Relationship between Safety Knowledge and Attitude towards Safety of 3rd Graders

Nadia Nazir*

Abstract

Ample of knowledge leads to positive attitude. Knowledge is an important tool that promotes attitude changes. Knowledge and Attitude of students towards safety is important because action of a person depends on believe. Unsafe actions of students are caused most of injuries and harms. It is important to minimize such harms by knowledge. Present study was conducted to find out the relationship between safety knowledge and attitude of students towards their safety. Study was quantitative in nature and researchers applied correlational research design. Sample of the study consisted of eighty-nine grade three students enrolled in government schools. Data were collected by self -constructed knowledge test for safety having 50 items and attitude scale for safety having 40 items mode of 5-point Likert type options. Content validity of self-constructed instruments was ensured from experts and Cronbach's Alpha reliability was censured in SPSS. Researchers personally collected data from respondents after ensuring ethical consideration prior to collect data. The data were analyzed by descriptive statistics and Pearson coefficient of correlation. The major findings of the study indicate that body safety, road safety, food safety, Internet safety, sports safety and fire safety knowledge strengthen the attitude towards safety. The results indicated that there was statistically significant relationship between knowledge and attitude about safety. On the basis of results, it is recommended that existing safety knowledge and attitude should be strengthening in school students in addition to their conventional education. Further researches may include research with male and female students at elementary and secondary level.

Keywords: Attitude, empowering, knowledge, relationship, safety

^{*}Ph.D Educaiton, Anjuman Himayat-e-Islam, Higher Secondary School, Lahore Email: nadianazir.khan@yahoo.com

Introduction

Safety is the state of being protected from hazards or other undesirable outcomes. It is the condition of being safe. Safety refers to recognize the severity of risk and to the control over it. Safety is necessary within as well as outside the homes, in educational institutions and various types of settings. Safety is an umbrella term that encompasses many facets like body safety, safety on road, safety in food selection, safety during use of internet, safety while playing sports and safety in fire incidents. Safety is promoted through imparted information. People will feel safe then they will pay their duty with concentrate and wholeheartedly. If they are encompassed in dangers, they need to take safety measures as well as avoid the occurrence of accidents to desired outcome. The individuals need to know about methods to promote well-being and safety within as well as outside the homes. Moreover, these methods will also generate the feeling of pleasure among individuals and they are able to discuss well with others, without any vulnerability and doubt. Safety measures and methods learn through knowledge. Knowledge about safety improves safety attitude (Luria, Smith & Chapman, 2000). Knowledge affect on attitudes directly. Emotions influences by attitudes. Knowledge of various types of safety helps the students to keep save from hazards. Knowledge about safety facilitates children to recognize and control hazards in daily life. Adequate knowledge and positive attitude of children towards safety demonstrate the commitment to safety and health (Tunc & Ozyazicioglu, 2018).

The physical and mental development of child can affect by adverse childhood experiences. Millions of boys and girls around the world face exploitation in term of physical and emotional in spite of their geographical location, ethnic, background or socioeconomic class (Baker et al., 2012). The children who victim in any risk are face many physical and mental disorders in the short and long term. Knowledge about body safety is essential for children to develop positive attitude and safety skills in unsafe situations. Children acquire safety skills through knowledge about body safety (Ogunfowokan & Fajemilehin, 2012). Safety knowledge helps to reduce harms for children. Sufficient knowledge of body safety leads to positive attitude, behavior and good practices (Wurtele, 2009). Knowledge about body safety affects on children's feelings, thoughts, and behaviors in a positive way (Kim & Kang, 2017).

Children can be particularly at threat as either passengers or pedestrians. Road accidents are being considered as one of the important public health problem. Children are inexperienced on roads and vulnerable users. They mostly victim of road accidents and face a lot of physical injuries in road accident (Ismail, Khairani, Abdullah., & Mustafa,2019). Road safety refers to an action which is taken to reduce the risk of injuries and death on the road. Knowledge about safety measures is necessary to reduce the risk of injuries and death in road accident. Road accidents injuries are the basic cause of death

among teenagers and second leading cause among children around the world (Mirza & Daud, 2013). Traffic rules helps to prevent road traffic accidents and regulate the vehicles on road (Barboza, 2019). Traffic signs give information to users is careful on road. Knowledge about traffic rules and signs helps children to adopt safety measures while use of the road (Dong, Peek-Asa, Yang, Wang, Chen, Chi & Ramirez, 2011).

Little knowledge about safety on road affects on the ability in identifying dangers while crossing the road. Adequate knowledge about road safety develops positive attitude of children. Positive attitude helps to think about protective measures from road traffic injuries and the avoidance of risk behaviors (Nina & Divera, 2006).

Children are at risk due to lack of knowledge of food safety. Selection of improper food can cause diseases in children. Knowledge about food safety helps in balanced food selection. Proper food selection can decrease risk about health and to put into practice risk-reduction behavior. Knowledge about food safety concerns with the consumers' belief that all foods are not good for health (Majowicz et al.,2015).Knowledge of food safety finds the ways to effectively educate children towards health safety (Sanlier & Konaklioglu, 2012). Knowledge of food safety helps the children to safe from various diseases. Food safety knowledge and positive attitude about eating habits are correlated (Haapala & Probart, 2004). Adequate knowledge contributes to decisions to food selection and better knowledge always associated with improved food-safety behavior (Cheng, Zhang, Ma & Zhan ,2017). Knowledge of food safety associates with attitude, belief and practices. Children need to know about health issues due to taking improper diet (Takeda, Akamatsu, Horiguchi &Marui, 2011).

The use of Internet is increasing day by day. It has many advantages along with disadvantages. The user spends long time on internet daily. Adults and children use internet for entertainment, Communication, information and inter-personal relationships. The result of use of internet for a long time can look in addiction. A person of any age use cell phones, instant messaging, web cam, chat rooms, e-mail, twitter, blogs, discussion boards, web pages, face book and so much more (Rugai & Ekeke,2016). The internet influences on user's life in the form of social isolation, depression, anxiety, disruption of immune system and even death (Council of Communications and Media, 2014). Knowledge about complexity of the Internet is essential for children. Knowledge of save use of internet directly contributes to child's online attitudes and online behaviors (Hofer & Pintrich, 2002). Knowledge related risk and benefits of the internet guides the children to develop positive attitude for protective use of the internet. There is need to adequate knowledge against the internet risks. Knowledge about internet safety helps to adopt the preventive measures while using the internet (Hofer & Pintrich, 1997; Schmmer, 1990; Schmmer, 1993).

Children take part in sports in their school life. Sports keep healthy and active but sports injury considers as one of the major health problems. Sports related injuries can be harmful for the fitness and performance level of the sports' participants (Wang, Lin & Huang,2011). Knowledge of sports safety and the first aids process after injuries is important for early rehabilitation, recovery and achievement of performance level. Knowledge about injury prevention brings behavioral changes and indentifies risk factors of injury. Knowledge about safety measures helps to develop responsible attitude. Responsible attitude helps to perform good behavior (Patil, Thakare & Patil,2017).

Fire is a one of the most costly and destructive cause of damage of property and death of person. Knowledge about fire safety is important for children. Fire incidents consider seriously problem. Fire-related incidents can cause serious injuries and sometimes death. Knowledge about fire safety play a major role in minimization risk or prevention of damage (Secer & Satyen, 2006). Sufficient knowledge contributes to develop attitude and both together influence effectively on behavior. Knowledge of fire safety is necessary for children to recognize severity of situation and take action for reducing the risk of injuries and loss of property and life. There is significant relationship between fire safety knowledge and positive attitude. Knowledge plays a key role to develop positive attitude as well as responsible behavior (Musigapong & Phanprasit, 2013).

Efficient knowledge of safety is important to prevent harms and risks and reduce injuries and deaths. Safety knowledge helps to improve attitude towards safety. Several studies found that safety knowledge was beneficial for students and their attitude (Eslami et al., 2009; Lou & Chen, 2009; Kuo & Weng, 2020; Medeiros et al., 2004; Sharif & Malki, 2010; Yeturu et al., 2016). In a study by Barboza (2019) proved that safety knowledge developed positive attitude towards safety. There were strong relationship between safety knowledge and attitude according to findings of the study. Ellinda-Patra et al. (2020) summarized the benefits of safety knowledge. According to them organized learning material can help to increase knowledge to keep safe in every stage of life. Knowledge encourages the students to show responsible attitude in any situation. Ismail et al. (2019) emphasized that school curriculum should include safety content to increase knowledge towards safety. There is dire need to bring improvement in attitude because attitude influence the behavior. The knowledge plays major role to improve attitude towards safety.

It is necessary for children to know about safety and its different aspects because knowledge about safety supports and strengthens the safety attitude. A positive attitude helps to cope easily with the safety problems in life. So, Knowledge and attitude link with each other significantly. This relationship facilitates children to manage and control the hazards and stay safe. The researcher could not find the studies on safety knowledge and attitude and relationship between them in a Pakistani perspective. However studies on safety in different field of life are found. So, there was need to see the relationship between safety knowledge and attitude of Grade 3 students towards their safety. Nazir

Objectives of the Study

- 1. To determine the relationship between knowledge and attitude of grade 3 students towards their safety.
- 2. To find out the association between safety knowledge and attitude of grade 3 boys regarding their safety.
- 3. To find out the relationship between safety knowledge and attitude of grade 3 girls towards their safety.

Research Questions

- 1. What is the relationship between knowledge and attitude of grade 3 students towards their safety?
- 2. What is the association between safety knowledge and attitude of grade 3 boys regarding their safety?
- 3. What is the relationship between safety knowledge and attitude of grade 3 girls towards their safety?

Conceptual Framework of the Study

This study covers various aspects that were identified in the conceptual framework of the study. There were two variables in the study. The first variable was the knowledge. Further, there were six dimensions of knowledge. These dimensions were body safety, road safety, food safety, Internet safety, sports safety and fire safety. The second variable was the attitude. The attitude was evaluated with the help of six standards namely, body safety, road safety, food safety, Internet safety, sports safety and fire safety and fire safety. The relationship between both variables was identified with six dimensions of safety.

Research Methodology

The quantitative approach was adopted to determine the relationship between safety knowledge and attitude. The research design was correlational in nature. Two instruments were used during the study. Instruments Knowledge Test for Safety (KTS) and Attitude Scale for Safety (ASS) were self-developed to collect data from students on safety knowledge and attitude. The study population consisted of all grade three students. The study was delimited to grade III students of a public sector primary school. Government primary school was selected through convenience sampling. Researcher visited the schools personally. For the purpose of this study, a sample of 89 students of grade III was chosen through convenience sampling. It was not possible to randomly select the participants. A pilot study was carried out to test the strength, validity and reliability of the instruments of the study consisted of 6 parts. Data collection permission had been taken from heads of the schools. Before administered the Instruments, purpose

of the study was told to participants. Descriptive and inferential statistics were carried out in this study. The Pearson correlation was used to correlate the relationship between knowledge and attitude such as t-test used to compare knowledge scores and attitude scores.

Instruments of the Study

The first instrument developed by the researcher was the knowledge test was administered. The test was comprised fifty multiple choice questions: body safety= 10 items, 9 road safety = 9 items, food safety = 9 items, Internet safety= 8 items, sports safety= 6 items and fire safety= 8items. A pilot study was conducted to ensure the reliability and validity of instrument. Table of Specification was developed, and item analysis was performed to ensure that the items in the performance test were correct and not misleading the students. The researcher prepared multiple choice questions based on safety content. Allocation of marks distribution and rules were discussed with participants before the study begins. Multiple choice questions were consisted on four alternative answers, of which one is correct. Instruments had been given to the participants. The second instrument developed by the researcher was the measuring scale to assess safety attitude of students. Medeiros (2004) developed an instrument attitude scale for food safety education to measure attitude towards food safety comprised of 49 items Likerttype rating scale. The other instrument was developed by Mohamed et al. (2021) comprised of 56 items, measure three factors knowledge: test safety, safety attitude and practice. In 201 8, Asadi et al. developed another safety instrument, comprised of 4 Likert-type items for measuring safety.

To ensure the validity and reliability of the safety instrument, a pilot study on the other group of 75 grade III students was conducted. Factor analysis was applied to find out that the statements in the safety instruments were clear. The internal consistency was measured by Cronbach Alpha Value. The internal consistency reliability for the total scale and its subscale was calculated was determined. Tuan et al. (2005) explain discriminative validity that used to measure the degree to which each scales distinguished a dimension which is diverse from other scales. The collected data were examined and analyzed by Pearson's correlation test and independent samples t-test. To estimate the mean differences between two similar groups independent sample t-tests were applied. The descriptive statistics (mean and standard deviation) and Cronbach Alpha values for the scale and subscale and Discriminant validity (in terms of mean correlation with scale) are described. The reliability of the knowledge test had internal consistency with Cronbach alpha=0.82 and for attitude scale safety was 0.81. Knowledge Test for Safety and Attitude Scale for Safety were administered among grade III students enrolled in government primary schools of Kasur. Knowledge Test for Safety was consisted of six sub scales; body safety= 10 items, 9 road safety = 9 items, food safety= 9 items, Internet

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safety= 8 items, sports safety= 6 items and fire safety= 8 items. Attitude Scale for Safety was consisted of six sub scales; body safety= 9 items, road safety = 6 items, food safety=6 items, Internet safety=6 items, sports safety= 6 items and fire safety=7 items based on 5 point Likert type responses mode of never, occasionally, sometimes, most of time and always. Content validity ensured through experts judgment. Ethical considerations were ensured from head teachers, teachers and students. It was ensured to heads of the school that collected data will be used only for research purpose. Collected data were analyzed through applying statistical techniques SPSS.

Data Analysis and Interpretation

The data were analyzed in the form of tables. Relationship between safety knowledge and attitude of students of government schools were calculated. Relationship between boys' and girls' knowledge and attitude regarding body safety, road safety, food safety, Internet safety, sports safety and fire safety were calculated and analyzed.

	Attitude Toward Safety							
Safety Knowledge	Overall	Body	Road	Food	Internet	Sports	Fire	
Overall	.798**	.600**	.525**	.550**	.542**)	.699**	.633**	
Body	.590**	.336**	.244*	.432**	.461**	.568**	.591**	
Road	.687**	.517**	.469**	.457**	.437**	.629**	.549**	
Food	.661**	.491**	.535**	.421**	.368**	.635**	.502**	
Internet	.777**	.621**	.556**	.530**	.498**	.670**	.579**	
Sports	.458**	.376**	.287**	.268*	.436**	.355**	.316**	
Fire	.609**	.508**	.365**	.509**	.412**	.422**	.462**	

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Correlation	between	safety	Knowledge	and safet	y Attitude

*p<.05, **p<.01

Table 1

The analysis in Table 1 reveals that there is relationship between safety knowledge and attitude of grade three boys and girls. The relationship find out through Pearson correlation coefficient. The r-value indicates there is strong positive relationship between the both variables (r=.798, p < .01). The significant relation exists between the safety knowledge and attitude.

The Pearson correlation coefficient was performed to measure the relationship between knowledge of body safety and attitude of grade three students. The r-value reveals there is weak positive relationship between body safety knowledge and attitude (r=.336, p < .01).

The analysis reveals the relationship between road safety knowledge and attitude of grade three students. The r- value depicts there is moderate positive relationship between the two variables (r=.469, p < .01).

The analysis determines the relationship between food safety knowledge and safety attitude of grade three students. The r- value illustrates there is moderate positive relationship between variables (r=.421, p < .01).

The analysis identifies the link between Internet safety knowledge and attitude of grade three students. The r- value indicates there is moderate positive relationship between knowledge and attitude about safety (r=.498, p < .01).

The analysis determines the relationship between sports safety knowledge and attitude of safety of grade three students. The r- value illustrates there is weak positive relationship between knowledge and attitude of safety (r=.355, p < .01).

The analysis measures the link between fire safety knowledge and attitude of grade three students. The r- value indicates there is moderate positive link between the knowledge and attitude about safety (r=.462, p < .01).

Table 2Correlation between boys' safety Knowledge and safety Attitude

	Attitude Toward Safety						
Safety Knowledge	Overall	Body	Road	Food	Internet	Sports	Fire
Overall	$.770^{**}$.541**	.532**	.522**	.509**	.724**	.544**
Body	.482**	080	.255	$.440^{**}$.364*	.554**	.463**
Road	.682**	.511**	.489**	.441**	.420**	.633**	.484**
Food	.659**	.514**	.518**	.447**	.391*	.574**	.429**
Internet	.726**	.569**	.486**	.481**	.541**	.643**	$.448^{**}$
Sports	.680**	.531**	.416**	.350*	$.470^{**}$.672**	.525**
Fire	.658**	.542**	$.507^{**}$.460**	.393*	.584**	.395**

*p<.05, **p<.01

The Table 2 shows there is strong positive relationship between the both variables (r=.770, p < .01). The statistically significant relationship exists between the boys' safety knowledge and attitude.

The analysis measures the relationship between knowledge of body safety and attitude of boys of grade three. The r- value reveals there is very weak positive relationship between body safety knowledge and safety attitude of boys (r=.080, p < .01).

The analysis finds out the relationship between knowledge of road safety and attitude of boys of grade three. The r- value depicts there is moderate positive relationship between the two variables (r=.489, p < .01). The significant relation exists between the knowledge of road safety and attitude of boys of grade three.

The analysis determines the relationship between knowledge of food safety and attitude of boys of grade three. The r- value illustrates there is moderate positive link between the knowledge and attitude about safety (r=.447, p < .01). The significant relation exists between the knowledge of food safety and attitude of boys of grade three.

The analysis measures the relationship between knowledge of Internet safety and attitude of grade three boys. The r- value indicates there is moderate positive relationship between the two variables (r=.541, p < .01). The relation is significant which is exists between Internet safety knowledge and attitude of boys of grade three.

The correlation coefficient was performed to determine the relationship between sports safety knowledge and attitude of grade three boys. The r- value illustrates there is strong positive relationship between knowledge and attitude about safety (r=.672, p < .01). The relationship which is exists between them is statistically significant.

The analysis determines the relationship between knowledge of fire safety and attitude of grade three boys. The r- value indicates there is weak positive link between safety knowledge and safety attitude (r=.395, p < .01).

 Table 3

 Correlation between girls' safety Knowledge and safety Attitude

	Attitude Toward Safety						
Safety Knowledge	Overall	Body	Road	Food	Internet	Sports	Fire
Overall	.852**	.713**	.558**	.595**	.565**	.738**	.772**
Body	.719**	.655**	.247	.422**	.640**	.625**	.762**
Road	.692**	.540**	.463**	.474**	.471**	.647**	.624**
Food	.664**	.491**	.566**	.396**	.316*	.694**	.591**
Internet	.827**	.700**	.636**	.586**	.427**	.709**	.729**
Sport	.252	.323*	.245	.185	.162	.136	.104
Fire	.566**	.475**	.242	.563**	.507**	.335*	.533**

*p<.05, **p<.01

The correlation coefficient was used to find the relationship between girls' safety knowledge and attitude of grade three because it was need to know correlation between variables on the basis of genders. In Table 3 r-value indicates that there is very strong positive relationship between the both variables (r=.852, p < .01). The statically significant relationship exists between the girls' safety knowledge and attitude.

The analysis finds out the relationship between knowledge of body safety and attitude of girls of grade three. The r- value reveals there is strong positive relationship between knowledge and attitude regarding safety (r=.655, p < .01). The relationship is significant between knowledge of body safety and attitude of girls of grade three.

The analysis indicates the link between knowledge of road safety and attitude of girls of grade three. The r- value depicts there is moderate positive relationship between safety knowledge and attitude (r=.463, p < .01). The relation is significant which exists between the knowledge of road safety and attitude of girls of grade three.

The correlation coefficient was performed to determine the relationship between food safety knowledge and attitude of girls of grade three. The r- value illustrates there is weak positive relationship between food safety knowledge and attitude (r=.396, p < .01).

The analysis measures the link between Internet safety knowledge and safety attitude of grade three girls. The r- value indicates there is moderate positive relationship between the two variables (r=.427, p < .01). The relation is significant which exists between the knowledge of Internet safety and attitude of girls of grade three.

The analysis determines the relationship between sports safety knowledge and attitude of grade three girls. The r- value illustrates there is weak positive relationship between sports safety knowledge and attitude (r=.136, p < .01).

The correlation coefficient was used to determine the relationship between knowledge of fire safety and attitude of grade three girls. The r-value indicates there is moderate positive relationship between the two variables (r=.533, p < .01). The relation is significant which exists between the knowledge of fire safety and attitude of girls of grade three.

Discussion

The study designed to assess the association between safety knowledge and attitude of 3rd graders. Data analysis revealed that there is relationship between safety knowledge and attitude of Grade 3 students.

Present study indicates there is strong positive relationship between the both variables safety knowledge and attitude. Study results aligned with Sylvester (1997). According to researcher programs about right and wrong touch were effective for preschool children. These programs were helpful for children to improve safety knowledge and skills. The study also provided evidence of children safety attitude and skills. Zaki, Kheimi, Aljohani and Aldadi (2019) highly recommended to adopt education strategies about that target those vulnerable students to improve their knowledge about physical harassment, and to modulate their attitudes towards this problem whenever happened. Finding of the current research revealed relationship between knowledge of body safety and attitude of grade three students. Özgülük (2010) findings of study indicated that positive relationship exists between information of personal safety and attitudes towards personal safety. Present study confirms the findings of Luria, Smith and Chapman (2000). They provided clear evidence participants willingness to obtain further

training about child exploitation. The present study pointed out a strong positive association between road safety knowledge and attitude of the respondents. Similar findings reported by Mary, Chitra, Arunmozhi & Doris (2016). According to Kumar (2018) there was a positive correlation between the knowledge and attitude of the respondent on the road safety measures and prevention of accidents. Similar finding were reported by Al- Khaldi (2006) in his study. Current study suggested same findings of previous studies.

The study of Kuo and Weng (2021) revealed that attitude, knowledge and practice were linked one another and this link among them statistically significant. Present study has confirmed the association between knowledge and attitude. Young et al. (2015) study results revealed that training and programs of food safety in schools help in behavior's improvement of students. Another study which is conducted in Malaysia indicated that knowledge and practice is link with one another. Food safety knowledge influences on practice directly and indirectly through the attitude of university students (Sharples, Graber, Harrison and Logan, 2008). Another study conducted in schools in Indonesia, study disclosed that knowledge affects the students' attitude and practice individually, but practices did not affect through attitude significantly (Sanlier & Baser, 2020). Present study supports the findings of previous researches According to Ellinda-Patra, Dewanti-Hariyadi, & Nurtama (2020) the association between knowledge of food safety and behavior is strong through attitude. Current study confirmed through finding that there was correlation between food safety knowledge and attitude. Sayuti, Albattat, Ariffin, Nazrin, and Tengku Silahudeen (2020) contributed to the literature through highlight the relationship between internet safety knowledge and attitude. The respondents showed very positive attitudes towards online safety. This result is similar to the findings of Fallows (2004) who indicated that respondents show positive attitude towards online safety. Research also revealed that children' attitudes and beliefs depend on content they taught. Fleming, Greentree, Cocotti-Muller, Elias and Morrison (2006) found that attitudes and beliefs strengthen through knowledge and experiences. Present study findings sustain the results of previous studies on relationship between Internet safety knowledge and attitude. Tynes (2007) presented the conclusion of the study that if students are knowledgeable and have positive attitude towards online safety then they will be protected themselves from online risks (Moreno, Egan, Bare, Young & Cox, 2013). Present findings of the study supports conclusion of previous study.

The results of present study showed correlation between sports safety knowledge and attitude. These confirm the findings of Lee and Cheng (2009); Lin, Wang and Hsiu (2002); Wang, Lin and Huang (2012). The study of Kanouse and Jacoby (1988) stated that the improvement of knowledge leads to positive attitude and changes in behavior. Present study proved it. Musigapong and Phanprasit (2013) pointed out that the appropriate knowledge of fire prevention correlated with responsible attitude. However, Wang and Huang (2006) suggested that the intervention of sports safety education and knowledge help to develop positive attitude of sports injury prevention and management. World Health Organization (2008) indicated that ample of knowledge develop safety attitude concerning change behavior to prevent fire. Mohamad et al. (2021) stated that there was significant relationship between knowledge, attitude and practice. Their finding revealed that knowledge can improve the attitude and developed attitude help in doing practice. Present study has confirmed the findings of Asadi et al. (2018). They indicated through their study results that attitude associated with knowledge. Both help in improve performance. Knowledge play a strong role in shaping the positive attitude and attitude play a key role in better performance. There were significant relationship among knowledge, attitude and performance. Medeiros et al. (2004) in their study conclusion, level of knowledge on safety and health risks among the vocational students was found to be moderate. Effective knowledge increase understanding as well as behavior. Finding from this study recorded association between moderate level of knowledge and high level of attitude. There was significant strong positive correlation between knowledge, attitude and practice. The current study results showed significant association between knowledge and attitude.

Conclusions

There is a relationship between safety knowledge and attitude. Safety knowledge helps to make positive attitude about safety. Body safety knowledge brings positive change in attitude to keep safe in every situation. Students' knowledge of traffic rules and traffic signs helps to sustain positive attitude towards road incidents risk. Sufficient knowledge of food selection helps to develop positive attitude and behavior of eating habits. Knowledge of Internet safety measures facilitate the students to know about positive as well as negative consequence of use of Internet. Students can develop responsible attitude towards safety with the help of Internet knowledge. The sports safety knowledge has affect on attitude and motivate students to keep them physically and mentally healthy. Knowledge about fire safety assists the students to prevent themselves from fire related incidents. Fire safety knowledge facilitates in developing positive attitude for self safety. There is positive association between knowledge and attitude regarding fire safety. In this study, Researchers found strong positive relationship between the safety knowledge and attitude regarding fire safety, road safety, food safety, Internet safety, sports safety and fire safety.

Recommendations

Safety knowledge plays a significant role to improve safety attitude. Insufficient knowledge about safety is a major reason of fear attitude to face any hazard. Students cannot confront danger situation because of their hesitant attitudes. On the basis of the finding, it is recommended that existing safety knowledge and attitude should be strengthening in school students in addition to their conventional education. Administrators, principals and teachers should focus on safety knowledge which will help students to show responsible attitude without any fear. Further researches may include research with male and female students at elementary and secondary level.

References

- Al-Khalidi, Y. M. (2006). Attitude and practice towards road traffic regulations among students of health sciences college in Aseer Region. *Journal of Family Community Med*, 13(3),109-113.
- Asadi, A. F., Shahsavari, S., Khosravizadeh, O., & Nourmohammad, M. (2018). The Relationship between Knowledge, Attitude, and Performance in Breast Cancer with Nutritional Behaviors and Drug Use. *Asian Pacific Journal of Environment* and Cancer,1 (1), 64-71.DOI: 10.31557/APJEC.2018.1.1.27-33
- Baker, C. K., Gleason, K., Naai, R., Mitchell, J., & Trecker, C. (2012). Increasing knowledge of sexual abuse: A study with elementary school children in Hawai. *Research on Social Work Practice*, 23, 167–178.
- Barboza, H. (2019). Knowledge and attitude of teenagers regarding traffic safety rules. Journal of Medical Paediatrics and Oncology, DOI: 10.18231/j.ijmpo.2019.012
- Cheng, Y., Zhang, Y., Ma, J., & Zhan, S. (2017). Food safety knowledge, attitude and self-reported practice of secondary school students in Beijing, China: A crosssectional study. *Journal. Pone*, 49(6),1038-1043.
- Council of communications and Media (2014). Media use by children younger than two years http://pediatricaappubiicatios.org/content/early/2011-1753.fullpdf+html
- Dong, X., Peek-Asa, C., Yang, J., Wang, S., Chen, X., Chi, G., & Ramirez, M. (2011). The association of road safety knowledge and risk behaviour with paediatric road traffic injury in Guangzhou, China. *Injury Prevention* 17(1),15-20.
- Dragutinovic, N., & Twisk, D. A. (2016). The effectiveness of road safety education, a literature review. *BMC Public Health*, 11(5),234-242.

- Ellinda-Patra, M. W., Dewanti-Hariyadi, R., & Nurtama, B. (2020). Modeling of food safety knowledge, attitude, and behavior characteristics. *Food Research*, 4(4), 1045–1052.
- Eslami, H., Marzban, A., Mohajeri, F.A., Rezaei, Z., & Fard, M. R. (2009). Students' Knowledge and Attitude of Hygiene and Food Safety at Shahid Sadoughi University of Medical Sciences in Yazd, Iran. *Journal of Community Health Research*, 4(3), 159-167.
- Fleming, M. J., Greentree, S., Cocotti-Muller, D., Elias, K. A., & Morrison, S. (2006). Safety in cyberspace: Adolescents safety and exposure online. *Youth and Society*, 38(2), 135-144.
- Haapala,I & Probart, C. (2004). Food safety knowledge, perceptions, and behaviors among middle school students. *Journal of Nutrition Education and behavior, 36*,71-76.
- Hofer, B. K., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of Educational Research*, 67, 88–140.
- Hofer, B. K., & Pintrich, P. R. (2002). *Personal epistemology: The psychology of beliefs about knowledge and knowing*. Mahwah, NJ: Erlbaum.
- Ismail, H. N., Khairani, A. Z., Abdullah, S. M. S., & Mustafa, Z. (2019). The Effect of road safety education on knowledge, attitude and perceived behavioral control regarding road safety among Malaysian school students. Universal Journal of Educational Research, 7(12),2597-2603.
- Kanouse, D. E. and Jacoby, I. (1998) When does information change practitioners' behavior?. *International Journal of Technical Assessment in Health Care, 4* (27), 41-47.
- Kim, S. J., & Kang, K. A. (2017). Effects of the child sexual abuse prevention education (CSAPE) program on South Korean fifth-grade students' competence in terms of knowledge and self-protective behaviors. *The Journal of School Nursing*, 33(2), 123–132.
- Kumar, P. S. (2018). A Study to assess the knowledge and attitude regarding road safety measures and prevention of accidents among two wheeler teenage riders in selected schools and pre university colleges in Jaipur with a view to develop an information booklet. *International Journal of Nursing and Research*, 6(4), 2454-2660.

- Kuo, S. C., & Weng, Y. M. (2020). Food safety knowledge, attitude and practice among elementary School children in Southern Taiwan, *Food Control*, 122, doi:10.1016// 107 818
- Lee, C. S., & Cheng, C. Y. (2009). A study of the junior high school students' knowledge, attitude, self-efficacy and behavioral intention toward first aid in Keelung city, Taiwan. J.Sch. Health .54,69-89.
- Lin, P. C., Wang, R. H., & Hsiu, T. L. (2002). Knowledge and attitude and their related factors about accident first aid among students of a medical junior college. J. *Health Sci, 4*,146-160.
- Lou. J. H., & Chen, S. H. (2009). Relationships among sexual knowledge, sexual attitudes, and safe sex behavior among adolescents: A structural equation model. International Journal of Nursing Studies, 46(12), 1595-1603.
- Luria, J. W., Smith, G. A., & Chapman, J. I. (2000). An evaluation of a safety education program for kindergarten and elementary school children, *Journal of Archives Pediatrics and Adolescent Medicine*, 22(2), 227-231.
- Mailinda, E., Lestari, R. F. (2019). The relationship between level of knowledge and attitude towards behavior in choosing healthy snacks of 4th and 5th grade students. *Enferm Clin*, 29(1), 81-84.
- Majowicz, S. E., Diplock, K. J., Leatherdale, S. T., Bredin, C. T., Rebellato, S., Hammond, D., Jones-Bitton, A., & Dubin, J. A.(2015). Food safety knowledge, attitudes and self-reported practices among Ontario high school students, *Journal of Public Health*, 106(8),520-526
- Mary, A. E., Chitra, A., Arunmozhi, R., & Doris, T. S. (2016). A cross sectional study to assess the knowledge, attitude and practice towards road safety rules and regulations among Higher Secondary school students in Chennai. *Indian Journal* of Basic and Applied Medical Research, 5(4), 779-789.
- Medeiros, L. C., Hillers, V. N., Chen, G., Bergimann, V., Kendal, P., & Schoeder, M. (2004). Design and development of food safety knowledge and attitude scales for consumer food safety education. *Journal of the American Dietetic Association*, 104,(11), 1671-1677.
- Mirza, H., & Daud, S. (2013). Study of Knowledge, Attitude and Practice Regarding Road Safety among Peri-Urban School Children. *Pakistan Journal of Medical* and Health Sciences, 7(3),658-661.

- Mohamed, Z., Nazhari, M., Nawi, M., Humzah, N. A., Ghafar, N. A. (2021). Knowledge, Attitude and Practice Towards Safety and Health Risks Among Vocational College Students in Kelantan, Malaysia. *Mal J Med Health Sci, 17*(8), 36-41.
- Moreno, M. A., Egan, K. G., Bare, K., Young, H. N., & Cox, E. D. (2013). Internet safety education for youth. *BMC Public Health*, 13, 543-549.
- Musigapong, P., & Phanprasit, W. (2013). Knowledge, Attitudes and Practices Relating to Fire Prevention among Students in the Elementary Schools of Muang Nakhon Ratchasima, Thailand. *Journal of Educational and Social Research*, *3*(7), 288-297.
- Nina, D., & Divera, T. (2006). The effectiveness of road safety education: A literature review. SWOV Institute for Road Safety Research, Leidschendam.
- Ogunfowokan, A. A., & Fajemilehin, R. B. (2012). Impact of a school-based sexual abuse prevention education program on the knowledge and attitude of high school girls. *The Journal of School Nursing*, 28(6), 459–468.
- Ozguluk, S, B. (2010). Prediction of attitudes towards child abuse by gender, age, income and education. *Journal of Social and Behaviors Science*, *5*, 515-519.
- Patil, P. J., Thakare, G. V., & Patil, S. P. (2017). Assessment of knowledge, attitude and practices in coaches regarding musculoskeletal sport injuries and sports safety measure use among sports participants. *Indian Journal of Clinical Anatomy and Physiology*, 4(1),63-67.
- Rugai, J., & Ekeke, J. H. (2016). A review of digital addiction: A call for safety education. *Journal of Education and e-learning Research*, 3(1),17-22.
- Sanlier, N., & Konaklioglu, E. (2012). Food safety knowledge, attitude and food handling practices of Students. *British Food Journal*, 114(4), 469-480.
- Sanlier, N., & Baser, F. (2020). The relationship among food safety knowledge, attitude, and behavior of young Turkish women. *Journal of the American College of Nutrition*, 39(3), 224–234.
- Sayuti, Y. A., Albattat, A., Ariffin, A. Z., Nazrin, N. S., & Tengku Silahudeen, T. N. A. (2020). Food safety knowledge, attitude and practices among management and science university students, Shah Alam. *Management Science Letters*, 10(4), 929–936.
- Schmmer, M. (1990). Effects of beliefs about the nature of knowledge on comprehension. *Journal of Educational Psychology*, 82, 498–504.
- Schmmer, M. (1993). Epistemological development and academic performance among secondary students. *Journal of Educational Psychology*, 85, 1–6.

- Secer, L., & Satyen, L. (2006). Fire safety training: Its importance in enhancing fire safety knowledge and response to fire. *Australian Journal of Emergency Management*, 21(4),48-53.
- Sharif L, A. l., & Malki, T. (2010). Knowledge, attitude and practice of Taif University students on food poisoning. *Food Control*, 21(1), 55-60.
- Sharples, M., Graber, R., Harrison, C., & Logan, K. (2008). E-safety and web 2.0. Research report, Becta.
- Sylvester, L. (1997). Talking about touching: Personal safety curricula preschool to Grade 3: Curriculum evaluation summary, 1996 editions. Seattle, WA: Committee for Children.
- Takeda, S., Akamatsu, R., Horiguchi, I., & Marui, E. (2011). Relationship among foodsafety knowledge, beliefs, and risk-reduction behavior in university students in Japan. *Journal of Nutrition Education and behavior*, 43(6),449-54.
- Tunc, G. C & Ozyazicioglu, N. (2018). Preventing child sexual abuse: body safety training for young children in Turkey. *Journal of Child Sexual Abuse*, 27(87),1-18.
- Tynes, B. M. (2007). Internet safety gone wild? Sacrificing the educational and psychosocial benefits of online social environments. *Journal of Adolescent Research*, 22 (6), 34-42.
- Wang, K. M., & Huang, Y. C. (2006). Knowledge and needs for prevention and management of sports injury among high /vocational school students in Taiwan. *Int. J. Sport Health Sci*, 4, 286-297.
- Wang, K. M., Lin, Y. H., & Huang, Y. C. (2012). The knowledge and attitude of sports injury prevention and management of senior high school in Taiwan. J. STAGE, 36,733-745.
- World Health Organization. Advocacy, Communication and Social Mobilization for TB control. (2008). A guide to developing knowledge, attitude and practice surveys. http://whqlibdoc.who.int/publications/2008/9789241596176 eng.pdf
- Wurtele, S. K. (2009). Preventing sexual abuse of children in the twenty-first century: Preparing for challenges and opportunities. *Journal of Child Sexual Abuse*, 18(1), 1–18.
- Yeturu, S. K., Annapurani, R., Janakiram, C., Joseph, J., & Pentapati, K. C. (2016). Assessment of Knowledge and Attitudes of Fire Safety – An Institution Based Study. J. Pharm. Sci, 8(11), 1281-1284.

- Young, I., Waddell, L., Harding, S., Greig, J., Mascarenhas, M., Sivaramalingam, B., et al. (2015). A systematic review and meta-analysis of the effectiveness of food safety education interventions for consumers in developed countries. *BMC Public Health*, 15 (6),822-831.
- Zaki, M., Kheimi, R. M., Aljohani, A, M., & Aldadi, S.O. (2019). Knowledge, awareness and attitude about sexual harassment among Saudi preparatory and secondary school students in Western region, kingdom of Saudi Arabia. *Journal of Medical care*, 4(19), 41-43.