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Shaping Behaviour as Proactive Approach for Awareness of Safety and Wellbeing Through Secondary Grade Curriculum

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Abstract

The Shyness, reluctance, hesitation, and unawareness hamper safety and may cause causalities. Usually children between the age of 13 to 15 get involved in road accidents due to carelessness. Safety awareness reduces the chances of accidents and injury happenings. A sample of 200 students and 99 teachers from secondary level public schools was taken. In order to develop awareness among secondary school students, action-oriented safety and wellbeing (SW) instructional methods through hands-on-activities, experiential learning, labs, weather safety precaution, fire, electricity safety, and ways to motivate students to protect themselves and conserve their wellbeing were used. By using valid and reliable survey questionnaire and observation protocol, perceptions about SW were assessed after interventions and prominent awareness and behavioural changes were declared such as reduced number of accidents and injuries. The results are useful for the school administration and teachers to reflect on the inclusion of safety and wellbeing activities.

Keywords: awareness, proactive approach, safety, wellbeing

INTRODUCTION

Shyness, reluctance, hesitation, and unawareness hamper safety and may cause causalities. Usually, children between the age of 13 to 15 are involved in road accidents due to carelessness. Safety awareness reduces the chances of accidents and injury. Work instructions, precautions, preventions, SOPs, safety drills, and PPEs are basically practiced to provoke awareness of safety as proactive strategies to ensure wellbeing in industries, but secondary grade students should also be aware for their safety. Proactive thinking and behaviour, preventions, precautions, and care are important to keep one secure and safe (Baskerville et al., 2014; Clarke, 2013). If the learners between the age of 13-15 years are informed and mentored about the wellbeing and proactive safety, they would react in a responsible way (Broadbent & Papadopoulos, 2014). In this situation, it is more important to make the students aware of SW so that they can be socially responsible and can lead every day activities in a safe and friendly environment. However, it has been noticed that students are not informed about SW issues.

Many students encounter accidents (Cooray et al., 2007) due to land sliding, smog, fog, and wind storm and are seriously injured (Goldblatt, 2009). They display a careless attitude in the laboratory by mishandling materials and chemicals. Nonetheless, they should be aware of the fact that safety threats lurk around them frequently. Therefore, students of secondary classes must be knowledgeable about their safety and wellbeing (SW) issues through shaping their behaviour in a way that they respond in a safe and secure manner as a proactive approach for everyone's safety.

Students can be made aware to react in a safe and secure way by showing clips on the TV, accident videos, and sharing safety instructions. This research attempts to study whether and to what extent formal curriculum incorporated with experiential awareness has been effective for the understanding of SW of the students. Road accidents are common with the school students between the ages of 13 to 15 years. In view of these issues, the objective of the study was to assess the students' awareness of SW issues and strategies to reduce injuries and fatalities. To explore the aims of the study, the following research questions were developed:

1. How can the number of accidents and injuries of secondary level students be reduced?

2. How can awareness for the wellbeing be raised of secondary level students?

LITERATURE REVIEW

Adults love to break rules and youngsters are not guided and advised regarding the importance of rules, social norms, ethical conduct, and behaviour. If we do not implement awareness in the students especially at secondary level, they would be ambiguous about their career choice and will not respond positively in the society. If students are knowledgeable about the SW issues, there would be realistic changes in the society. Knowledge in curriculum must be conveyed in a practical manner to learners and they should be given examples from everyday life. Learning can also be further enhanced by electronic media by airing safety programs (Wang et., 2018).

Adolescence Period

Secondary level education is the first step towards categorization of syllabus and courses. Moreover, teens between 13-15 years deal with emotional, physical, cognitive, and social development issues with no sense of right and wrong. Adolescence is a time of blooming developing, and looking towards the future. Moreover, children in this phase are moody, sensitive, and self-conscious. Development is a lifelong process, but this age is the foundation of behaviour shaping and awareness, which is approached with a great deal of apprehension. Students in early adolescence experience tremendous intellectual growth and begin to understand their own actions in a moral context and as part of the world they live in. The new social and moral convictions could lead to the development of wellbeing, social, and environmental responsibilities. In this age, the teenagers develop physically and biologically and are fearless. It is the time of concrete and abstract thinking, reasoning, making connections between today and tomorrow, developing intellectual curiosity, experimenting, and increasing intimacy and independence. It is the time to make secondary level students aware of their SW so as to react in a social and responsible way (Schonert-Reichl et al., 2015).

Safety and wellbeing literacy are fundamental that requires individuals to have a more active role in decision making and managing in the society (Rheault et al., 2021). Safety awareness information is essential as it enhances students' wellbeing. Wellbeing awareness can protect our lives by helping us better manage such problems and unexpected situations that may happen (Mariotti & Hefti, 2015).

Wellbeing in Schools

Secondary school students' safety awareness is a broad and wide concept which requires students' attention in terms of potentially dangerous situations in the school environment, on the roads, and in drastic weather conditions. By identifying risks, students can practice appropriate and suitable behaviour and follow SOPs for minimizing physical harm in dangerous situations. Awareness of personal safety is an essential skill, which can provoke awareness about prevention and causes of injuries and accidents, so that students ride bikes on the correct side of the road and wear bright reflective colours to be more visible (Richmond et al, 2014). Safety awareness is necessary for students to adopt the right measures and strategies to promote their safety and wellbeing by being healthy physically and psychologically (Díaz-Vicario & Sallán, 2017). Keeping schools safe allows students to look forward to an encouraging environment to enhance social and creative learning. If the basic safety needs cannot be met then students are at the risk of not feeling comfortable, which would impair

their creativity (Cuellar & Coyle, 2020). Inculcation of safety and wellbeing awareness among students lead them to have a satisfactory life free from drugs as well as accidents (Crawford, 2006).

It is the responsibility of class teachers to make students cognitively ready and encourage them to discuss and participate in decision making exercises regarding basic parameters for safe behaviour. Safe work and wellbeing with adequate safeguards make students focus on their wellness rather than on danger or hazard (Falavigna et al., 2012). Wellbeing and safety are important because it protects teenagers (Hoskins, 2014). Precautions, preventions, SOPs, and safety equipment ensure wellbeing in a proactive sense. Workplaces and every day activities may threaten wellness and increase costs and results in fatalities (Baicker et al., 2010). However, safety reduces the likelihood of injuries and accidents (Oah et al., 2018). Learning is a lifelong process and students are agents of learning, so they should be provided safety awareness to react in a safe way. Usually, it has been observed that the students of secondary classes encounter accidents while doing experiments in science labs and using chemicals and electronic devices. Therefore, students must be taught about laboratory precautions before entering the laboratories in order to mitigate mishaps.

Wellbeing at the Workplace

Workplace safety is not only helpful for preventing people from accidents and tragedies, but also promoting well-being, happiness, and contentment among them (Costanza et al., 2007). Workplace safety can be improved by training the employees and rewarding them for their safe and proactive approach as well as using labels and signs to keep the environment clean and safe. Moreover, it ensures that employees have the right tools and the right protective equipment for their safeguard to implement safety protocols throughout the work period (Costanza et al., 2007). Wellbeing is a state of being comfortable, healthy, and happy and it is important to realize that it is a broader concept to contentment. For better safety and wellbeing, people have to realize their workplace surroundings site by wearing safety gear and doing things in a timely manner.

METHODOLOGY

A mixed-method was used for the present research study and the data were collected by using a self-developed questionnaire and observation checklist. The sample of the research included 200 students and 99 teachers of male secondary level classes. Questionnaires comprising multiple choice and true/false questions and observation sheets ranging from scale 1 (not at all aware) to 5 (extremely aware) were utilized to evaluate students' understanding and awareness on different issues of safety and wellbeing. Assessment questions were utilized to quantify proficiency about safety and wellbeing. Both pre and post-tests were analysed through SPSS for SW awareness and change in proficiency of the respondents.

Content Knowledge Test

The researcher assessed awareness of the students through oral and written explanation of issues relevant to safety and wellbeing. The pre-test was taken prior to classroom teaching and the post-test was administered after teaching.

The research instruments used were:

Data Analysis

Paired sample two-tailed t-test was applied for pre-test and post-test. Authenticity and reliability of the research tools were settled by pilot testing the instrument, and taking specialist opinion. Reliability was assessed by Cronbach's alpha.

RESULTS AND DISCUSSION

A comparative assessment of students' awareness was done. The results obtained from the experiment on teaching, learning exercises are presented below.

Safety and wellbeing

The following statements were used for wellbeing awareness assessment:

1. Understanding of Benefits of Safety as Proactive Wellness

The first statement in Table 1 was to understand the benefits of safety as proactive wellness as it is useless to regret after a tragedy, but better to take precautions before mishaps. For awareness of safety and wellbeing, students reported considerable gain between the pre and post-test phase in their proficiency in identifying threats to safety and wellbeing issues. The value of the standard deviation (S.D) 21.762, mean value 56.31, T-value 8.327, and significance 0.978 support the results.

2. Awareness for Safe Electronic Media Use

Second safety and wellbeing statement in Table 1 was awareness about safe electronic media use because mostly incidents of aggressions and incidents occur due to a myriad of unsafe content on the electronic media that leave a profound effect on the personality of the students. Students reported significant gains between the pre-and post-test phase in awareness for safety and wellbeing about safe electronic media use. The value of the standard deviation (S.D) 19.536, mean value 53.20, T-value 8.524, and significance 0.980 support the results.

3. Attentiveness on Safety Issues for Safe Behaviour

The third safety and wellbeing statement in Table 1 was about students' attention towards safe behaviour and self-harm. In this regard, importance should be given to adopt safe methods in public, social, and societal attitudes, so that they can find some kind of enthusiasm in themselves and do not harm in anger. Students revealed significant gains among pre-and post-testing stages for awareness in their proficiency on safe behaviour and self-harm. The value of the standard deviation was (S.D) 17.131, mean value 51.00, T-value 9.536, and significance 0.982 support the results.

4. Awareness of Road Safety Knowledge to Reduce Accidents

The fourth safety and wellbeing statement in Table 1 was awareness about road safety to reduce accidents as most accidents of bikes are caused by secondary level students aged 13 to 15 due to reckless driving. Students declared enormous gains in pre-and post-testing stage in the awareness of road safety knowledge to reduce

accidents. The value indicated for standard deviation (S.D) 19.823, mean value 52.50, T-value 8.375, and significance 0.971 support the results.

5. Attention for Proactive Approach in Alarming Weather

The fifth safety and wellbeing statement in Table 1 was attention for proactive approach in alarming weather such as fog, smog, and rain. Students declared significant gain between the pre-and post-testing stage in the awareness of their ability in attention for proactive approach in alarming weather. The value of the standard deviation (S.D) 20.670, mean value 58.60, T-value 8.551, and significance 0.988 support the results.

6. Importance of Vehicle's Wellness and Safety Accessories

The sixth safety and wellbeing statement in Table 1 was the importance of vehicle's quality and safety accessories, as many accidents and tragedies can be avoided if the vehicles are kept in good condition by ensuring that the indicators and brakes are in functional condition. Students declared significant gain among pre-and post-testing stage in awareness of proactive approach for importance of vehicle's wellness and safety accessories. The value of the standard deviation (S.D) 22.658, mean value 57.30, T-value 8.327, and significance 0.984 support the results.

7. Social Behavioural Safety

The seventh safety statement in Table 1 was students' understanding of social behavioural safety and patience. Students declared reasonable gain among pre-and post-testing stage in awareness for their social behavioural safety. The value of the standard deviation (S.D) 18.314, mean value 53.00, T-value 8.431, and significance 0.977 support the results.

8. Benefits of PPEs, SOPs, Work instructions, Precautions

The eighth safety and wellbeing statement in Table 1 was students' awareness about benefits of PPEs, SOPs, work instructions, precautions as safety guidelines and safety devices ensure safety. Students revealed enormous gain among pre and post-testing stages regarding benefits of PPEs, SOPs, work instructions, and precautions. Table 1 indicates the value of the standard deviation (S.D) 16.912, mean value 50.23, T-value 9.223, and significance 0.991 support the results.

Table 1

Pre-Test and Post-Test of Safety and Wellbeing

Statements	**Sec 1**		**Sec 2**		**Sec 3**		**Sec 4**		**Sec 5**		**S.D**	**t**	**Mean**	**Anova**		**Average**	
	Pre	*Post*	*Pre*	*Post*	*Pre*	*Post*	*Pre*	*Post*	*Pre*	*Post*				*F*	*Sig.*	*Pre*	*Post*
1	34	69	29	73	41	79	45	84	38	81	21.76	8.327	56.31	0.08	0.98	**37**	**77**
2	34	71	45	81	42	55	33	67	27	77	19.54	8.524	53.2	0.11	0.98	**36**	**70**
3	38	68	45	63	28	59	34	72	34	69	17.13	9.536	51	0.07	0.98	**36**	**66**
4	41	77	30	79	38	78	35	55	33	59	19.82	8.375	52.5	0.14	0.97	**35**	**70**
5	52	68	27	82	34	78	41	88	44	72	20.67	8.551	58.6	0.04	0.99	**40**	**78**
6	51	75	36	81	47	92	57	78	39	80	22.66	8.327	57.3	0.08	0.98	**46**	**81**
7	44	86	37	76	39	63	48	57	53	82	18.31	8.431	53	0.11	0.98	**44**	**73**
8	31	60	36	75	43	71	33	79	34	56	16.91	9.223	50.23	0.08	0.99	**41**	**82**

Overall Results of the Observation Sheet

It can be observed in Table 2 that after safety and wellbeing demonstration, the attendance increased from 87.5% to 92% and the test marks an average increased from 61.16% to 76.91%. At the same time, accidents reduced from 5.5 % to 1.5 %, absence of students due to illness decreased from 5 % to 2%, and fighting issues also decreased from 8.5 % to 2.5 %. Similarly, proper hair and nail cutting habits improved from 3 % to 9.5% and helmet using habits in the students increased to 44 %. Bike's functional indicators ratio went up to 68.5%, late attendance decreased to 9.5 %, and shoe polishing was improved from 2.5 % to 5.5%. The habits in the students increased from the function indicators to 68.5 %, late coming habit was also decreased from 9.5 % to 2%, writing on shirts decreased from 5.5 to 0.5 %, and polishing of shoes increased from 7 % to 72.5%. Discipline and etiquette behaviour also improved in the students, which were missing previously. Betel-nut use decreased from 19.5% to 6%. Rash driving decreased and health and emotional issues were also improved. The use of safety measures during rain, fog, and smog in drastic weather conditions increased. Safety and wellbeing measures to which the students were not aware previously were now followed. For instance, a majority of the students started using helmets.

It was observed that the majority of students became aware and cautious while driving on roads. They were more vigilant in science, electrical, and computer labs. Students' skills in performing experiments gained proficiency and their interest in studies enhanced. It was evident that students became proactive and cautious about their safety and wellbeing by taking precautions in fog, rain, smog, higher, and lower ambient weather temperatures. Moreover, majority of the respondents were aware about ill effects of smoking on wellbeing. Most of the students became cautious about cleanliness, by throwing trash and wrappers in waste bins. The breaking of window panes was also reasonably decreased. Fighting among students decreased and peer studies increased. It was evident that the majority of students stopped damaging plant pots and plucking flowers. They started to wear helmets, gloves and face masks. Overall, students became proficient in identifying potential hazards.

Table 2

After 30 Days Demonstration, Observation Results of Safety and Wellbeing

	Pre-demonstration		Post demonstration	
	F	%age	F	%age
Attendance	175	87.5%	184	92%
Test Marks (Average%)	7.34	61.16%	9.23	76.91%
Accidents	11	5.5%	3	1.5%
Absents due to illness	10	5.00%	4	2%
Fighting issues	17	8.5%	5	2.5%
Proper Hair & nail cutting	19	9.5%	6	3%
Helmet using	00	00%	88	44%
Bike's functional Indicators	31	15.5%	137	68.5%
Late comers	19	9.5%	4	2%
Writing on shirts	11	5.5%	1	0.5%
Shoes polishing	14	7%	145	72.5%
Discipline & Etiquettes	Not good		Improved	
Betel-nut use (Supari)	39	19.5%	12	6%
Over Speeding	Frequent		Not at all	
Rash driving	Recurrent		Abridged	
Health & emotional issues	Not aware		Improved	
Safety measures in rain, fog, smog	Not aware		Proficient	

School safety, emergency and security measures	Not aware	Attentive
Safe travel route to school	Not aware	Adopted
Natural food & hygiene measures	Not aware	Adept

Table 3 represents overall responses of teachers towards safety and wellbeing. According to data analysis, 79.76% (45.35+34.41) of the respondents agreed with the statements that by safety and wellbeing awareness, there is improvement in attendance, test marks, accidents, absents due to illness, fighting issues, hair and nail cutting/trimming, helmet use, indicator's use, attendance, discipline, and etiquettes in students; whereas 17.71% (8.48%+9.23%) of the respondents disagreed; and 2.5% of the respondents were undecided. Collectively, most of the teachers 79.76% (45.35+34.41) declared that by safety and wellbeing awareness, attendance had improved and test marks, hair and nail cutting/trimming, helmet use, indicator use, discipline and etiquettes in students had gone high. Standard Deviation 1.21 and Mean value 2.48 support the statements.

Table 3

Responses of Teachers

Statements	SDA	DA	UD	A	SA	S.D	Mean
Attendance	12.01	9.41	1.02	35.06	42.5	1.199	2.57
Test Marks (Average%)	11.03	10.03	2.12	36.08	40.74	1.15	2.47
Accidents	8.02	8.84	1.5	29.05	52.59	1.262	2.54
Absents due to illness	7.33	10.04	2.11	33.61	46.91	1.176	2.58
Fighting issues	7.61	9.51	3.04	28.51	51.33	1.494	2.28
Proper Hair & nail cutting/trimming	8.02	8.81	1.77	35.6	45.8	1.233	2.54
Helmet using	10.01	9.03	2.09	37.66	41.21	1.144	2.56
Bike's functional Indicators	3.02	8.08	3.06	40.61	45.23	1.15	2.38
Late comers	9.03	7.21	4.31	33.2	46.25	1.149	2.47
Discipline & Etiquettes	8.8	11.34	4.03	34.8	41.03	1.167	2.43

SDA: Strongly disagree
DA: Disagree
UD: undecided
A: Agree
SA: Strongly agree

CONCLUSION AND RECOMMENDATIONS

The introduction of safety and wellbeing concept resulted in the increase in students' attendance and better marks. The projected SW active learning techniques have proved to be a successful proactive approach to shape the behaviour of the students and potentially has a long-term impact on the students' safety and wellbeing preservation and influential effects for their upcoming life. In the light of the research findings and conclusions, it is recommended that safety and wellbeing awareness trainings should be delivered to secondary school students, teachers, as well as parents. All teachers should deliver broad explanation of SW in order to build awareness among the secondary level students.

REFERENCES

Baicker, K., Cutler, D., & Song, Z. (2010). Workplace wellness programs can generate savings. *Health affairs, 29*(2), 304-311. https://doi.org/10.1377/hlthaff.2009.0626

Baskerville, R., Spagnoletti, P., & Kim, J. (2014). Incident-centered information security: Managing a strategic balance between prevention and response. *Information & Management, 51*(1), 138-151. https://doi.org/10.1016/j.im.2013.11.004

Broadbent, R., & Papadopoulos, T. (2014). Improving mental health and wellbeing for young men in the building and construction industry. *Journal of Child & Adolescent Mental Health, 26*(3), 217-227. https://doi.org/10.2989/17280583.2014.923431

Clarke, S. (2013). Safety leadership: A meta-analytic review of transformational and transactional leadership styles as antecedents of safety behaviours. *Journal of Occupational and Organizational Psychology, 86*(1), 22-49. https://doi.org/10.1111/j.2044-8325.2012.02064.x

Cooray, V., Cooray, C., & Andrews, C. J. (2007). Lightning caused injuries in humans. J*ournal of Electrostatics, 65*(5-6), 386-394. https://doi.org/10.1016/j.elstat.2006.09.016

Costanza, R., Fisher, B., Ali, S., Beer, C., Bond, L., Boumans, R., & Snapp, R. (2007). Quality of life: An approach integrating opportunities, human needs, and subjective well-being. *Ecological Economics, 61*(2-3), 267-276. https://doi.org/10.1016/j.ecolecon.2006.02.023

Crawford, R. (2006). Health as a meaningful social practice. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine,10*(4), 401-420. https://doi.org/10.1177/1363459306067310

Cuellar, M. J., & Coyle, S. (2021). Assessing disparities in school safety: Implications for promoting equality in current efforts to keep kids safe. *Security Journal, 34*(4), 658-684. https://doi.org/10.1057/s41284-020-00254-2

Díaz-Vicario, A., & Gairín Sallán, J. (2017). A comprehensive approach to managing school safety: case studies in Catalonia, Spain. *Educational Research, 59*(1), 89-106. https://doi.org/10.1080/00131881.2016.1272430

Falavigna, A., Teles, A. R., Velho, M. C., Medeiros, G. S., Canabarro, C. T., de Braga, G. L., & Kleber, F. D. (2012). Impact of an injury prevention program on teenagers' knowledge and attitudes: Results of the Pense Bem–Caxias do Sul Project. *Journal of Neurosurgery: Pediatrics, 9*(5), 562-568. https://doi.org/10.3171/2011.12.PEDS11169

Goldblatt, H. (2009). Caring for abused women: impact on nurses' professional and personal life experiences. *Journal of Advanced Nursing, 65(*8), 1645-1654. https://doi.org/10.1111/j.1365-2648.2009.05019.x

Hoskins, D. H. (2014). Consequences of parenting on adolescent outcomes. *Societies, 4*(3), 506-531. https://doi.org/10.3390/soc4030506

Mariotti, A., & Hefti, A. F. (2015). Defining periodontal health. *BMC Oral Health, 15*(1), 1-18. https://doi.org/10.1186/1472-6831-15-S1-S6

Oah, S., Na, R., & Moon, K. (2018). The influence of safety climate, safety leadership, workload, and accident experiences on risk perception: A study of Korean manufacturing workers. *Safety and Health at Work, 9(*4), 427-433. https://doi.org/10.1016/j.shaw.2018.01.008

Rheault, H., Coyer, F., & Bonner, A. (2021). Chronic disease health literacy in First Nations people: A mixed methods study. *Journal of Clinical Nursing*, *30*(17-18), 2683-2695. https://doi.org/10.1111/jocn.15757

Richmond, S. A., Zhang, Y. J., Stover, A., Howard, A., & Macarthur, C. (2014). Prevention of bicycle-related injuries in children and youth: A systematic review of bicycle skills training interventions. *Injury Prevention, 20*(3), 191-195. http://dx.doi.org/10.1136/injuryprev-2013-040933

Schonert-Reichl, K. A., Oberle, E., Lawlor, M. S., Abbott, D., Thomson, K., Oberlander, T. F., & Diamond, A. (2015). Enhancing cognitive and social-emotional development through a simple-to-administer mindfulness-based school program for elementary school children: A randomized controlled trial. *Developmental Psychology*, *51*(1), 52-66. https://doi.org/10.1037/a0038454

Wang, P., Wu, P., Wang, J., Hung-Lin, C., & Wang, X. (2018). A critical review of the use of virtual reality in construction engineering education and training. *International Journal of Environmental Research and Public Health*, *15*(6), 01-18. https://doi.org/10.3390/ijerph15061204