

Health Behavior of School-Aged Children in Sialkot

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ABSTRACT

Objective: To determine Health Behavior of School-Aged Children in Sialkot.

Study Design: Observational Study

Place and Duration of Study: This study was conducted at the Sialkot Medical College Sialkot during Jan 2019 to Dec 2019.

Materials and Methods: Health Behavior in School aged Children (HBSC) questionnaire was used in this study. Questionnaire survey was carried out in 2 schools of Sialkot. One school was private and one school was public. There were 300 participants and majority of them were 14 and 15 years old. Health behavior was measured with questions concerning adolescent's nutritional habits (breakfast, fresh fruit and vegetable, sweets, fast food and soft drinks with sugar consumption), health-risk behavior (cigarette use, injuries) and physical activity. Statistical data was analyzed using the statistic package SPSS 15.0 for Windows

Results: Two thirds (78.5%) of respondents thought they are in good health and just 4% claimed having excellent health. Results of this work showed, that forty one percent students of school exercise two-three times a week and seven point three percent less than once a month. It was determined that more than half of Sialkot teen agers eat morning food every day on end of the week, but on end of the week less than one third have morning food at home. One third of respondents stated, that eat fresh vegetable and 20.1% of then eat fresh fruit every day. Unhealthy diet products such as sweets, soft-drinks with sugar, fast food adolescents consumed (from 0% till 24.6%) every day or 4-6 times a week. Current study indicates that girls were less habitual to use carbonated drinks and junk foods as compared to opposite sex. They ingest more balanced diet. The results showed that 12.1% of adolescents reported smoking once a week. Statically significant differences were found among respondent gender and injuries. Young Girls were harmed more often than boys in the past twelve month. Teenagers in Sialkot thought they are in excellent health less frequent than teenagers in Lithuania. Study result showed that statistically significant differences were found between breakfast consumption on weekends, nutritional habits, smoking of adolescents in Sialkot.

Conclusion: Adolescents in general experience good health in Sialkot. Physical activity of the majority adolescents did not meet the global WHO recommendations for school-aged children. Children above twelve years of age are used to intake raw vegetables frequently than the raw fruits. Majority of adolescent's unhealthy diet products consumed rarely. Less beneficial foods is being more frequently ingested by males as compared to females. Teenagers in Lithuania enjoy very good health more often than teenagers in Sialkot. Health behavior of teenagers were different in Sialkot.

Key Words: Health habits, Children above 12 years, nutritional habits, health risk behavior

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INTRODUCTION

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Health behavior is one of the most important determinants of health. These are labors being adopted by persons regardless of their own condition of health in order to propagate, shield and perpetuate health. It may either effect positively or negatively. Multiple studies are needed to get data about health of babies and adolescents. These studies should encompass various activities related to health in order to collect data for health education. World health organization has defined health as well being physically, socially, and emotionally¹. Thus, work into children's health requires to consider the positive characteristic of health, as well as danger factors for future ailment and disease. Positive or health promoting behavior needs to be studied, as well as health-damaging or risk behavior.

Certain behavior is initiated in the adolescent years, while some patterns of behavior, such as eating patterns, become established in earlier childhood. Taking a social as opposed to a purely biomedical research perspective means studying the social, environmental and psychological influences or determinants of child and adolescent health and health behavior².

This study was carried out in relation to health, taking food, tobacco and exercises.

Adolescence is defined as the period from the onset of puberty to the termination of physical growth and attainment of final adult height and characteristics that occurs during the second decade of life. It can be known by abrupt physical growth, remarkable physical and psychological changes, and unfolding personal relationships. Children above 12 years and abrupt changes linked with it may have major effects on the health of individuals, and, conversely, variations in health may significantly affect the transitions of adolescence.^{3,4}

MATERIALS AND METHODS

The survey was conducted during Jan 2019 to Dec 2019 in 2 different types (one private and one public) of schools in Sialkot. Class was chosen as a sampling unit. The data was collected from 9th grade primary school students. The participants were 300 (200 boys and 100 girls). One hundred boys and fifty girls were from public school and hundred boys and fifty girls were from private school. Majority of respondents were 14 and 15 years old and just 3% of participant were 16 years old. More than 90% of participants lived in urban areas (cities, towns) and 5.5% in countryside.

Health Behavior in School aged Children (HBSC) questionnaire was used in this study. Health Behavior in School aged Children (HBSC), a world health organization (WHO) coordinated transnational work, collects data on 11-, 13- and 15-year-old boys' and girls' health and comfort, sociocultural context and combination of knowledge, practices, and attitudes that together contribute to motivate the actions we take regarding health, repeated after four years. This study used questions regarding health behaviors of adolescents. Data concerned, combination of knowledge, practices, and attitudes that together contribute to motivate the actions we take regarding health was collected with the help of survey questioning about measured with questions concerning adolescent's the way a person or group eats various food items, Diseases causing habits like cigarette smoking and habits of doing exercise.

Adolescents were asked to fill in the questionnaire in school classroom during ordinary school hours. Written informed consent was obtained from the students after explaining the study objectives. The students were free to withdraw at any time without giving any reason.

Complete secrecy was observed during the process of data collection, entry and analysis. All attempts were made in this research to complete the ethical considerations in accordance with the 'Ethical principles for medical research involving human subjects' of Helsinki Declaration. The response rate was 100 percent.

RESULTS

The incidence of adolescent from City was maximum 204 (68.3%) and Minimum 16(5.5%) from Village as shown in table no 1.

Table No 1: Distribution of adolescent place of residence

Sr. No.	Place of residence	No of cases	age%
1	City	204	68.3%
2	Town	80	26.7%
3	Village	16	5.5%
Total		300	100%

The incidence of adolescent male was 200 (66.66%) and 100 (33.33%) in female as shown in table no 2.

Table No 2: Gender Distribution of Adolescent

Sr. No.	Gender	No of cases	age%
1	Male	200	66.66%
2	Female	100	33.33%
Total		300	100 %

Fresh fruit and vegetable consumption is very important determinant regarding healthy lifestyle. Longitudinal studies suggest that fruit and vegetable consumption tracks into adulthood which points at the importance of establishing healthy eating behavior among children and adolescent⁵.

One third (32.6%) of respondents stated, that eat fresh vegetable and 20.1% of then eat fresh fruit every day. This suggests that, fresh vegetables are more popular than fruits among adolescents. It was determined that no significant differences were found among gender and fresh fruit, vegetable consumption (Table 3). Other studies in Europe confirm opposite results, that vegetable intake was in general lower than fruit intake and boys consumed less fruit and vegetables than girls did⁶.

Table No 3: Correlation between gender and exercise hour a week

Exercise hour a week	Boys % (n)	Girls % (n)	Total % (n)
None	1,5 (3)	0	1 (3)
1/2 hours	12,5 (25)	16 (16)	13,7 (41)
1 hours	38 (76)	40 (40)	38,7(116)
2-3 hours	37 (74)	33 (33)	35,7(107)
4-6 hours	11 (22)	11 (11)	11 (33)
$\chi^2 = 2,466; df = 4; p > 0,05$			

Table No 4: Correlation between gender and breakfast consumption on weekdays and weekends

Breakfast consumption on weekdays	Boys % (n)	Girls % (n)	Total % (n)
Every day	57,9 (110)	46 (46)	53,8 (156)
Less than every day	42,1 (80)	54 (54)	46,2 (134)
Never	0	0	0
$\chi^2 = 3,729; df = 1; p > 0,05$			
Breakfast consumption on weekends	Boys % (n)	Girls % (n)	Total % (n)
Every day	32,2 (64)	20 (20)	28,1 (84)
Less than every day	53,3 (106)	67 (67)	57,9 (173)
Never	14,6 (29)	13 (13)	14 (42)
$\chi^2 = 5,790; df = 2; p < 0,05$			

Table No 5: Correlation between gender and fresh fruit, vegetable consumption

Fresh fruits consumption	Boys % (n)	Girls % (n)	Total % (n)
Every day and 4-6 times a week	18,6 (37)	23 (23)	20,1 (60)
1-3 times a week and never	81,4 (162)	77 (77)	79,9 (239)
$\chi^2 = 1,235; df = 1; p > 0,05$			
Fresh vegetables consumption	Boys % (n)	Girls % (n)	Total % (n)
Every day and 4-6 times a week	34,8 (69)	28 (28)	32,6 (97)
1-3 times a week and never	65,2 (129)	72 (72)	67,4 (201)
$\chi^2 = 0,558; df = 1; p > 0,05$			

Unhealthy diet products such as sweets, soft-drinks with sugar, fast food adolescents consumed (from 0% till 24.6%) every day or 4-6 times a week. It was determined that significant differences were found among gender and soft-drinks with sugar and fast food consumption – girls consumed unhealthy diet products less frequent than boys. No significant differences were found among gender and sweets consumption (Table 4). Other studies confirmed that consumption of sugar-sweetened beverages, including soft drinks, has risen across the globe, accompanied by an increase in the prevalence of overweight and obesity⁷. In summary every second 9th grade student has breakfast every day in Sialkot. Fresh vegetables are more popular than fruits among adolescents. Unhealthy diet products such as sweets, soft-drinks with sugar, fast food are more popular between boys than girls.

Table No 6: Correlation between gender and unhealthy diet products consumption

Sweets consumption	Boys % (n)	Girls % (n)	Total % (n)
Every day and 4-6 times a week	3,5 (7)	0	2,3 (7)
1-3 times a week and never	96,5 (192)	100 (100)	97,7 (292)
$\chi^2 = 6,348; df = 1; p > 0,05$			
Soft- drinks with sugar consumption	Boys % (n)	Girls % (n)	Total % (n)
Every day and 4-6 times a week	24,6* (49)	9 (9)	19,4 (58)
1-3 times a week and never	75,4 (150)	91 (91)	80,6 (241)
$\chi^2 = 3,765; df = 1; p < 0,05$			
Fast food consumption	Boys % (n)	Girls % (n)	Total % (n)
Every day and 4-6 times a week	7* (14)	0	4,7 (14)
1-3 times a week and never	93 (185)	100 (100)	95,3 (285)
$\chi^2 = 1,758; df = 1; p < 0,05$			

Table No 7: Correlation between adolescents self-rated health in Sialkot

Adolescents self-rated health	Sialkot % (n)
Excellent	4 (12)
Good	78,6 (234)
Poor	17,4 (52)
Total % (n)	100 (298)
$\chi^2 = 91,2; df = 3; p < 0,05$	

Study result showed that statistically significant differences were found between breakfast consumption on weekends in Sialkot and Lithuania. On weekends, adolescents in Lithuania eat breakfast every day more frequent than children in Sialkot (Table 6). The obtained results lead to the conclusion that adolescents in Lithuanian are more supervised by their parents than in Sialkot.

Table No 8: Correlation between breakfast consumption of adolescents on weekends in Sialkot

Breakfast consumption on weekends	Sialkot % (n)
Every day	28,1 (84)
Less than every day	57,9 (173)
Never	14 (42)
Total % (n)	100 (298)
$\chi^2 = 529,8; df = 2; p < 0,05$	

Fresh fruits and vegetables consumption reflects not only nutritional habits of adolescents, but also indicates family’s health literacy rates. In this survey were established that adolescents in Lithuanian eat more

fresh fruits and vegetables than teenagers in Sialkot (Table 7).

Table No 9: Correlation between fresh fruit and vegetable consumption of adolescents in Sialkot

Fresh fruits consumption	Sialkot %(n)
Every day and 4-6 times a week	20,1 (60)
1-3 times a week and never	79,9 (239)
Total %(n)	100 (299)
$\chi^2 = 39,9; df = 1; p < 0,05$	
Fresh vegetables consumption	Sialkot %(n)
Every day and 4-6 times a week	32,6 (97)
1-3 times a week and never	67,4 (201)
Total %(n)	100 (298)
$\chi^2 = 11,53; df = 1; p < 0,05$	

DISCUSSION

Physical activity is an important lifestyle factor that is associated with a wide range of health benefits⁸. Participation in regular physical activity in childhood and adolescence has also been reported to positively influence physical activity levels in adulthood⁹.

Study results showed, that 41% of school students exercise 2-3 times a week and 7.3% less than once a month. No significant differences were observed between gender and student physical activity. In the survey information were collected regarding the time used to perform exercise. It was established that 11% of boys and girls spend 4-6 hours a week being physically active (Table 1). Which means, that small part of adolescents meet the global recommendations for school-aged children physical activity (participate in at least 60 minutes, and up to several hours, of at least moderate physical activity on a daily basis)¹⁰. Nutritional habits of adolescents in Sialkot the habitual decisions of individuals or group of people regarding what foods they eat are important relating to the activity undertaken by people for the purpose of maintaining or enhancing their health. Epidemiological research claims that youth breakfast consumption is very important part of young people future health¹¹. Regular breakfast consumption is associated with higher intakes of micronutrients, a better diet that includes fruit and vegetables and less frequent use of soft drinks¹². Despite the potential importance of breakfast consumption, the prevalence rates of breakfast skipping among children and adolescents have increased in the past few decades¹³.

The study result showed that more than half (53.8%) of Sialkot adolescents eat breakfast every day on weekdays, but on weekends less than one third (28.1%) have breakfast at home. It was known, that there were gross variances between breakfast consumption on weekends and gender – girls eat breakfast less frequent than boys (Table 2). It should be noted, that 14% of

respondences reported, never eat breakfast on weekends.

A recently published WHO/HBSC international report confirmed these study findings, determining that girls eat breakfast less frequent than boys¹⁴.

Adolescents in Lithuania consume sweets more frequent than school children in Sialkot, opposite findings were determined in soft-drinks with sugar consumption – adolescents in Lithuania consume soft-drinks with sugar less frequent than teenagers in Sialkot.

* $p < 0.05$ – z test compared adolescents in Sialkot

Fast foods are very popular with adolescents, who are at a stage in life in which they experience increased autonomy, both in terms of availability of meals outside the home and discretionary income¹⁵.

* $p < 0.05$ – z test compared adolescents in Sialkot

Frequent consumption of fast food has adverse effects on nutrition because of excessive content of energy and fat and low nutritional value¹⁶.

Study results showed that significant differences were found between fast food consumption of adolescents in Sialkot. Adolescents in Lithuania consume fast food more frequent than school children in Sialkot. The obtained results lead to the conclusion that adolescents in Lithuanian may have greater accessibility to fast food restaurant than teenagers in Sialkot.

* $p < 0.05$ – z test compared adolescents in Sialkot

Analyzing relationship between adolescent's smoking in Sialkot and Lithuania were found statistically significant differences. It was determined that frequency of smoking every day was significantly higher in Lithuania than in Sialkot.

* $p < 0.05$ – z test compared adolescents in Sialkot.

CONCLUSION

Adolescents in general thought they are good health in Sialkot. Physical activity of the majority of adolescents did not meet the global WHO recommendations for school-aged children. No statistically significant differences were found between the gender and physical activity. Every second 9th grade student had breakfast every day in Sialkot. Fresh vegetables were more popular than fresh fruits among adolescents. Boys and girls consumed fresh fruits and vegetables equally often.

2. Majority of adolescent's unhealthy diet products such as sweets, soft-drinks with sugar, fast food consumed rarely (1-3 times a week or never). Unhealthy diet products were more popular between boys than girls in Sialkot.

3. The percentage rate of teenagers, who smoked daily, were small, girls smoke cigarette less frequent than boys. Adolescents smoking were related to self-rated poor health.

Author's Contribution:

Concept & Design of Study: Usman Nasir
 Drafting: Rabea Nasir, Ghazala Khalid
 Data Analysis: Rashid Siddique, Nimra Ikram, Akmal Khurshid Bhatti
 Revisiting Critically: Usman Nasir, Rabea Nasir
 Final Approval of version: Usman Nasir

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