



KNOWLEDGE AND PERCEPTION OF PHYSICAL ACTIVITIES AND DIETARY HABITS AMONG ADOLESCENTS OF DHARAN

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ABSTRACT

Background: Adolescent is a transitional stage for growth and development in human life. A healthy diet helps protect against malnutrition in all its forms, as well as non-communicable diseases. **Methods:** A cross sectional study was carried to assess knowledge and perception of physical activities and dietary habits among adolescent. Total of 437 students were randomly enrolled in this study from 8th-12th class. **Results:** Majority of the participants was female (54.2%), regarding mode of the transport, 55.6% were used vehicle to drop and pick up from school. Majority were (89.2%) used to do moderate physical activity while 10.8% do vigorous physical activity, feeling shy when practicing exercise outdoors or not suitable climate for exercise. Only 52.0% consume fruits and 78.5% vegetable daily, followed by dairy products 79.7%. Out of total 31.1% were underweight, equal proportion of male and female. **Conclusion:** Knowledge of physical activities and diet was good even a large proportion of adolescent was not practicing vigorous-intensity physical activity and had unhealthy dietary habits.

KEYWORDS : Physical activity, Dietary habits, Adolescents

INTRODUCTION:

Unhealthy diets and physical inactivity are key risk factors for the major non-communicable diseases such as cardiovascular diseases, cancer, and diabetes. Recognizing the opportunity for reducing deaths and diseases worldwide by improving diets and increasing levels of physical activity, the World Health Assembly adopted the WHO Global Strategy on Diet, Physical Activity and Health. Dietary Habits are the habitual decisions of individuals or group of people regarding what foods they eat. Proper dietary choices require the consumption of vitamins, minerals, carbohydrates, proteins and fats. Dietary habits and choices play a significant role in human health. (Springer link). Diet and physical activity influence health both together and separately. Physical activity is a key determinant of energy expenditure, and thus is fundamental to energy balance and weight control. Health promotion program in school and nutrition program can overcome many existing risk factors of chronic disease. The objective of the study is to explore the adolescent knowledge and perception regarding physical activities and healthy dietary habits among adolescent students of Delhi public school of Dharan, Nepal.

METHODOLOGY

In this descriptive cross sectional study, participants were clearly explained about the purpose of study and informed consent was obtained from authority of Delhi public school of Dharan, Sunsari district. Ethical clearance was get from institutional ethical review board of B.P. Koirala Institute of Health Sciences, Dharan. The calculated sample size was 400 considering 95% CI & 90% power, and reference prevalence of 50 % (Al-Haifi et al., 2013). Adolescent who studies in Delhi public school of dharan and willing to give consent for participation in the study were selected randomly to complete the sample size with 10% non-response i.e. 440. Study period was February 2017 to June 2017. Self-administered questionnaire was used during school time consisting of multiple sections with regards to socio-demographic profile, knowledge and perception towards physical activity and dietary habits in English medium. BMI were calculated according to observation of height and weight. Collected data was entered into MS Excel-2010 and converted into SPSS-11.5 further coded and validity was checked, percentage and frequency was calculated and presented in different tables.

RESULTS:

Female were participated more than male (45.8%). Majority of the

students (26.5%) were age of 16 years followed by 14 years (26.1%) and 15 years (21.7%) respectively. More than half (58.6%) of student's parents were businessman and their mode of transport used to drop and pick up from school were vehicle(55.6%) as compared to those who walked or use cycle followed by 19.7% hostel residents.

Table 1: Socio-demographic characteristics of the students:

Characteristics	Categories	No of Students	Percentage (%)
Studying at class standard	8 th	62	14.2
	9 th	100	22.9
	10 th	84	19.2
	11 th	79	18.1
	12 th	112	25.6
Gender	Male	200	45.8
	Female	237	54.2
Age of the students in years	13	42	9.6
	14	114	26.1
	15	95	21.7
	16	116	26.5
	17	53	12.1
	18	15	3.4
	19	2	0.5
Parent's occupation	Business	256	58.6
	Faculty	36	8.2
	Service	145	33.2
Mode of Transport use to come school	Walking	102	23.3
	Cycling	6	1.4
	Vehicle/Bus	243	55.6
Total		437	100.0

Table 2 : Distribution of adolescent according to Body Mass Index (WHO classification for Asia)

Body Mass Index (BMI)	Male	Female	Total
Underweight (<18.50)	68 (50%)	68 (50%)	136 (31.1)
Normal (18.50-24.99)	105 (45.85%)	124 (54.14%)	229 (52.4)
Pre- Obese & Obese (≥25.00)	27 (37.5%)	45 (62.5%)	72 (16.5)
Total	200	237	437

The above table 2 shows distribution of adolescent according to Body Mass Index (BMI). Equal proportion of male and female were underweight among total 31.1% of underweight students. Similarly more female were normal compared to male among total 52.4% normal students. Out of total (16.5%) pre-Obese & obese students, proportion of female were more than compared to male.

Table 3: Perception of students towards regular physical activity and dietary habits

Characteristics	Categories	No of Students	Percentage (%)
Regular Physical activity of parents	Yes	315	72.1
	No	83	19.0
	Don't Know	39	8.9
Does physical activity Reduce Stress	Yes	386	88.3
	No	14	3.2
	Don't Know	37	8.5
Does physical activity improve academic performance	Yes	348	79.6
	No	22	5.0
	Don't Know	67	15.3
Most Important Meal of Day	Breakfast	72	16.5
	Lunch	50	11.4
	Dinner	66	15.1
	All of them	249	57.0
Does your Eating habit healthy	Yes	309	70.7
	Don't Know	128	29.3
Source of information about healthy food	School teacher	63	20.4
	Television/Internet	77	24.9
	Family members	169	54.7
Total	437	100	

The perception of students towards regular physical activity and dietary habits. Regular physical activity/exercise of parents for maintaining good health was observed in 72.1% of adolescents and 88.3% responded that physical activity reduce stress and 79.6% responded that regular physical activity improve academic performance. Majority of the student (89.2%) used to do moderate physical activity while small number of student (10.8%) do vigorous physical activity.

More than half of the students (57.0%) responded that all type of meal are equally important followed by breakfast (16%), lunch (11.4%) and dinner (15.1%) were said that most important meal of day for them. A total of 70.7% of students said that their eating habit are healthy but still 29.3% students don't know about their eating habit. The biggest share of information about healthy food were their family members (54.7%).

As per WHO guideline for Healthy food, Adolescents should consume 5 portions of fruits and vegetables a day. This study shows that only 52.0% of students consume fruits and 78.5% of students

consume vegetable daily. Consumption of milk & dairy products are found in large number of students 79.7% (Table 4). This study shows that the frequency of consumption of sugar intake was high among the students. Consumption of sweet/chocolate (26.5%), soft drink (13.7) and sugar added drinks around 20% daily which is not a healthy diet. Around forty percent of students consume breads, cereals and legumes daily. Consumption of fast food (21.0%) and junk food (19.4%) was observed daily by the students.

Table 4: Dietary habits of the students (n=437)

Parameters	No of the students (%)		
	2-3 days	Everyday	Never
Consumption of fruits	192(44.0)	227(52.0)	18(4.1)
Consumption of vegetables	87(19.9)	343(78.5)	7(1.6)
Consumption of meat/ fish	309(70.7)	50(11.5)	78(17.8)
Consumption of milk & dairy products	79(18.1)	348(79.7)	10(2.3)
Consumption of sweet/ chocolate	303(69.4)	116(26.5)	18(4.1)
Consumption of soft drinks	345(78.9)	60(13.7)	32(7.3)
Consumption of fast food	322(73.7)	92(21.0)	23(5.3)
Consumption of junk food	315(72.1)	85(19.4)	37(8.5)
Consumption of breads ,cereals and Legumes	248(56.8)	174(39.8)	15(3.4)
Sugar added drinks	299(68.4)	87(19.9)	51(11.7)

Table 5: Practices of different physical activities:

Activities	60 minutes per day physical Activities done by students (%)		
	2-3 days	Daily	Never
Skipping	221(50.6)	30(6.8)	186 (42.6)
Walking	84(19.2)	326(74.5)	27(6.2)
Bicycling	218(49.9)	91(20.9)	128 (29.3)
Jogging or running	173(39.6)	183(41.9)	81 (18.5)
Dancing	164(37.5)	74(16.9)	199 (45.5)
Football	169(38.7)	90(20.6)	178(40.7)
Badminton	241(55.2)	54(12.3)	142(32.5)
Basketball	220(50.4)	55(12.6)	162 (37.1)
Gardening	188(43.0)	43(9.8)	206(47.1)
Housework	165(37.8)	167(38.2)	105(24)
Traditional games	190(43.5)	65(14.9)	182(41.6)
Exercise	183(41.9)	94(21.6)	160(36.6)

WHO recommend 60 minutes a day moderate to vigorous-intensity physical activity. This study shows that only 74.5% of student do walking daily. Around fifty percent of students only practice vigorous-intensity physical activity like jogging or running (41.9%), football (38.75), badminton (55.2%), basketball (50.4%) and bicycling (49.9%).

DISCUSSION

This study attempts to explain the knowledge and perception of adolescents' students in secondary school of dharan about physical activity and healthy dietary habits. Further it also assesses the knowledge of the students about disease due to unhealthy diet and physical inactivity. Among the total participant, 200 (45.80%) were and male and 237 (54.20%) were female. The distribution of Body Mass Index among adolescent's students is nearly similar to that reported by Geetha Mani (Tamil Nadu). In this study female (62.50%) were found more pre-obese & obese than male (37.50%) which is similar to the study done by Shah TA et al in Ahmadabad. This may be due to the fact that there were more female students than male students in the study population. Perception towards Dietary habits, the study shows that only 57.0% student perceived all food; breakfast, lunch and dinner as most important meal of the day for them. It was found that 70.7% students know about healthy eating habit but still 29.3% don't know about healthy eating habit. The main source of information about healthy food was their family members. Similarly perception of students towards regular physical activity, 72.1% responded that their parents are doing regular physical activity whereas 19.0% responded that their parents are not doing regular physical activity. It also shows that majority of the student (88.3%) perceived that physical activity reduce stress and 79.6% students perceived that physical activity improve academic performance. Vigorous physical activities like exercises and sports helps in energy consumption, thereby reducing body fat and ultimately prevents from overweight or obesity. But in this study majority of the student were doing moderate physical activity and only 10.8% were doing vigorous physical activity and 6.60% student never do physical activity at school. Similar study done by Acharya B et al. in kaski district of Nepal shows 12.4% adolescents never do any vigorous activities.

This study also attempts to identify the dietary habit of student. It shows that only 41.2% consume fruit, 68.9% consume vegetables, 70.3% consume milk & dairy products every day in a week. Similar poor dietary practices have been reported by Geetha Mani, Shah TA et al. and from seven Arab countries shows high consumption of junk food & carbonated drinks. This study shows no association between BMI and dietary habit.

Perceived barriers to Physical activity and healthy eating habits among adolescents, like information to increase physical activity, not having the time to be physically active, feeling shy when practicing exercise outdoors and climate not suitable for practicing exercise was perceived as most common barrier by maximum number of students. Similarly the barrier perceived by many students regarding healthy diet were that have they have no skills to plan and shop for preparing or cooking healthy foods, have no information regarding healthy diet, have no motivation to eat healthy diet and do not enjoy eating healthy foods. This barrier has also reported by maximum number of adolescents from different Arabian countries.

CONCLUSION

Many factors that influence the physical activity and dietary habit among adolescents are modifiable factors. The result of the study shows that a large proportion of adolescent were not practicing vigorous-intensity physical activity and have unhealthy dietary habits which emphasize the urgent need for suitable health promotion program at school level to promote more regular physical activities with reduction in sedentary activities and improving healthy dietary behaviors. Regarding source of information show that the school teacher was not good about healthy food consumption. Majority of students perceived some barrier for healthy diet and regular physical activity.

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