

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/353914266>

Annals of Community Health

Article · August 2021

CITATIONS
0

READS
73

5 authors, including:



Anirudha Mutalik

KMCH Institute of Health Sciences and Research Coimbatore

18 PUBLICATIONS 52 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Emergency Medicine [View project](#)



Reproductive and Child Health [View project](#)

ORIGINAL ARTICLE

A Cross-sectional Study on Health Awareness among High School Students in Mukkam Municipality

K. Hassan Koya¹, Anirudh V. Mutalik², Bindu Mohandas¹, Durgesh Kumar¹, P. K. Sujesh¹

ABSTRACT

Background: Low awareness in health leads to its health related issues in adolescent age group. Health awareness is important to create positive health well-being in children. Therefore, this study was conducted with the aim to assess the health awareness among adolescent school children. **Materials and Methods:** A cross-sectional study was conducted among 278 high school students using a self-designed structured questionnaire, which assessed health awareness related to information of health in general, exercise, and nutrition; addictions, communicable diseases; non-communicable diseases; maternal and child health; and personal hygiene and first aid. Data were entered into Microsoft Excel and were statistically analyzed using SPSS 16. **Results:** A total of 278 students were studied from two high schools. Out of these, 62.9% were male and 37.1% were female students. About 61.1% of the students had the opinion that Ayurveda is the best stream of medicine. About 42.9% of them thought that it is important to go for health check-up at least once in a year even if they had not any illness. About 81.3% of the students correctly said that skipping of meals is not good for health. About 12.9% of the students responded that malnutrition is both undernutrition as well as over nutrition. About 62.9% of them had the knowledge that Aedes mosquito bite result in dengue fever. About 87.4% said physical inactivity will lead to diabetes, hypertension, and obesity. **Conclusion:** Students were having only basic knowledge regarding various illnesses that emphasize the need of strengthening the health awareness among them.

Key words: Health, awareness, high school, students

INTRODUCTION

Health is a multidimensional concept as it is formed by biological, social, economic, and cultural factors. Health is not merely the absence of disease but is formed and influenced by the access to basic needs such as food, security, safe water supply, housing, and sanitation and health services. Health of the children is an important concern for all societies since it contributes for all societies in their overall development. Health, nutrition, and education are important for the overall development of the child. Education plays an important role in creating health awareness and health status improvements in children.^[1-3]

Health awareness plays a vital role in the wellbeing of the children. For the maintenance of good health, a person may

have adequate quantities of proper nutrition, safe drinking water, and proper shelter with adequate ventilation and lighting, proper clothing, proper work, exercise, and rest and personal hygiene are essential. Therefore, health-related awareness such as proper sanitation and hygiene, cleanliness, nutrition, etc., is necessary to be practice among the school children for the safe, secure, and healthy environment and for the prevention and control of communicable and non-communicable diseases.^[4] Adolescents not only form a unique group rapidly developing both physically and mentally but also are often dependent on their parents or guardians for their health matters. Adolescents are particularly vulnerable to many health issues.^[3,5]

Correspondence: Dr. Bindu Mohandas, Department of Community Medicine, KMCT Medical College, Manassery, Kerala, India. E-mail: bindumohandas86@gmail.com

How to cite: Koya KH, Mutalik AV, Mohandas B, Kumar D, Sujesh PK. A Cross-sectional Study on Health Awareness among High School Students in Mukkam Municipality. Ann Community Health 2021;9(1):53-57.

¹Department of Community Medicine, KMCT Medical College, Manassery, Kerala, India

²Department of Community Medicine, KMCH Institute of Health Sciences and Research, Coimbatore, Tamil Nadu, India

Adolescents in India are often devoid of health care facilities or not utilizing it, and therefore, there is a need to assess the concept of health and awareness of health in adolescents.^[3] Several studies in Indian literature have documented low awareness and health issues in adolescents related to malnutrition, reproductive health, sexual transmitted diseases, and tobacco consumption especially in rural areas.^[5] Therefore, this study was conducted with the aim to assess the health awareness among adolescents school children studying in schools of Mukkam Municipality.

MATERIALS AND METHODS

The present study was a cross-sectional study conducted during June–October 2019 in 278 students conveniently sampled from two high schools coming under the field practice area of the Urban Health Training Center, KMCT Medical College, Manassery, Mukkom.

A self-designed and structured questionnaire was distributed to high school students studying in 8th, 9th, and 10th standards who are between 12 to 16 years of age. Students from 1st to 7th and 11th and 12th standards were excluded from the study. After obtaining approval from the Institutional Ethics Committee and permission from the school principal and class teachers, the students were interviewed during the recess and free period. Informed consent was obtained first, then they were asked to complete questionnaire assessing awareness of health and related matters. The questionnaire assessed health awareness related to information of health in general, exercise, and nutrition; addictions and communicable diseases; non-communicable diseases; maternal and child health; and personal hygiene and first aid.

Data were entered into Microsoft Excel and were statistically analyzed using SPSS 16. Data were expressed in actual number, mean \pm standard deviation (SD), and percentage.

RESULTS

A total of 278 students were studied from two high schools. Out of these, 62.9% were male and 37.1% were female students. The mean age of the study population was 13.55 ± 0.978 SD. The medium of instruction in 92.4% of the students was Malayalam and the rest 7.6% was English. About 45.7% of the students were from 9th standard, 36.3% from 8th standard, and only 18% of the students were from 10th standard.

Awareness on Health in General [Table 1]

About 61.1% of the students had the opinion that Ayurveda is the best stream of medicine. Only 5% of them said that Allopathy is the best stream of medicine. When students were inquired about which is the most complicated disease according to your belief, 36% of them said that cancer was the most complicated disease. About 35.6% had an opinion that Nipah was the most complicated disease followed by 8.3% other diseases among which 4.3% said fever was the most complicated disease, whereas 1.4% said that it was leprosy. About 14.4% of them were not having any idea about a complicated disease.

About 42.9% of them thought that it is important to go for health checkup at least once in a year even if they had not any illness and they did the same also whereas 33.1% of them said that it was important, but they did not go for a health checkup. Only 24.1% said that it is not important to do a checkup even in absence of any disease. However, 64.4% of them said that they will go for a general health checkup if it is provided free of cost in their area. About 48.6% of the students visited a doctor for only serious illnesses, whereas 41.7% of them visited a doctor for even a very mild illness also.

Awareness on Exercise and Nutrition [Table 2]

About 12.9% of the students responded that malnutrition is both undernutrition as well as over nutrition. However,

Table 1: Response of students with regard to awareness of health in general ($n=278$)

Awareness of health in general	Yes		No	
	Number	%	Number	%
Health is physical, mental and social well being	176	63.3	102	36.7
Main methods of disease prevention are by consuming safe food, personal cleanliness, vaccination, and exercise	152	54.7	126	45.3
Rehabilitation is possible by medical measures, surgical measures, and vocational measures	38	13.7	240	86.3
Ability of the body to resist a particular infection is immunity	199	71.6	79	28.4
Screening procedures can find the hidden problems in the society	131	47.1	147	52.9
Hip joint is largest joint in human body	72	25.9	206	74.1
There are 206 bones in human body	164	59	114	41
Toothache is a non-contagious disease	149	53.6	129	46.4
36.9°C is average human body temperature	129	46.5	149	53.6
Alexander Fleming discovered penicillin	40	14.4	238	85.6

Table 2: Response of students with respect to exercise and nutrition ($n=278$)

Inquiry on exercise and nutrition	Yes		No	
	Number	%	Number	%
Vit B1 deficiency causes beri beri	89	32	189	68
Reduction of iron in body causes anemia	80	28.8	198	71.2
Eating fast food will lead to obesity	117	42.1	161	57.9
Skipping meals is good for health	52	18.7	226	81.3
Burger, puffs, and french fries are junk foods	172	61.9	106	38.1
Doing exercise is a healthy habit	237	85.3	41	14.7
Iodine deficiency result in thyroid diseases	68	24.5	218	75.5
Nutrient rich food helps in growth and development of the body	180	64.8	98	35.2

65.8% of them said malnutrition means undernutrition only.

About 45% of the students said that calcium is required for building up of bones and teeth. Only 11.9% of them said that it is required for both building up of bones and teeth as well as for the functioning of heart.

About 81.3% of the students correctly said that skipping of meals is not good for health. However, among the 278 students 51.8% of them skipped any of the meal in a day.

The students responses towards awareness on communicable diseases, non communicables diseases and addiction, maternal and child health, personal hygiene and first aid are shown in Tables 3-6 respectively.

DISCUSSION

Health and well-being is an essential aspect of existence of life. The present study was an attempt to assess the health awareness among adolescent school children. The WHO defines health as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.^[2] In our study, 63.3% students had the correct knowledge about the concept of health.

Majority of the students in our study knew that skipping any meals is not good for health but 51.8% of them skipped at least any one meal in a day. A study done by Mehta *et al.* shown that 76.5% of the students in their study did not skip any meals of the day.^[5] About 85.3% of the participants in our study were aware that doing exercise is good for health. This finding was in accordance with the study finding of Mehta *et al.* where they found that 93.13% of their study participants were aware of the importance of exercise on health.^[5] Awareness on eating fast food will lead to obesity that was 42.1% in our study which was comparatively much higher when compared with the study of Joseph *et al.*, where only 22% of the students said that consumption of fast foods will lead to weight gain.^[6]

Awareness on malaria, leprosy, and water borne diseases among the study participants were 18.3%, 49.6%, and 10.4%, respectively, in our study. Health awareness of high school students study by Goel *et al.* found that the awareness on malaria, leprosy, and water borne diseases were 68.5%, 41.5%, and 33.2%, respectively, which was much high in their students compared with our student population.^[7] Furthermore, the knowledge about the non-communicable diseases especially diabetes (58.3%) and hypertension (65.3%) was also high when compared with that of our study participants which were 28.4% in diabetes and 36% in hypertension. Although the knowledge on diabetes and hypertension as such was low in our study population, 87.4% of them knew that physical inactivity can lead to diabetes, hypertension, and obesity. However, in a study done by Divakaran *et al.* found that the awareness among school children on non-communicable diseases is not satisfactory.^[8] In our study, 54.6% of the students had the knowledge that tobacco use will result in cancer. In a study done by Jayakrishnan *et al.*, only 41.5% of the students were aware of the relationship between oral cancer and tobacco, while 38% reported that they were unaware of any diseases due to tobacco.^[9] However, the study by Mehta *et al.* showed that 85.29% students were aware of ill effects of taking tobacco.^[5]

Only 27% of the study participants knew the minimum number of antenatal visits to be done by a pregnant mother in her course of pregnancy. About 30.6% of them were aware of the medications (iron and folic acid tablets) to be taken regularly during pregnancy. In a study by Goel *et al.*, only 23.7% students knew the correct minimum number of antenatal check-up recommended to a pregnant woman; however, 85.5% knew about the medications advised during pregnancy.^[7]

In our study, only 21.2% and 41.7% of students identified appropriate management of snake bite and dog bite, respectively. The awareness on management of snake bite and dog bite was low in the study done by Goel *et al.*, where it was 42.8% and 27%, respectively.^[7] About 45% of the participants in our study were having the knowledge that washing hands

Table 3: Awareness on communicable diseases

Queries on communicable diseases	Yes		No	
	Number	%	Number	%
Albert Sabin developed Polio vaccine	43	15.5	235	84.5
Tuberculosis is not transmitted by mosquito	117	42.1	161	57.9
Malaria is not an airborne disease	51	18.3	227	81.7
Polio, hepatitis, and cholera are water borne diseases	29	10.4	249	89.6
Head lice result in pediculosis	35	12.6	243	87.4
Pain is not a feature of the lesion in leprosy	138	49.6	140	50.4
Increased appetite is not a feature of patient with tuberculosis	93	33.5	185	66.5
Aedes mosquito causes dengue fever	175	62.9	103	37.1

Table 4: Awareness on non-communicable diseases and addiction

Inquiry on non-communicable diseases	Yes		No	
	Number	%	Number	%
Heart is the main organ in cardiovascular system	99	35.6	177	64.4
Dialysis is done in a person with kidney failure	214	77	64	23
Weight gain is not a sign of cancer	80	28.8	198	71.2
Physical inactivity will lead to diabetes, hypertension, and obesity	243	87.4	35	12.6
Inability to read from a board in a class room is refractory error	68	24.5	210	75.5
Hypertension occurs when BP is more than 140/90 mm of Hg	79	28.4	199	71.6
Diabetes occurs when blood sugar goes above 200 mg	100	36	178	64
Drinking alcohol will not result in tuberculosis	159	57.2	119	42.8
Constant use of mobile phones affects our health, academic performance and personal relationships	64	23	214	77
Tobacco use will result in cancer and hypertension	152	54.6	126	45.4
Thick dark oily liquid that forms when tobacco burns is tar	60	21.6	218	78.4

Table 5: Awareness on maternal and child health

Queries related to maternal and child health	Yes		No	
	Number	%	Number	%
MMR vaccine prevents mumps, measles, and rubella	155	55.8	123	44.2
Minimum 4 antenatal visit should be done by pregnant mother in her course of pregnancy	75	27	203	73
Immunization will help in preventing certain diseases	173	62.3	105	37.7
TT immunization is advised at 10 years of age	128	46.1	150	53.9
Iron and folic acid tablets should be taken regularly during pregnancy	85	30.6	193	69.4

Table 6: Awareness on personal hygiene and first aid

Queries related to personal hygiene and first aid	Yes		No	
	Number	%	Number	%
Washing hands with soap and water after using toilet will prevent diarrheal diseases	125	45	153	55
Boiled water is good for drinking purpose	197	70.9	81	29.1
Wash the area with cold water should be done immediately when you get burns	123	44.2	155	55.8
In snake bite washing the bitten area with soap and water, immobilizing the limb till you reach a medical facility should be done	59	21.2	219	78.8
When you get a dog bite immediately wash that area in soap and running water	116	41.7	162	58.3
While standing for school assembly, your friend fainted; removing him to shade and give him sugar and water should be done immediately	140	50.4	138	49.6
Brushing, bathing, and washing daily will keep you away from disease	171	61.2	107	38.8

with soap and water after using toilet will prevent diarrheal diseases. This was consistent with the findings of Garg *et al.*, in which 59.1% of the students were aware of the prevention of diarrheal diseases by hand washing.^[10]

This was a cross-sectional study and it was carried out in two high schools coming under the field practice area of our urban health training center, so the results cannot be extrapolated to the rest of the state.

CONCLUSION

Our respondents were having only basic knowledge regarding various illnesses, and there is a definite need of strengthening the knowledge of the students regarding these illnesses.

REFERENCES

1. Singh K. A comparative study of health awareness among secondary school students in relation to their gender and locale. *Int J Appl Res* 2016;2:109-12.
2. Park K. Preventive medicine in obstetrics, paediatrics and geriatrics. In: Park's Textbook of Preventive and Social Medicine. 24th ed. Jabalpur: Banarsidas Bhanot Publishers; 2017. p. 630.
3. Suryakantha AH. Adolescent Health. Community Medicine with Recent Advances. 4th ed. New Delhi: Jaypee Brothers Medical Publishers Pvt. Ltd.; 2017. p. 784-5.
4. Kishore V, Lal CJ. Health awareness among primary school students. *GYAN* 2012;8:24-30.
5. Mehta V, Bhat A. Health awareness and behaviour among adolescent students in a rural school: A cross sectional observational study. *Int J Res Med Sci* 2015;3:3499-502.
6. Joseph N, Nelliyanil M, Rai S, Babu R, Kotian SM, Gosh T, *et al.* Fast food consumption pattern and its association with overweight among high school boys in Mangalore city of Southern India. *J Clin Diagn Res* 2015;9:13-7.
7. Goel S, Singh A. Health awareness of high school students. *Indian J Community Med* 2007;32:192-4.
8. Divakaran B, Muttapillymyalil J, Sreedharan J, Shalini K. Lifestyle risk factors of noncommunicable diseases: Awareness among school children. *Indian J Cancer* 2010;47 Suppl 1:9-13.
9. Jayakrishnan R, Geetha S, Binukumar B, Sreekumar, Lekshmi K. Self-reported tobacco use, knowledge on tobacco legislation and tobacco hazards among adolescents in rural Kerala state. *Indian J Dent Res* 2011;22:195-9.
10. Garg A, Taneja DK, Badhan SK, Ingle GK. Effect of a school-based hand washing promotion program on knowledge and hand washing behavior of girl students in a middle school of Delhi. *Indian J Public Health* 2013;57:109-12.