <https://doi.org/10.17756/jfcn.2024-171>
- Zaborskis, A., Grincaitė, M., Kavaliauskienė, A., & Tesler, R. (2021). Family structure and affluence in adolescent eating behaviour: A cross-national study in forty-one countries. *Public Health Nutrition*, 24(9), 2521–2532. <https://doi.org/10.1017/S1368980020003584>
- Zhang, X., Yan, J., Zhu, W., & Fu, X. (2024). Development and validation of the Chinese family environment influencing physical activity habits scale. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1243658>