



Role of Schools in Developing Health Awareness among Primary Level Science Students of District Swat

Alam Khan^{a*}, Syed Nasir Hussain^b, Azhar Majeed Qureshi^c

^aPhD Scholar, Department of ECE & Elementary Education, Allama Iqbal Open University, Islamabad.

^bAssistant Professor, Department of ECE & Elementary Education, Allama Iqbal Open University, Islamabad. ^cAssistant Professor, Department of Science Education, Allama Iqbal Open University, Islamabad

*Email: alamphy124@gmail.com

Abstract: The purpose of this descriptive study was to determine the role of schools in developing health awareness among primary level Science students in district Swat in the light of national curriculum. Different Students of grade 5 were selected as sample for the study with the assumption that they completed the whole curriculum at primary level. The random sample collection was done from nine boys' primary schools of district Swat. The data collection tools were a questionnaire and an MCQs test with the purpose to measure the schools' role in creating awareness about students' health. It was found that the schools are successfully fulfilling the role of health awareness through teaching, recreation activities, and observation of world health days seminars as part of school curriculum. However, the results of the MCQs test showed a lower level of knowledge about food choices, awareness regarding hygiene was satisfactory, while awareness about physical activities was also satisfactory. The study suggests that more recreation activities and regular observation of world health days.

Keywords: Health awareness, Primary students, Science curriculum

1. Introduction

Children are the future of a country. If the health of the child is adequately protected and maintained, they certainly become healthy people of a country. Students spent most of their active time in schools instead of homes. They need to be provided with quality health services in the schools. School health is also a significant and integral part of school education (Gowri & Missiriya, 2017). According to another research, students require prevention measures that incorporate goals for whole health promotion, such as healthier food, improved body image, and greater physical activity. School-based activities could be a good strategy to address these issues (Jones et al., 1998). The school curriculum, which is mostly focused on pedagogy, it enables students in gaining knowledge and abilities in the area of a healthy diet. Individual health skills and action competencies are required in both formal and informal curriculum. Health related activities, where students gain age-related knowledge, understandings, skills, and experiences, allowing them to develop skills in action to improve the health and well-being of themselves and others in their community while also improving their learning outcomes (Leger & Young, 2009). Pakistan is an overpopulated country, and the health facilities are inadequate. It is almost impossible for the health department to reach and treat all the people. Therefore, we should concentrate on the preventive measures that

produce awareness among students about health in the primary level Science students. We can develop very healthy habits among children which may have life-long effects on their future lives. We know that “Prevention is better than cure”. This is a very important principle and if we make the students aware of how to take care of their health then it can bring about positive health changes in school children which may have bring positive effect on his/her total development. When we discuss prevention measures it is mainly divided into three main types:

- The aim of primary prevention is to avoid disease or harm before it occurs.
- Secondary prevention tries to minimize the consequences of an existing sickness or injury.
- Tertiary prevention tries to mitigate the long-term effects of a chronic illness or damage (Wallace, 2006).

Here we discussed only primary prevention that is bringing awareness among the students about health because secondary and tertiary prevention are the responsibility of special medical people like doctors, nurses etc. and then schools have a negligible role in it. Awareness about health is further divided into four main areas in which knowledge or awareness is necessary for students and schools need to guide them in these areas. These five areas are

- Knowledge or awareness about food
- Awareness about hygiene
- Awareness about physical exercises
- Knowledge or awareness about vaccine. (Government of Pakistan, 2006)

One of the responsibilities of teachers, health policy makers and health care persons is to ensure the health of schoolchildren. The school children are the main agents to impart health related knowledge to their peers and bring change in their own families. As school children are in the process of figuring out what is right and wrong, health-related issues taught in the classroom have a bigger impact on creating the proper attitude among them (Karkada, 2016).

1.2 Health Awareness

Communities can successfully improve their health status if they are made aware of their health care choices. The most effective and progressive healthcare programs in the world are the full comprehension of public health awareness before the disease strike society in terms of both food controlling and preventive immunizations (Bawden & Lindsay, 2007).

Much medical research have demonstrated that unhealthy lifestyles are to fault for 60% of illnesses (WHO, 2004). In truth, diseases brought on by a sedentary lifestyle can be avoided and managed. The focus of global health progress is shifting from disease treatment to disease prevention and management, with a special emphasis on health communication and education (Yuan et al., 2015).

1.3 School Role in Promoting Health Awareness

School-based programs, reach huge numbers of young people in a reliable and sustainable way. According to research health and learning have a strong, progressive relationship. Students who have good health perform better in school. Furthermore, schools may be an effective means of training young students. According to the researchers, schools should help its students have a better grasp of what health is, how to obtain it, and how it contributes to social and economic development (Sabinsky, 2013).

School children's physical and mental health, as well as their learning process, is influenced by a range of circumstances such as physical and social environment, their parents' quality of life, their own understanding of healthy behaviors, and the availability of health services in the community etc. Children under the age of five are more vulnerable to a wide range of illnesses and infections. Schools have a responsibility to educate their kids as well as promote healthy and sanitary behavior. They must inform their pupils about numerous health dangers and instruct them on how to protect themselves and others from diseases and other forms of illness by adopting healthy habits and behaviors. Students can be educated on health and hygiene issues by incorporating health and hygiene awareness messages into the curriculum and providing teacher training on how to implement the following themes (Government of Pakistan & UNESCO 2010).

1.4 Health awareness in Schools in Pakistan

In Pakistan, education is divided into phases based on the grade or class level of study (Hussain, 2007). In

Pakistan, there are nearly five levels of education, ranging from primary to graduate and doctoral studies. Children's development and educational quality are influenced by a variety of circumstances, including their personal health. The school's health-promoting actions contribute not only to children's physical development and health care, but also to parents' and the community's knowledge of health issues. The link between student health and learning inspired planners and educators in developed countries a century ago to establish health-related initiatives in schools. Developing countries are gradually recognizing the importance of school health interventions for high-quality education and society health and are implementing its numerous components into their educational systems (Alamgir et al., 2014). Today's major health challenges are the result of youth-developed behaviors and attitudes (Kolbe, 1993). Schools play a significant role in health promotion and prevention due to two major factors: (a) schools provide structured opportunities for learning and reflection; and (b) students spend a significant amount of time in schools participating in a variety of activities such as eating, drinking, physical activity, games, and social interactions. Furthermore, schools educate nearly 37 million children (ages 3–18 years) and 1.3 million teachers, accounting for one-fifth of Pakistan's total population. It's difficult to ignore this population. The World Health Organization classifies Pakistan among the top 10 countries with the highest burden for intestinal worm infections. These infections result from poor hygiene and sanitation conditions and tend to have the highest prevalence in school-going-age children (Government of Pakistan 2018 & 2019). A shortage of hygiene facilities in schools has a negative effect on enrolment, performance, attendance and retention, especially for young girls, by failing to meet their menstrual hygiene management needs (UNICEF, 2017).

1.5 Research Objectives

The following were the objectives of the study:

- a) To investigate the role in schools promoting health awareness through curricular and co-curricular activities among primary level Science students.
- b) To measure the effectiveness of health awareness activities of the primary level Science students.

2. Research Methodology

The design of this study was descriptive in nature. The survey method was used for collection of research data. All the 1347 government primary schools and 240702 students at primary schools of district Swat constituted the population of the study. By using random sampling technique, the researcher selected 9 primary schools from district Swat. At the second stage all students of class 5 of the given schools were included, so a total of 408 students as sample were selected for the study.

2.1 Research Instruments

2.1.1 Questionnaire

The questionnaire was developed for primary level Science students to obtain feedback on the role of schools in developing health awareness. Closed form questions on a three-point Likert scale were included in all parts of the questionnaires. Moreover, the validity and reliability of questionnaire was ensured through piloting and with the help of language experts.

2.1.2 MCQs Test

A self-constructed MCQs test was used to measure the health awareness of level school students. It was constructed from primary school curriculum especially from science book as well as from other books related to health awareness. The test was consisted of 35 items after validation

2.2 Data Collection

Data was collected personally with the prior approval of the concerned principals and class teachers. The researcher went to each of the nine schools in the sample and administered the questionnaire and MCQs test in person. After getting the informed consent from participants, the purpose and structure of the questionnaire and MCQs test and potential harms to them, were all explained verbally.

3. Findings

The data collected using the above-mentioned instruments were quantitative in nature so it was descriptively

analyzed in a variety of ways.. To describe the participants’ awareness level in terms of central tendency, descriptive statistics were used (i.e., mean scores, standard deviations, and sample size). Inferential statistics were used for understanding the descriptions of the tests.

3.1 Analysis of the questionnaire data

The researcher prepared a questionnaire using three points Likert scale. This questionnaire was developed to explore the role of schools in developing health awareness at primary level.

Table 1: Student’s perceptions regarding the aspect of teaching in schools about health awareness

S. No	Variables	Statements	Rarely	Sometimes	Very Often	Mean	SD	Mean of Variables
1	Food	My schoolteachers explain the importance of eating different types of food to us.	55	213	140	2.20	0.66	2.29
		My schoolteachers explain the importance of different food categories	109	170	129	2.04	0.76	
		My schoolteachers explain the importance of water for healthy life.	41	101	266	2.55	0.67	
		My schoolteachers advise us not to use unhygienic food.	16	83	308	2.71	0.54	
		My schoolteachers educate us about the importance of a balanced diet.	109	199	100	1.97	0.71	
2	Hygiene	My schoolteachers guide us to keep ourselves clean.	13	92	303	2.71	0.51	2.56
		My schoolteachers explain the importance of washing hands with soap....	28	88	292	2.64	0.60	
		My schoolteachers advise us to keep our home clean	42	183	183	2.34	0.65	
3	Physical Activities	My schoolteachers explain the importance of exercise for better health.	27	185	195	2.40	0.62	2.09
		Our schoolteachers show us different types of physical activates.	82	175	151	2.16	0.73	
		My schoolteachers enlighten us how much exercise are necessary for good health in 24 hours.	169	184	55	1.72	0.68	
4	Vaccination	My schoolteachers explain the importance of vaccines for better health.	203	130	75	1.68	0.76	1.68
		Our schoolteachers tell us when vaccine should be given.	200	131	76	1.69	0.76	

Mean of means =2.21

Table 1 shows responses of students’ perceptions about school role for health awareness through teaching. According to students, the teachers explain food and its types sometimes (M=2.29 SD= 0.63) during teaching. The students perceived that the teachers explain the importance of hygiene and its types very often (M=2.56 SD= 0.63) during school hours through teaching. According to students, the teachers explain the importance of physical

activities and their types sometimes (M=2.09 SD= 0.60) during school hours through teaching. The students perceived that the teachers explain the importance of vaccine and its types sometimes (M=1.68 SD= 0.67) during school hours through teaching.

The overall mean 2.21 of all statements reveals that the students perceived that schoolteachers recognize the importance of health awareness for better health of school students and try to explain it through teaching sometimes during teaching.

Table 2: Students’ Perceptions regarding the effectiveness of School’ recreational activities for health awareness

S. No	Variables	Statements	Rarely	Sometimes	Very Often	Mean	SD	Mean of Variables
1	Food	My teachers arrange of a dialogue among us about better health and food.	229	154	24	1.49	0.61	1.69
		My schoolteachers explain different food groups through charts.	131	184	93	1.90	0.73	
2	Hygiene	Our schoolteachers encourage us to give speeches on the importance of hygiene	96	180	132	2.08	0.74	2.19
		My schoolteachers check our’ nails, hair and clothes.	19	109	280	2.63	0.56	
		My schoolteachers make an arrangement for us to make posters about domestic cleanliness.	133	204	71	1.84	0.69	
		We take an active part in keeping our school clean.	48	226	134	2.21	0.69	
3	Physical Activities	Speech competitions are organized in our school on the importance of taking exercise	134	195	79	1.86	0.71	1.86
4	Vaccination	My school teachers call health teams to our school to explain the importance and usefulness of vaccines.	241	142	25	1.47	0.61	1.47

Mean of means = 1.93

Table 2 shows responses of students’ perception about school role for health awareness through recreational activities. According to students, the teachers explain the importance of food and its types sometimes (M=1.69 SD= 0.57) during school hours through recreational activities. The students perceived that the teachers explain the importance of hygiene and its types sometimes (M=2.19 SD= 0.69) during school hours through recreational activities. According to students, the teachers explain the importance of physical activities and their types sometimes (M=1.86 SD= 0.60) during school hours through recreational activities. The students perceived that the teachers explain the importance of vaccine and its types rarely (M=1.47 SD= 0.61) during school hours through recreational activities.

The overall mean 1.93 of all statements reveals that students believed that schoolteachers recognize the importance of health awareness for better health of school students and try to explain it through recreation activities sometimes during teaching.

Table 3: Students’ Perceptions regarding the effectiveness of School’ activities regarding observation of world health days

S. No	Subcategory	Statements	Rarely	Sometimes	Very Often	Mean	SD	Mean of subcategory
-------	-------------	------------	--------	-----------	------------	------	----	---------------------

1	Food	In our school different functions are arranged by our teachers on World Food Day to bring awareness about the importance of food	156	174	77	1.80	0.73	1.80
2	Hygiene	Hygiene week is organized at our school, so that we can learn about hygiene in practice.	97	154	157	2.14	0.77	2.14
3	Physical Activities	We celebrate World Fitness Day in our school to create awareness about different exercises and physical activities for better health.	154	188	66	1.78	0.70	1.78
4	Vaccination	World Immunization Week is celebrated in our school to bring the awareness about vaccines for better health	248	130	29	1.45	0.62	1.45

Mean of means= 1.79

Table 3 shows responses of students’ perception about school role for health awareness through observation of world health days. According to students, the school observes World Food Day for bringing awareness about food importance for better health sometimes (M=1.80 SD= 0.73) during school session. The students perceived that the school organized hygiene week to bring awareness about hygiene for better health sometimes (M=2.14 SD= 0.77) during school session. According to students, the school observes World Fitness Day for bringing awareness about physical activities for better health sometimes (M=1.78 SD= 0.70) during school session. The students perceived that the school observe World Immunization Week to bring awareness about vaccination for better health rarely (M=1.45 SD= 0.62) during school session.

The overall mean 1.79 of all statements reveals that the students believed that schoolteachers recognize the importance of health awareness for better health of students and try to explain it through observation of world health days during education year sometimes.

3.2 Analysis of the data obtained through Test (Students Health Awareness)

A self-constructed MCQs test was used to measure the health awareness of primary school students. This section consists of the analysis of the MCQs test.

Table 4: Student’s awareness level about food and its indicators

S. No	Sub variable	Statements	Incorrect responses	Correct responses	Percentage of correct responses	% of Sub Variables
1	Food Importance	If children don’t eat proper food, they feel	155	253	62%	48%
	at school				
		Hungry children are more likely to have	141	267	65%	
		Problems at school.				
1	Food Importance	Which of the following foods is necessary for the proper function of brain, heart, kidney and nervous system?	339	69	17%	
		Which of the following foods is necessary for the growth of our body?	209	199	48%	
2	Food Groups	Which of following is necessary for formation	298	110	27%	27%

		of bones, teeth and blood cells				
		Ghee, butter, fats of meat and fish oil are the sources of ...	273	135	33%	
		Leafy green vegetables, fruits, meat, sea food, eggs and milk are the sources of	321	87	21%	
3	Water	Boil water at least for minutes to kill all germs.	340	68	17%	42%
		Drinking of.... ..glasses of water every day is necessary for good health.	206	202	50%	
4	Hygienic Food	Food should beso that flies don't sit on it.	54	354	87%	88%
		Food that has been saved and left over can be dangerous. It should be reheated very well before eating. This statement is	44	364	89%	
		Food sold by hawkers that do not appear clean and safe is	47	361	88%	
5	Balanced Diet	A diet that contains proper amount of all the necessary required nutrients is called.....	209	199	48%	48%

Table 4 shows the knowledge or awareness of primary school students about food for better health. The table indicates that the student's knowledge regarding the importance of food is 48 %. Students know 27 % about the importance of different food groups for better health. Students are 42% aware of the importance of water for better health. Students know 88% about the importance of hygienic food for better health. Students are 48% aware of the importance of a balanced diet for better health.

The overall percentage of all statements indicates that the students know 50 percent about food and its different types for better health.

Table 5: Student's awareness about hygiene and its indicators

S. No	Sub Variable	Statements	Incorrect responses	Correct responses	% of Correct Responses	% of Sub Variables
1	Hygiene Significance	Which of the following is necessary for good health	94	314	77%	80%
		The main cause of HCV is.....	72	336	82%	
2	Personal Hygiene	It is necessary to wash hands by using clean water and.....at key times.	20	388	95%	90%
		Which of the following is necessary for teeth protection?	16	392	96%	
		We shouldwash our hair with clean water and soap or shampoo.	46	362	88%	

		It is important to keep nose and ears clean and not to put finger in them.	50	358	87%	
		Eyes should be cleaned gently with	22	386	94%	
		Nails should be trimmed and should not be bitten.	25	383	93%	
		Hands should be washed forseconds to disinfect.	102	306	75%	
3	Domestic Hygiene	Animal and its urine and feces should be kept..... living areas.	44	364	89%	87%
		We should keep our bed, towel and shoes clean.	63	345	84%	
4	School Hygiene	After you attend the school toilet..... should clean it.	44	364	89%	83%
		It is the responsibility of.....to keep the school clean.	90	318	78%	

Table 5 shows the knowledge or awareness of primary school students about hygiene for better health. The table indicates that the students’ knowledge regarding significance of hygiene is 80 %. Students know 90 % about the importance of personal hygiene for better health. Students are 87% aware of the importance of domestic hygiene for better health. Students know 83% about the importance of school hygiene for better health. The overall percentage of all statements indicates that the students know 87 percent about hygiene and its different types for better health.

Table 6: Student’s awareness about physical activities and its indicators

S. No	Sub Variable	Statements	Incorrect responses	Correct responses	% of correct responses	% of sub variables
1	Significance of Physical Activities	Regular and proper exercise keeps us....	48	360	88%	76%
		For the maintenance of good health, it is.....to play games or take exercise regularly.	63	345	84%	
		Reduced physical activity can contribute to.....	182	226	55%	
2	Types of PA	Playing cricket, football and other games are good	119	289	70%	77%

		example of.....				
		Walking, running, cycling and playing etc. are some good exercises which are.... for life.	58	350	85%	
3	Time required for PA in 24 hours	Children and young people should have at least.... minutes of moderate to vigorous physical activity daily.	200	208	50%	50%

Table 6 shows the knowledge or awareness of primary school students about physical activities for better health. The table indicates that the student's knowledge regarding the significance of physical activities is 76 %. Students know 77% about the different types of physical activities for better health. Students are only 50% aware that how much exercise or physical activities are required for better health in 24 hours. The overall percentage of all statements indicates that the students know 83 percent physical activities and their different types for better health.

Table 7: Student’s awareness about vaccination and its indicators

S. No	Sub Variable	Statements	Incorrect responses	Correct responses	% of correct responses	% of sub variables
1	Significance	Immunization is necessary to protect us from... All children need to be protected by immunization against the.....killer diseases	182	226	55%	42%
2	Time of taking Vaccine	When vaccine should be given?	135	273	66%	66%

Table 7 shows the knowledge or awareness of primary school students about vaccine for better health. The table indicates that the students’ knowledge regarding vaccine significance is 42 %. Students are 66% aware that that when vaccine should be given. The overall percentage of all statements indicates that the students know 50 percent about vaccine and its different types for better health.

3.3 Discussion

According to the study students perceived that their teachers provide them awareness of health and tried to explain it through teaching 74%(M=2.22), recreational activities 64% (M=1.93). The students also described that observation of world health days activities was regular feature during education year 60% (M=1.79).. These findings bolster the suggestions of Karkada & Pai, (2016) that from primary school and onwards, the school curriculum incorporates basic health-related concepts to help youngsters to become more aware of their own health.

The study showed that the students were 50% aware about the food related knowledge for their health which is an area of great concern because better health and food are strongly related. Poor knowledge of food may not guide the students to use balanced food in their daily life which may harm their health badly. The study conducted by Hussain et al., (2015) stated that 73% of the respondents acknowledged the term 'food and nutrition' and were keen on knowing about balanced diet and nutritious elements for their daily intake. The students’ awareness about hygiene and its indicators is quite significant and satisfactory as the results showed that the students were 87% aware about hygiene and its different types for better health. According to the same study of Hussain et al., (2015) 89% of students at elementary schools were interested to get awareness about HIV whose one cause is clean water and hygiene Similarly, elementary school kids (86%) were concerned about the lack of safe and clean drinking

water and needed to be educated about how to obtain safe drinking water. Therefore, schools are doing a remarkable job to bring awareness about hygiene and its types.

The results of the present study showed that the awareness of the students about the significance of physical activities and its types for better health was 83%. These results are quite satisfactory because for good health physical activities are much required as according to the study of Hussain et al., (2015) on elementary schools stated that 56% appeared to be unaware about the benefits of physical activities and exercises.

The results of present study showed that the student's awareness or knowledge about vaccine and its indicators is just 50% which is very much low because the study Hussain et al., (2015) on elementary schools reveals that, 87% of the elementary school students believed they needed preventive measures. Similarly, according to the report of WHO Country Cooperation Strategy for WHO and Pakistan (2011–2017) stated that: The increasing number of child deaths due to vaccine-preventable diseases is a matter of serious concern, as more than 150,000 children die from vaccine-preventable diseases annually in Pakistan. Poverty, low female literacy, poor environmental hygiene and living conditions are the main reasons why complete coverage of vaccination in Pakistan has so far been unachievable.

4. Conclusion

As it is clear from the analysis that the health awareness of primary school students quite significantly depends on the school role. Hence the role of school may be considered very crucial regarding the health awareness of primary school students. The school role was divided into three main areas in which the school can give knowledge about better health to students. These areas are teaching, recreational activities and observation of international days of health during the educational year. As awareness about health is divided into four main areas in which knowledge or awareness is necessary for students and schools need to guide them in these areas.

As far as teaching is concerned in the schools regarding health awareness, most of the students perceived that the school fulfills this responsibility up to great extents . The recreational activities concerned with better health in schools are arranged quite regularly during school time. As far as the observation of international days regarding health is concerned the role of schools is quite low and schools needed to observe these days more regularly.

As for as the role of schools is concerned regarding the knowledge of health in school textbooks the school role was quite good but below the average when it comes to the knowledge out of textbooks for better health. When we look at the role of schools regarding food and its indicators it was quite satisfactory but needs improvement as the students know very less about food and its indicators. The schools are making great efforts to bring awareness about hygiene and its indicators and as a result most of the students are aware about hygiene and its indicators. The schools' role for bringing awareness about physical activities and their indicators was quite low and need to be improved. The awareness of students about physical activities and their indicators was quite good. The school role for bringing awareness about the vaccine and its indicators was very low and the schools needed more work to do in this area. Most of the students do not know about vaccine and their importance for better health.

References

- Bawden, R., & Lindsay, E. (2007). Patient empowerment: a general practice perspective. *British journal of community nursing*, 12(6), S28–S30. <https://doi.org/10.12968/bjcn.2007.12.Sup3.23784>
- Government of Pakistan (2006). National curriculum for General Science iv-viii, 2006 pp.29. Ministry of education Islamabad. [http://www.kptbb.gov.pk/images/download/27.%20General%20Science%20\(IV-VIII\).pdf](http://www.kptbb.gov.pk/images/download/27.%20General%20Science%20(IV-VIII).pdf)
- Government of Pakistan (2006). National Curriculum for English Language Grades I-XII, 2006 pp .29. Ministry of education Islamabad. [http://www.kptbb.gov.pk/images/download/17.%20English%20\(I-XII\).pdf](http://www.kptbb.gov.pk/images/download/17.%20English%20(I-XII).pdf)
- Government of Pakistan (2006). National Curriculum for General Knowledge I-III, 2007 pp 13, 15, 31. Ministry of education Islamabad. [http://moent.gov.pk/userfiles1/file/General%20Knowledge%20I-III%20\(20-09-pdf](http://moent.gov.pk/userfiles1/file/General%20Knowledge%20I-III%20(20-09-pdf)
- Government of Pakistan (2006). National Curriculum for Urdu Grades I-XII, 2006 pp .29. Ministry of education Islamabad. [http://www.kptbb.gov.pk/images/download/59.%20Urdu%20\(I-XII\).pdf](http://www.kptbb.gov.pk/images/download/59.%20Urdu%20(I-XII).pdf)
- Government of Pakistan (2010). Ministry of Education, Curriculum Wing, Islamabad In Collaboration With: United Nations Educational, Scientific and Cultural Organization (UNESCO). <http://unesco.org.pk/education/documents/publications/School%20Health%20Programme>.

- Gowri, M., & Missiriya, S. (2017). Knowledge and practice of schoolteachers on health care of school children. *International Journal of Pharma and Bio Sciences*, 8, 21-32. https://www.researchgate.net/publication/311935994_Knowledge_and_practice_of_school_teachers_on_health_care_of_school_children
- Hussain, I. (2007). Transnational education: concept and methods. *Turkish Online J Distance Education*, 8(1), p. 163-173. <https://dergipark.org.tr/en/download/article-file/156329>
- Hussain, i., Alamgir, M, A. & Shahzad, M. (2015).A study of health education and its needs for elementary school students. *I-manager's Journal on School Educational Technology*, 10(3).<https://files.eric.ed.gov/fulltext/EJ1097400.pdf>
- Jones, Jack T, Furner, & Matthew.,(1998) Health-promoting schools. A healthy setting for living, learning and working. WHO Global School Health Initiative & World Health Organization. <https://apps.who.int/iris/handle/10665/63868>
- Karkada, S., & Pai, M. S. (2016).Concept of Health Promoting School. *Manipal Journal of Nursing and Health Sciences*, 2(2). <https://www.researchgate.net/publication/313004412>
- Kolbe, L, J.(1993).An essential strategy to improve the health and education of Americans. *Preventive Medicine* 22(4), PP 544-560. <https://www.sciencedirect.com/science/article/pii/S0091743583710479>
- Sabinsky, M. (2013). Healthy eating at schools: How does a school food programme affect the quality of dietary intake at lunch among children aged 7-13 years? *National Food Institute, Technical University of Denmark*. <https://backend.orbit.dtu.dk/ws/portalfiles/portal/80486211/Afhandling071113.pdf>
- St Leger, L., & Young, I. M. (2009). Creating the document 'promoting health in schools: from evidence to action. *Global Health Promotion*, 16(4), 69–71. <https://doi.org/10.1177/1757975909348138>
- United Nations Children's Fund (UNICEF)(2017).annual report https://www.unicef.org/publications/files/UNICEF_Annual_Report_2017.pdf
- Wallace RB. (2006). Primary prevention. In: Breslow L, Cengage G, editors. Encyclopedia of Public Health [online]. Available from URL: <http://www.enotes.com/public-health-encyclopedia/primary-prevention>
- World Health Organization ((b.2004. Global Strategy on Diet, Physical Activity and Health, Geneva, World Health Organization.
- Yuan, F., Qian, D., Huang, C. *et al.* (2015). Analysis of awareness of health knowledge among rural residents in Western China. *BMC Public Health* 15. Retrieved from: <https://doi.org/10.1186/s12889-015-1393-2>