

Awareness and knowledge level on eye health among students of government school of Udaypur district, Nepal

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Citation: Karn, R.R., Singh, S., Singh, S.K., (2019). Awareness and knowledge level on eye health among students of government school of Udaypur district, Nepal. *International Journal of Perceptions in Public Health*, 3(4);82-86.

Doi:10.29251/ijpph.dec191

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Abstract

Background: Eye health awareness is important for community people. Eye health education is an integral part of any comprehensive eye care system. The objective of the study was to find out the knowledge level about eye health among school students and effectiveness of eye exhibition program conducted for school students

Methodology: In this, the descriptive cross-sectional study design was used. The data collection tool was a self-administered questionnaire where knowledge regarding common eye problem was assessed. The consent were taken prior to the data collection with the students and approval was taken from the school and the Sagarmatha Choudhary Eye Hospital.

Result: A total of 162 students were participated, there was a significant improvement in knowledge level in pre and post intervention to school students regarding eye diseases. Overall knowledge before intervention was 44% which was low and was increased to 71% after intervention.

Conclusion: Knowledge level increases significantly from pre to post in all cases except knowledge about the injury in the eye. There is a need to conduct awareness program on eye health to school going children.

Keywords: Eye Health Exhibition, School students, Knowledge on Eye Health

Introduction

School health programs are a unique opportunity to provide comprehensive eye health services to potentially more than 700 million children throughout the world (Gilbert, Minto, Morjaria, & Khan, 2016).

Eye health promotion is important for the eye care system. The aim of VISION 2020, Right to sight is "A world in which nobody is needlessly visually impaired,

where those with unavoidable vision loss can achieve their full potential.(Pizzarello et al., 2004)". According to WHO, Globally, it is estimated that approximately 1.3 billion people live with some form of vision impairment. With regards to distance vision, 188.5 million have mild vision impairment, 217 million have moderate to severe vision impairment, and 36 million people are blind(Bourne et al., 2017). With regards to near vision, 826 million people live with a near vision impairment (Fricke et al., 2018). About 90% of the world visually impaired lives in low-income settings. Eighty-two percent of people living with blindness are aged 50 and above. Globally, uncorrected refractive errors are the main cause of moderate and severe visual impairment; cataracts remain the leading cause of blindness in middle- and low-income countries. The number of people visually impaired from infectious diseases has reduced in the last 20 years according to global estimates work, 80% of all visual impairment can be prevented or cured.

The prevalence of blindness in Nepal was 0.84 in 1981(Brilliant et al., 1985) which was decreased to 0.35 in 2011(Thapa et al., 2011) with various efforts in eye care. In the Sagarmatha zone, the prevalence of blindness is still 1.3. According to the Epidemiology of blindness survey, The major causes of blindness in Nepal is cataract (62.2%), other posterior segment diseases 16.5%, glaucoma 5.9% corneal scar other than trachoma 5.2% and uncorrected aphakia 3.4%. Most 66% of blindness is treatable, 16% preventable and 19% are permanent blindness (incurable) (Sangh, 2012). Eye health awareness among the general population is very poor in Nepal, the least of it being in the rural and remote areas. Most people in rural areas have a deep-rooted belief in spiritual and ancient ways of healing diseases including eye problems, and still, regard blindness as an incurable curse from God (NNJS, 2012).

Knowledge regarding eye health among nonmedical university students in Malaya, the awareness of cataract was 88.2%, diabetic retinopathy 83.5%, refractive errors 75.3% and glaucoma 71.5% of the study population (Chew, Reddy, & Karina, 2004). According to the IAPB, In 2010, just over 28% of the world's population was affected by Myopia (short-sightedness). This is predicted to rise to 34% by 2020 and

nearly 50% by 2050.(Chew et al., 2004) Health promotion can reduce the burden of eye diseases and will ultimately limit avoidable causes of blindness and low vision (Hubley & Gilbert, 2006).

Childhood blindness and visual impairment are important and perhaps more devastating and disabling than adult-onset blindness, because of the long span of life remaining to be lived (Jose & Sachdeva, 2009). Refractive errors and more particularly myopia, place a substantial burden on the individual and society. School-age children constitute a particularly vulnerable group where uncorrected refractive errors may have a dramatic impact on learning capability and educational potential.

If we make aware of the school children the message will be delivered to the family also.

Eye health education is an integral part of any comprehensive eye care system. The main goal and objective of the eye health education program of NNJS is to promote overall eye health in the country by creating public awareness for eye health and motivating and guiding people to undertake necessary preventive measures, and to seek eye care early for eye health problems and thereby, promoting the utilization of existing eye care facilities. Preventive and pro-motive eye care is of optimum importance in a country like Nepal with a low per capita income, where the majority of the blinds reside in remote and rural areas with less accessibility to eye care services. EREC-P, SCEH has an eye education department to aware community people various program has been conducted time to time like training to FCHV, Drug retailer, Traditional healer, mothers group, and school teachers and students. School health programs can play an essential role in eye health promotion, prevention, early detection, and treatment of ocular problems in children. Sagarmatha Choudhary Eye Hospital with the support of CBM conducted a school screening program regularly.

In Nepal, there is no much data on awareness regarding eye health among school students. The objective of the study was to find out the knowledge level about eye health among school students and the effectiveness of eye exhibition program conducted for school students.

Data and Methods:

A descriptive study was done where the pre-post evaluation of class 8, 9 and 10 students was done. Altogether 10 questions were developed for the self-administered questionnaire which was pre-tested and modified. The study site was Janjyoti Secondary School, Chuhade-7, Udaipur, Nepal. Data collection tools were semi-structured questionnaires. All the students of class 8, 9 and 10 were involved in the study who came on the day of the exhibition. For validity pre-testing of tool and modification was done. The study duration was from March to June 2017. Approval was taken from the hospital and school. Written consent was taken from students before the self-administered questionnaire. Pre-testing and post-testing data were analyzed and interpreted by using the table, bar graph, and pie chart. Eye screening was done by the team of the Sagarmatha Chaudhary Eye Hospital.

The content on eye health exhibition was developed by discussing with Ophthalmologist, Optometrist, Ophthalmic Assistant and concerned faculties. Different health education methodology, like brainstorming, lecture methods, demonstration, role play, video show, poster presentation, and power point presentation were used for school eye health exhibition. The comprehensive program was done on eye health. The major content of eye health exhibition was prevention and promotion of Eye Health, Healthy vs Unhealthy eye, Eye nutrition, Vitamin-A available diet, Trauma in Eye and its prevention, Primary Eye Care, Early identification and prevention, Facts and myths about eye health, use of spectacles in case of refractive error. Ophthalmic Assistant students were mobilized to organize and conduct the program.

Results

A total of 202 students from class 8,9 and 10 participated in the pretest and intervention was given and finally, 162 participated in the post-test, the response rate was 80%.

Among the respondents 29% of the respondents had pre-knowledge regarding eye injury and post knowledge was increased up to 35% which is not statistically significant.

Similarly, 21% had correct knowledge regarding the sign of Vitamin A deficiency which increases up to 38% in the post-test, 49% said correctly regarding the cause of blindness in Nepal before the intervention and after the intervention, it increases up to 83%. Pre-knowledge 38% regarding cataract treatment which increases to 66%. Pre-knowledge regarding conjunctivitis was 34% and post knowledge 81%. Fifty-nine percent have correct knowledge regarding preventive measures if lime in the eye and 88% after the intervention. Refractive error knowledge 36% before intervention which was increased up to 75% after the intervention. Knowledge regarding seeing the sun with the naked eye before the intervention was 83% and after the intervention, it was increased to 98%. Overall knowledge before the intervention was 44% which was increased to 71% after the intervention. Knowledge level increases significantly from pre to post in all cases except knowledge about the injury in the eye.

Discussion

In this study, overall knowledge before the intervention was 44% which was increased to 71% after intervention which shows the program was effective. Since the program was only for one time the intervention could not increase more. If the program is organized on regularly the effectiveness of the program will be more satisfactory. The study done by NNJS at the country level regarding awareness about common eye problem showed 47% having basic knowledge about the common ocular disease which is comparable to our study. In contrary to this study, the study done by Alghamdi among university students found 70% had knowledge of all the eye diseases (Alghamdi, 2011). This might be due to university students. Knowledge level increases significantly (P Value=0.00) from pre to post in all cases except knowledge about injury in eye (P value=0.1). While analyzing the knowledge as per the class it was found that the pre and post knowledge was high in class nine and ten in comparison to class eight students the reason might be that the class nine and ten students were more matured than class eight students.

Knowledge regarding the sign of Vitamin A deficiency was 21% which increase upto 38% in post test, in the study done by Alghamdi

(Alghamdi, 2011), 97% have knowledge regarding Night blindness among university students reason might be due to higher class students.

In this study 49% said correctly regarding the common cause of blindness (cataract) in Nepal before the intervention and after the intervention it increases to 83%. In the study done by Dandona et al (2001) found 70% had knowledge of cataract which was higher than this study.

Knowledge regarding cataract treatment was 38% in pre test while in post test it increased to 66% similar findings were seen in the study of NNJS(NNJS, 2012) where 32% of respondents answered that cataract is curable. Therefore, we need more extensive eye health awareness and promotion program on regular basis.

There is very less data on awareness among students regarding eye health in Nepal. Overall the program shows effective as the post test knowledge has increased in all cases.

Conclusion: The eye health exhibition program was conducted in Chuhare school where post test knowledge level was increased in compare to pretest in all classes. The awareness program is effective for increasing knowledge among students and in the general community.

Recommendation: There is a need to conduct awareness program for school children

regarding ocular diseases in regular basis to increase the level of knowledge among school children.

Acknowledgement: We would like to acknowledge all the OA third year students 2017 batch for their support in data collection for conducting this research. Similarly, students and teachers of Chuhade School and Sagarmatha Choudhary Eye Hospital, Lahan.

Conflict of interest: Nil

Funding: Nil

Table 1. Pre and post knowledge level regarding eye health among school students

Correct Knowledge on Eye Health	Pre test N=202(%)	Post test N=162(%)	P value
Eye Injury	59(29)	58(35)	0.10
Vitamin A	43(21)	62(38)	0.00*
Cause of Blindness	99(49)	135(83)	0.00*
Cataract treatment	77(38)	107(66)	0.00*
Conjunctivitis	69(34)	131(81)	0.00*
Lime in eye	119(59)	142(88)	0.00*
Refractive Error	73(36)	121(75)	0.00*
Sun seen with naked eye	168(83)	158(98)	0.00*
Overall knowledge	707(44)	914(71)	

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