

Effect of Bad Habits on the Growth of School Students: A Cross-Sectional Study

Firas A. Jassim¹, Ali Malik Tiryag^{2*}, Sajjad Salim Issa³

^{1,2} Community Health Nursing Department, College of Nursing, University of Basrah, Basrah,
Iraq

³ Fundamentals of Nursing, College of Nursing, University of Basrah, Basrah, Iraq

Email: ali.malik@uobasrah.edu.iq

Abstract. Background: Lifestyle is the primary element influencing health, according to the health field theory. Objectives: To identify the effect of bad habits on school students' growth. Methods: A collection of elementary and middle schools in Basrah served as the study's site. For the study, an adequate sample of 300 male and female students was selected, with 133 male and female students and 167 female students participating. A survey with closed-ended questions was used to collect data. The questionnaire is divided into two pieces. The first focuses on the social and demographic traits of pupils, such as their age, gender, study style, height, weight, and parent's occupation. Results: The majority of the pupils were between the ages of nine and twelve. Women participated at a higher rate than men did. Since the majority of the students' fathers worked and their mothers were housewives, the majority of the participants were middle schoolers. Every student provided a written response to the questions. Conclusion: Bad behaviors and the parents' occupations were significantly correlated, and the students' stage and registration were related

Highlights:

1. Lifestyle significantly influences health, per health field theory.
2. Examine bad habits' impact on students' growth.
3. Bad habits correlate with parents' occupations and students' school stages.

Keywords: Effect, Bad Habits, Growth, School Students

Introduction

The primary determinant of health, as per Lalonde's health field model, is lifestyle [1]. Poor lifestyle choices are contributing to the rise in overweight and obesity among younger individuals. The World Health Organization (WHO) recommends that children be categorized as overweight or obese if their body mass index (BMI) is greater than or equivalent to the 85th and 95th percentiles, respectively. For adults, the corresponding breakpoints are 25 and 30 kg/m² [2].

Being overweight has serious health repercussions for young people [3]. Obese children and adolescents [4–8] have significantly higher rates of endocrine [9], metabolic [10], orthopedic [11–14], and mental [15,16] disorders than their peers with normal

body weight. Approximately 80% of obese teenagers will continue to be obese as adults, according to research [17-21].

Adolescence is a time of many important changes in social, psychological, and physical development. Furthermore, it is a crucial period for the formation of lifestyle and food decisions that may have some detrimental effects on the health of young people. One of the lifestyle factors that is crucial for adolescent growth is a healthy diet [22].

Numerous authors note that the younger generation is ignorant of the importance of maintaining a healthy lifestyle, including what foods they should eat [23,24]. The most frequent nutritional errors teenagers make include eating meals erratically, including skipping breakfast, eating a diet that isn't adequately balanced, and consuming many highly processed foods and sugary drinks [25,26].

Methods

This descriptive cross-sectional study used random sampling to investigate how specific bad behaviors affect the growth patterns of elementary and middle school students in Basrah City schools. A total of 300 samples were obtained from the questionnaire, which was filled out by all registered students between January 13 and January 20, 2022.

A few primary and intermediate schools in Basrah City served as the sites of the current research. A convenient sample of 300 primary and intermediate school pupils, 133 of whom were male and 167 of whom were female, was selected for the study. The male and female students' height and weight were evaluated to assess the impact of their negative behaviors.

The study tool consisted of written questions that were broken up into key sections and given to pupils in elementary and middle schools. Finding socioeconomic and demographic characteristics, such as the parents' sex, age, level of education, height, weight, and employment position, was the first step. Sixteen questionnaire items make up the second section, which evaluates how negative behaviors affect children's growth. The students' height and weight were measured using a scale and tape measure, and they were given a questionnaire with 16 yes/no questions to complete in person.

Result and Discussion

Table 1: Distribution of the Demographic Data

Descriptive Statistics of Demographic Data			
Items	Classes	Frequency	Percent
Sex	Male	133	44 %
	Female	167	56 %
	Total	300	100 %
Age	9 - 12	138	46 %
	12 - 15	132	44 %
	16 - 19	30	10 %
	Total	300	100 %
Education level	Primary	147	49 %
	Secondary	153	51 %
	Total	300	100 %
Mother job	Employee	82	27 %
	Housewife	218	73 %
	Total	300	100 %
Father job	Employee	229	76 %
	Unemployed	71	24 %
	Total	300	100 %

The results of this study showed each primary and intermediate school's sex ratio was displayed. Males received 44% and females 56%, respectively, while the percentage of people aged 9 to 12 and 12 to 15 received a good estimate of 46% and 46%, respectively. He had a 44% share, while the 16–19 age group had a 10% share, the secondary education level had a 51% share, and the primary education level had a 49% share. With 73% of the workforce being housewives and 27% being female, the mother's job had the highest employee rank. On the other hand, the father's job had the greatest unemployment rate, with 76% of the workforce unemployed and 24% unemployed.

Table 2: Assessment of the questions for students' bad habits

Questions	Min	Max	Mean score	Sd.	Evaluation
Q1	1	2	1.90	0.296	Low
Q2	1	2	1.81	0.393	Low
Q3	1	2	1.70	0.458	Low
Q4	1	2	1.85	0.358	Low
Q5	1	2	1.72	0.450	Low
Q6	1	2	1.63	0.483	Low
Q7	1	2	1.73	0.446	Low
Q8	1	2	1.55	0.498	Medium
Q9	1	2	1.45	0.499	Medium
Q10	1	2	1.63	0.483	Medium
Q11	1	2	1.68	0.466	Low
Q12	1	2	1.63	0.483	Low
Q13	1	2	1.83	0.376	Low
Q14	1	2	1.55	0.498	Medium
Q15	1	2	1.76	0.426	Low
Q16	1	2	1.73	0.445	Low

High = (1 – 1.33), medium = (1.34 – 1.67), low = (1.68 – 2) mean score

The assessment of each item at the level of harmful behaviors is displayed in Table (2). For instance, their poor habits were little in the first question and questions 2, 3, 5, 6, and 7, but they were more prevalent in questions 8, 9, and 10. In questions 11, 12, and 13, the degree of undesirable habits was low; in question 14, it was medium; and in questions 15 and 16, it was low.

Table 3: Assessment of students' bad habits

students' bad habits			
Items	F	Percentage	Assessment
1 – 1.33	6	2 %	High
1.34 – 1.67	101	34 %	Medium
1.68 – 2	193	64 %	Low
Total	300	100 %	

The findings presented in Table (3) demonstrated the frequency and proportion of students' negative habits, with 2% of students having high levels of bad habits, 34% having medium levels of bad habits, and 64% having low levels of bad habits.

Table 4: Assessment of Students' BMI, weight, and height

Variables	Min	Max	Mean	Sd.
Weight	25	75	45.9	12.70
Height	1.05	2.50	1.49	0.161
BMI	5.28	37.19	20.48	4.56

Discussion

Our health is greatly influenced by our habits. By learning about the biology of how we form potentially unhealthy patterns and how to break them and embrace new ones, we may be able to modify our lifestyles and take up healthier habits [28-30].

According to the study's findings, 56% of the participants are male and 44% are from elementary, intermediate, and secondary schools. These results agreed with many studies [31-34]. To assess the degree of negative habits, their ages range from 9 to 19 years. Such behaviors seriously harm human life by reducing drive and potential, causing the body to age too quickly, and increasing the risk of developing numerous diseases. These behaviors include using narcotics, alcohol, tobacco, and psychotropic and poisonous chemicals, among other deadly substances.

According to Grygoriy et al. (2020), students' surroundings are not conducive to the activation of healthy lifestyle components; they also aid in the propagation of unhealthy habits, the full effects of which students are unaware. Many students don't need to take care of their health. About bad behaviors [35].

Mirta et al. (2018) concluded that eating vegetables and enrolling in a university's undergraduate health sciences program helped prevent obesity. However, it was discovered that drinking sugary drinks and having sex with a man were risk factors for obesity [36,37]. The frequency and percentage of students' negative habits are displayed in Table 2-3. Two percent of pupils had high levels of negative habits, thirty-four percent had medium levels, and sixty-four percent had low levels.

Food energy, sweets, snacks, soft drinks, body mass index (BMI), and the consumption of sausages and fatty meats were found to be significantly positively connected with systolic blood pressure (SBP) and body adiposity index (BAI) components in both sexes [38–40]. Muslim students drank less alcohol (odds ratio [OR] = 7.88, 95% CI = 4.27, 14.54).

Furthermore, they claimed that the lives and eating habits of Muslim and Christian pupils were improvable. Christian students' increased consumption of alcohol, sodium, saturated fats, and total cholesterol may cause cardiovascular disease to develop early [41-44].

According to Giacomo et al. (2014), medium-income families were more likely to have poor self-reported health status and higher odds of life dissatisfaction, whereas low-income families were more likely to have merely life dissatisfaction. Both harmful behaviors and health consequences showed a consistent pattern of gender disparities [45].

Conclusion

The majority of the pupils were in the 9–10 age range. There are more women than men taking part in our study. Students from secondary schools made up the majority of our participation. Mothers of students were housewives in the majority of the samples. The dads of pupils were employed in the majority of the samples. Scoring: the majority of students provided accurate answers to the questionnaire. For all categories, the overall evaluation of undesirable habits was low.

References

- [1] T. H. Tulchinsky, "Marc Lalonde, the Health Field Concept and Health Promotion," *Case Studies in Public Health*, vol. 523, pp. 523–541, 2018.
- [2] M. De Onis, A. W. Onyango, E. Borghi, A. Siyam, C. Nishida, and J. Siekmann, "Development of a WHO Growth Reference for School-Aged Children and Adolescents," *Bulletin of the World Health Organization*, vol. 85, pp. 660–667, 2007.
- [3] J. Hamulka, L. Wadolowska, M. Hoffmann, J. Kowalkowska, and K. Gutkowska, "Effect of an Education Program on Nutrition Knowledge, Attitudes Toward

- Nutrition, Diet Quality, Lifestyle, and Body Composition in Polish Teenagers," *Nutrients*, vol. 10, p. 1439, 2018.
- [4] A. M. Tiryag and H. H. Atiyah, "Nurses' Knowledge Toward Obesity in Al-Basra City," *Annals of the Romanian Society for Cell Biology*, vol. 25, no. 2, pp. 4667–4673, May 2021.
- [5] F. A. Jassim, Z. T. Maki, and S. S. Issa, "Prevalence of Overweight and Obesity Among Primary School Children in Basrah City Center," *HIV Nursing*, vol. 23, no. 2, pp. 152–157, Jan. 2023.
- [6] S. S. Issa, S. M. Ibrahim, and A. A. Al-Mussawi, "A Study on Abdominal Obesity at Basra University Staff," *Clinical Medicine Research*, vol. 6, no. 3, pp. 69–73, 2017.
- [7] J. Ahmed and S. S. Issa, "Association of Abdominal Obesity with Dietary Habits and Demographic Variables Among Students at Southern Technical University," *University of Thi-Qar Journal of Science*, vol. 10, no. 1, pp. 1–10, Apr. 2023.
- [8] S. S. Issa et al., "A Study About Obesity Among Preschool Children at Al-Zubair District," *HIV Nursing*, vol. 22, no. 2, pp. 3403–3407, Nov. 2022.
- [9] A. M. Tiryag, M. A. Atiyah, and A. S. Khudhair, "Nurses' Knowledge and Attitudes Toward Thyroidectomy: A Cross-Sectional Study," *Health Education and Health Promotion*, vol. 10, no. 3, pp. 459–465, Jul. 2022.
- [10] A. M. Tiryag and H. H. Atiyah, "Nurses' Knowledge Toward Bariatric Surgery at Surgical Wards at Teaching Hospitals in Al-Basra City," *Indian Journal of Forensic Medicine & Toxicology*, vol. 15, no. 3, pp. 5152–5159, Jun. 2021.
- [11] M. A. Akber, A. M. Tiryag, and A. I. Alobaidi, "Nurses' Knowledge Regarding Cast Complications of Limb Fractures: A Cross-Sectional Study," *Central Asian Journal of Medical and Natural Science*, vol. 5, no. 2, pp. 195–200, Apr. 2024.
- [12] A. A. Al-Iedan, M. A. Akber, S. B. Dawood, A. I. Alobaidi, S. S. Issa, H. H. Raaof, A. Z. Khalaf, and A. M. Tiryag, "Bridging the Gap: Enhancing Open Fracture Care in Emergency Nursing," *Academia Open*, vol. 9, no. 1, pp. 10–21070, Jun. 2024.
- [13] M. A. Akber, A. M. Tiryag, and A. I. Alobaidi, "Nurses' Knowledge Concerning Developmental Dysplasia of the Hip: A Cross-Sectional Study," *American Journal of Pediatric Medicine and Health Sciences*, vol. 2, no. 4, 2024.

- [14] H. M. Sabty, S. B. Dawood, and A. M. Tiryag, "Nurses' Knowledge and Practices on Influenza Vaccination for Pregnant Women," *Jurnal Kebidanan Midwiferia*, vol. 10, no. 2, pp. 50–59, Oct. 2024.
- [15] H. H. Abdul-Ra'aoof, M. A. Akber, F. A. Jassim, A. M. Tiryag, S. S. Issa, M. A. Atiyah, J. A. Mezail, and I. S. Hassan, "The Psychological Impact of Violence on Emergency Department and Intensive Care Unit Nurses: A Cross-Sectional Study," *Research Journal of Trauma and Disability Studies*, vol. 3, no. 4, pp. 228–233, Apr. 2024.
- [16] S. M. Ebrahim and S. S. Issa, "Workplace Violence Against Nursing Staff Working in Emergency Departments at General Hospitals in Basra City," *Indian Journal of Public Health Research & Development*, vol. 9, no. 6, pp. 239–244, 2018.
- [17] S. S. Issa, "Prevalence of Urinary Tract Infection in Children from One to Fifteen Years Old in Basra City in 2014," *Journal of Health, Medicine and Nursing*, vol. 36, 2017.
- [18] I. H. Al-Taai, D. F. Al-Fekaiki, and S. S. Issa, "Anti-Carcinogenic Effect of Sulforaphane on Colon Cell Line SW1417," unpublished.
- [19] K. A. Hussein, A. A. Mohammed, S. B. Dawood, and S. S. Issa, "Genetic Identification of Methicillin-Resistant *Staphylococcus aureus* (MRSA) Isolated from Diabetic Foot Ulcers and Evaluating the Inhibition Activity of Reuterin Against This Bacteria," *JPMA. The Journal of the Pakistan Medical Association*, vol. 74, no. 10 (Supple-8), pp. S132–S136, Oct. 2024.
- [20] D. A., V. P. Vijayasamundeeswari, and D. Geetha, "Effectiveness of Planned Teaching Program on Knowledge and Practice Regarding Intravenous Therapy Among Pediatric Nurses," *Journal of Clinical & Diagnostic Research*, vol. 15, no. 9, Sep. 2021.
- [21] S. S. Issa, A. F. Kareem, and S. M. Ibrahim, "Assessment of Patients' Fear from Cancer in Basra Oncology Center," *SCOPUS IJPHRD Citation Score*, vol. 10, no. 6, pp. 641, Jun. 2019.
- [22] E. Błaszczuk-Bebenek, B. Piórecka, M. Płonka, I. Chmiel, P. Jagielski, K. Tuleja, and M. Schlegel-Zawadzka, "Risk Factors and Prevalence of Abdominal Obesity Among Upper-Secondary Students," *Int. J. Environ. Res. Public Health*, vol. 16, no. 1750, 2019.

- [23] Z. Buyuktuncer, A. Ayaz, D. Dedebayraktar, E. Inan-Eroglu, B. Ellahi, and H. T. Besler, "Promoting a Healthy Diet in Young Adults: The Role of Nutrition Labelling," *Nutrients*, vol. 10, no. 1335, 2018.
- [24] T. Lobstein, L. Baur, and R. Uauy, "IASO International Obesity Taskforce Obesity in Children and Young People: A Crisis in Public Health," *Obes. Rev. J. Int. Assoc. Study Obes.*, vol. 5, suppl. 1, pp. 4–104, 2004.
- [25] P. R. M. Rodrigues, R. R. Luiz, L. S. Monteiro, M. G. Ferreira, R. M. V. Gonçalves-Silva, and R. A. Pereira, "Adolescents' Unhealthy Eating Habits Are Associated with Meal Skipping," *Nutr. Burbank Los Angel. Cty. Calif.*, vol. 42, pp. 114–120.e1, 2017.
- [26] A. Gustafson et al., "Direct Effects of the Home, School, and Consumer Food Environments on the Association Between Food Purchasing Patterns and Dietary Intake Among Rural Adolescents in Kentucky and North Carolina," *Int. J. Environ. Res. Public Health*, vol. 14, no. 1255, 2017.
- [27] M. Bruening, R. MacLehose, M. E. Eisenberg, M. S. Nannery, M. Story, and D. Neumark-Sztainer, "Associations Between Sugar-Sweetened Beverage Consumption and Fast Food Restaurant Frequency Among Adolescents and Their Friends," *J. Nutr. Educ. Behav.*, vol. 46, pp. 277–285, 2014.
- [28] I. H. Zainel, H. H. Abdul-Ra'aoof, and A. M. Tiryag, "Mothers' Knowledge and Attitudes Toward Her Children With Neonatal Jaundice: A Cross-Sectional Study," *Health Educ. Health Promot.*, vol. 10, no. 3, pp. 565–570, Jul. 2022.
- [29] M. A. Mohammad, A. Y. Al-Timary, and A. M. Tiryag, "Safety of Tubeless Double Access Percutaneous Nephrolithotomy Compared to Single Access Approach," *Bahrain Med. Bull.*, vol. 45, no. 2, Jun. 2023.
- [30] M. A. Mohammad, F. A. Jassim, and A. M. Tiryag, "Single-Use Flexible Ureteroscope for the Treatment of Renal Stone," *Rev. Latinoam. Hipertens.*, vol. 18, no. 7, Dec. 2023.
- [31] M. Jabbar, M. Mohammad, and A. Tiryag, "Changes in Male Reproductive Hormones in Patients With COVID-19," *Georgian Med. News*, no. 342, pp. 42–46, Sep. 2023.
- [32] M. Mohammad, F. Jassim, and A. Tiryag, "Retrograde Intrarenal Lithotripsy Using Disposable Flexible Ureteroscope," *Georgian Med. News*, no. 348, pp. 44–46, Mar. 2024.

- [33] M. A. Mohammad, H. H. Abdul-Ra'aoof, K. A. Razzaq Manahi, and A. M. Tiryag, "Parents' Knowledge and Attitudes Toward Testicular Torsion," *Bahrain Med. Bull.*, vol. 46, no. 1, Mar. 2024.
- [34] Z. S. Dawood, K. M. Jassim, A. S. Khudhair, and A. M. Tiryag, "Nurses' Knowledge and Attitudes Toward Deep Vein Thrombosis: A Cross-Sectional Study," *Bahrain Med. Bull.*, vol. 45, no. 4, Dec. 2023.
- [35] G. P. Griban, M. S. Myroshnychenko, P. P. Tkachenko, T. Y. Yavorska, N. Y. Kolesnyk, I. V. Novitska, and I. A. Verbovskiy, "Bad Habits and Their Impact on Students' Health," vol. 73, no. 11, pp. 2386–2395, 2020.
- [36] M. Crovetto, M. Valladares, V. Espinoza, F. Mena, G. Oñate, M. Fernandez, and S. Durán-Agüero, "Effect of Healthy and Unhealthy Habits on Obesity: A Multicentric Study," *Nutrition*, vol. 54, pp. 7–11, Feb. 2018.
- [37] K. M. Jassim, A. S. Khudhair, Z. S. Dawood, and A. M. Tiryag, "Nurses' Knowledge About Electrocardiogram Interpretation: A Cross-Sectional Study," *Rawal Med. J.*, vol. 48, no. 4, Oct. 2023.
- [38] E. H. Rahi, Z. M. Al-Hejaj, and A. M. Tiryag, "Nurses' Knowledge of Nonalcoholic Fatty Liver Disease: A Cross-Sectional Study," *Academia Open*, vol. 9, no. 1, Jun. 2024.
- [39] Z. K. Dhahi, S. S. Issa, and L. A. Hameed, "A Study on Pregnant Women's Satisfaction With Primary Health Care Services in Basra," *Int. J. Res. Humanit. Arts Lit.*, vol. 3, no. 1, pp. 7–19, Jan. 2015.
- [40] S. S. Issa, K. J. Madwah, and H. S. Al Mosawi, "Evaluation of Nurses' Knowledge in Management of Premature Babies in Neonatal Units," *Am. J. Nurs.*, vol. 6, no. 5, pp. 291–295, 2018.
- [41] S. M. Ebrahim and S. S. Issa, "Satisfaction With Nursing Care Among Patients Attending Oncology Center in Basra City, Iraq," *J. Environ. Sci. Eng.*, vol. 4, pp. 241–248, 2015.
- [42] H. H. Abdul-Ra'aoof et al., "Moderate Proficiency in Suture Techniques Among Nurses: A Cross-Sectional Study," *J. Nurs. Educ. Pract.*, vol. 14, no. 2, pp. 50–58, 2024.

- [43] N. R. Shiaa, S. S. Issa, and K. H. Subber, "Maternal and Fetal Determinants of Stillbirth Among Women Attending Maternity Departments of Basra Central Hospitals," *Indian J. Public Health Res. Dev.*, vol. 10, no. 9, Sep. 2019.
- [44] S. S. Issa, M. A. Ma'atook, and M. Falih, "Assessment of Nurses' Knowledge About Intravenous Fluid Administration at Basra General Hospital," *Int. J. Pharm. Res.*, vol. 12, no. 2, Apr. 2020.
- [45] G. Lazzeri et al., "Factors Associated With Unhealthy Behaviors and Health Outcomes: A Cross-Sectional Study Among Tuscan Adolescents (Italy)," *Int. J. Equity Health*, vol. 13, no. 1, Dec. 2014.