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TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTANT TEACHING METHOD ON KNOWLEDGE REGARDING ROAD SAFETY MEASURES AMONG SCHOOL GOING CHILDREN IN SELECTED SCHOOL IN VIDARBHA.''

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Abstract: "A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO-ASSISTED TEACHING METHOD ON KNOWLEDGE REGARDING ROAD SAFETY MEASURES AMONG SCHOOL-GOING CHILDREN IN SELECTED SCHOOLS OF VIDARBHA REGION."

I. INTRODUCTION

Road traffic accidents are a major public health problem worldwide, especially among children. According to the World Health Organization, road traffic injuries are one of the leading causes of death among children and adolescents. Lack of knowledge, unsafe practices, and poor awareness about traffic rules contribute significantly to these accidents. School-going children are a vulnerable group as they frequently use roads without adequate supervision. Therefore, educating them about road safety is essential. Videoassisted teaching is an effective educational method that uses audiovisual aids to improve understanding and retention. It can simplify complex concepts and engage students better than traditional teaching methods. This study aims to evaluate the effectiveness of video-assisted teaching on improving knowledge regarding road safety measures among school children.

OBJECTIVES OF THE STUDY: - Primary objective: - • To assess the effectiveness of video-assisted teaching on knowledge regarding road safety measures among school-going children. Secondary Objectives: - • To assess the pre-test knowledge regarding road safety measures. • To assess the post-test knowledge after video-assisted teaching. • To compare pre-test and post-test knowledge scores. • To find the association between knowledge scores and selected demographic variables.

11 ASSUMPTIONS: - • School-going children have some baseline awareness about road safety measures. • Knowledge regarding road safety is inadequate among school children and needs improvement. • Video-assisted teaching is an effective method for enhancing knowledge compared to traditional methods. • Children are able to understand and retain information provided through audiovisual teaching. • The selected sample is representative of school-going children in the Vidarbha region. • External factors (like prior exposure or peer discussion) will have minimal influence on post-test results. • Students will be cooperative and attentive during the video-assisted teaching session.

CONCEPTUAL FRAMEWORK: - The study is based on Modified General System Theory. Video-assisted teaching intervention on road safety measures, which emphasizes that health behavior is influenced by individual beliefs about disease susceptibility, severity, benefits of action, and barriers to action. Health education acts as a cue to action that improves knowledge and effectiveness practices. RESEARCH METHODOLOGY: - The research approach is a plan to investigate the phenomenon under study, which can be structured (Quantitative approach). This approach helps decide on the presence or absence of variables, as well as the level of control and manipulation over them. In the present study, a quantitative approach was used to assess the effectiveness of video-assisted teaching method on knowledge regarding road safety measures among school-going children. Research Design: Pre-experimental one group pre-test and post-test design Setting: Selected school in Vidarbha. Population: School-going children. Sample Size: 60 Students studying in selected schools. Sampling Technique: Non-probability convenient sampling.

DATA COLLECTION TOOLS AND TECHNIQUES: -

Data collection is a crucial aspect of research. The study aims to assess the effectiveness of video-assisted teaching method on knowledge regarding road safety measures among school-going children, and for this purpose, a self-structured questionnaire was developed.

The tool was divided into three sections: - Section A: - This section consists of a self-structured questionnaire on demographic data, which includes: • Age. • Marital Status. • Religion. • Type of family. • Area of residence. • Do you know about road safety? • Sources of information.

Section B: - Pre-test Self-structured questionnaires on knowledge on assess the effectiveness of video-assisted teaching method on knowledge regarding road safety measures, consisting of: • 10 multiple-choice questions. • Each correct response was awarded 1 mark. • Incorrect responses received 0 marks. • The total score was 10.

Section C: - Post-test Self-structured questionnaires on knowledge on assess the effectiveness of video-assisted teaching method on knowledge regarding road safety measures, consisting of:

• 15 multiple-choice questions. • Each correct response was awarded 1 mark. • Incorrect responses received 0 marks. • The total score was 15. SCALING: - • Excellent: 21-25 • Very Good: 16-20 • Good: 11-15 • Average: 6-10 • Poor: 0-5 13 CONTENT

VALIDITY OF THE TOOL: - The tool was validated by experts in nursing, obstetrics and gynecology, and community health nursing. Necessary modifications were made based on expert suggestions to ensure clarity, relevance, and accuracy.

RELIABILITY: - Reliability of the tool was established using split-half method / Test-retest method. The reliability coefficient (r) was found to be (e.g., 0.7 or above), indicating that the tool is high reliability. PILOT STUDY: - A pilot study was conducted on 10% of the sample in a similar setting to assess feasibility and practicability. The study design and tools were found to be feasible, and no major changes were required. A pilot study is a small-scale trial conducted to ensure the feasibility of the full study. The pilot study was conducted from 28th October to 1st November 2025. MAIN STUDY: - The main study was conducted among selected students. Pre-test was administered, followed by knowledge regarding road safety intervention, and post-test was conducted after a specified period (e.g., 7 days). • The main study was conducted from 22nd February to 27th Februray 2026. • Permission was obtained from the concerned authority. • Informed consent was taken from the participants, and the objectives of the study were discussed with them. • Data were collected from school student at the selected school in Vidarbha using the self-structured questionnaire.

MAJOR FINDINGS OF THE STUDY: - • Significant improvement in post-test knowledge scores compared to pre-test • Video-assisted teaching found effective • Majority of students gained adequate knowledge after intervention.

DEMOGRAPHIC FINDINGS: - Age Group: 10-14 years old students. Education: All Source of Information: 40% gained knowledge from college, 30% from health professionals, 20% from mass media, and 10% from books and journals. Findings on Knowledge of Psychiatric Emergencies: - • 10%

of student had poor knowledge. • 66% had average knowledge. • 23% had good knowledge. • The minimum score was 4, and the maximum score was 15.

SECTION A: Distribution of students with regards to demographic variables. SECTION B: Assessment of the level of knowledge the effectiveness of video-assisted teaching method on knowledge regarding road safety measures among school-going children in selected schools of Vidarbha region. SECTION C: Association of knowledge of the effectiveness of video-assisted teaching method on knowledge regarding road safety measures among school-going children in selected schools of Vidarbha region with their selected demographic variables.

DISCUSSION: - The study findings indicate that video-assisted teaching significantly improved knowledge regarding road safety measures. The audiovisual method helped students understand concepts clearly and retain information better. The results are consistent with previous studies showing that interactive teaching methods are more effective than traditional methods.

CONCLUSION: - The study concludes that video-assisted teaching is an effective method to improve knowledge regarding road safety measures among school-going children. It is recommended that such teaching methods be incorporated into school health education programs to prevent road traffic accidents.

15 AFTER THE DETAILED ANALYSIS, THIS STUDY LEADS TO This study assessed the knowledge on regarding road safety measures among school students. Findings revealed gaps in knowledge, with a significant association between knowledge and demographic variables such as age, education, and prior training. • 10% of students had poor knowledge. • 66% had average knowledge. • 23% had good knowledge. This study highlights the need of knowledge on regarding road safety measures among school students.

NURSING IMPLICATIONS: - The findings of the study have implication for nursing practice, nursing education, nursing administration, nursing research. NURSING PRACTICE / NURSING SERVICES: - • Nurses can actively participate in health education programs in schools focusing on road safety measures. • Use of video-assisted teaching methods can be incorporated during school health visits to improve children's understanding and retention. • Community health nurses can organize awareness campaigns, demonstrations, and workshops on safe road behaviors such as use of helmets, seat belts, and traffic rules. • Nurses can collaborate with teachers and parents to reinforce safe practices in daily life. • Early education on road safety can help in prevention of accidents and injuries among children, reducing morbidity and mortality.

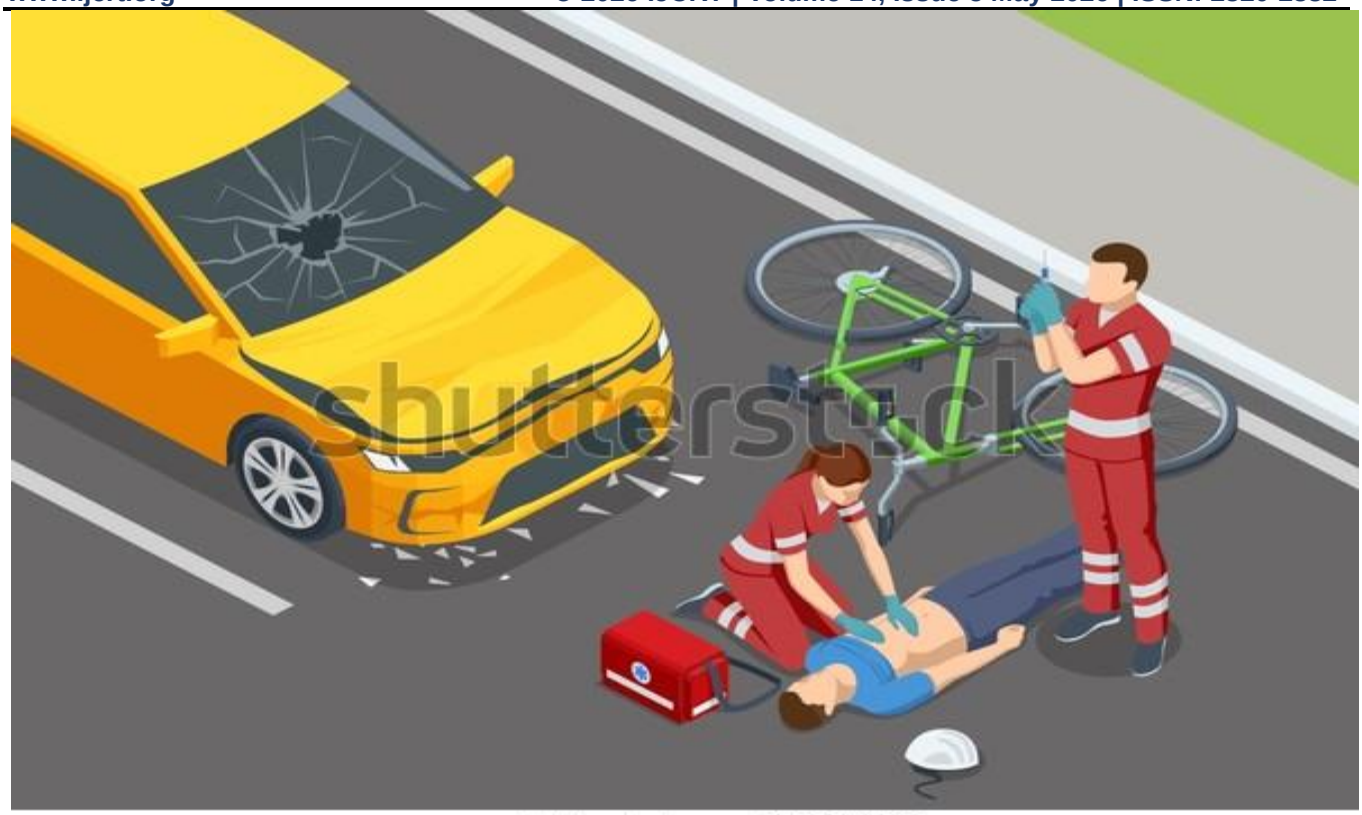
NURSING EDUCATION: - • Nursing curriculum should include innovative teaching methods such as videoassisted learning for effective health education. • Student nurses should be trained to develop and use audio-visual aids for educating school children. • Emphasis should be given on school health nursing, including road safety education as a vital component. • Nursing students can be encouraged to conduct health teaching sessions in schools as part of their clinical postings.

CHAPTER: - 1

"Safety first is safety always." -Charles M. Hayes

INTRODUCTION: - As per the Global Status Report on Road Safety, 2018 published by World Health Organization (WHO), India has the world's highest number of annual road accident fatalities. As per data published in Road Accident Statistics in India (2020), a total of 3,66,138 road accidents have been reported in 2020, which claimed 1,31,714 lives and caused 3,48,279 injuries. Two wheelers accounted for highest share in total accidents and recorded 43.5% of share in total fatalities amongst vehicle categories involved in road accidents. 68 % of road accidents death took place in rural area whereas urban area accounted for 32 % of total accidents death in the country. A significant number of victims of road accidents are young and of working age. Deaths and permanent disabilities in this age group is an economic loss to the nation too. It has been observed that high speed roads without safe walkways for pedestrians and pedestrian crossing facilities are more prone to accidents due to vehicle-pedestrian

interaction. Restricted right-of way conditions often result in poor designs that contribute to unsafe operating conditions. As per report published by World Bank Group in 2018, India can record an increase of 14% in its Gross Domestic Product, if it is able to reduce road accident fatalities by 50% over the period of 24 years. Road Safety Initiatives in India: - The road accidents are multi-causal which requires multi-pronged measures to mitigate the problems through concerted efforts. The 'Sundar Committee' constituted in 2005 assessed the extent of road accidents as public health and economic problem of the country, proposed institutional mechanism for the management of road safety, recommended amendments in traffic laws among other important recommendations. 24 India launched the 'National Road Safety Policy' in 2010 to expedite implementation of road safety initiatives. The objective of the policy focused on increasing awareness about road safety, setting up a road safety database, ensuring safe road infrastructure, safer vehicles & safer drivers, ensuring safety of vulnerable road users, making provision for road safety education & training and ensuring enforcement of road safety laws. The policy also highlighted matters like establishment of emergency medical services for road accident victims, strengthening legal, institutional & financial mechanism for road safety. In 2011, National Road Safety Council formulated different working groups which came out with agenda towards implementing 4Es i.e., Enforcement, Engineering, Emergency Care & Education to strengthen road safety in India. In 2014, a committee on road safety was constituted by Supreme Court to monitor and measure implementation of road safety laws in the country. The committee reviewed the scenario of road safety and issued first set of recommendations which are as follows: • Implement Laws for wearing helmets for all States. • Spreading awareness amongst people on road safety rules. • Audit of road safety to be implemented by states to ensure the safety standards in the design, construction, and maintenance of roads. • Prohibition on use of alcohol on highways (both state and national) to restrain drunk driving. Government of India declared application of new set of regulations in line with the UN's standards for front & side impact of vehicles and protection of pedestrian in 2015. India also joined hands by being a part of Brasilia Declaration on Road Safety where countries plan to achieve the Sustainable Development Goal 3.6: by 2020, halve the number of global deaths and injuries from road traffic accidents.[1] Based on the recommendations of Sunder Committee, the Union Cabinet approved National Road Safety Policy on 15 March 2010. The National Road Safety Policy specifies the guidelines for initiatives to be taken and SOPs to be designed and drafted by the Government at all levels to improve the road safety activities in the country. The Government of India further recognizes that as road accidents involve roads, motor vehicles and human beings, road safety needs to be addressed in a holistic manner. It also recognizes that regardless of jurisdiction, the Central and State Governments have a joint responsibility in reducing the incidents of road accidents, injuries and fatalities. The study is a literary one and is based on the secondary data referred from various Government Websites, journals, magazines, and newspapers, etc. 25 This paper is an attempt to broadly examine and analyses the status of Safety Policies in India and the challenges being faced in their implementation.[2] In 2023, India recorded 4.64 lakh road accidents, resulting in 1.73 lakh deaths and over 4.47 lakh injuries, with fatalities up 1.6% from 2022. Highway Fatalities: National highways, though only 2% of roads, accounted for 34.6% of deaths (60,127), followed by state highways at 23.4% (40,611). Uttar Pradesh, Tamil Nadu, and Maharashtra reported the highest highway deaths. Major Causes: Over speeding: 58.6% of deaths, Reckless driving and dangerous overtaking: 23.6%, Other factors (poor weather, drunk driving, animals on road): 2.8%.[3]



HYPOTHESIS: - H_0 = There is no significant difference in the knowledge regarding road safety measures among school-going children before and after the video-assisted teaching method.

H_1 = There is a significant increase in the knowledge regarding road safety measures among school-going children after the video-assisted teaching method.

H2 = The video-assisted teaching method significantly improves the knowledge regarding road safety measures among school-going children in the selected school of Vidarbha.

SCOPE OF THE STUDY: - This study aims to assess the effectiveness of video-assisted teaching method on knowledge regarding road safety measures among school-going children in selected schools and evaluate the effectiveness of a structured teaching program. The study holds significance in the following ways: - • The study focuses on assessing knowledge regarding road safety measures among school children. • It evaluates the effectiveness of video-assisted teaching as an educational intervention. • The study is limited to selected schools in the Vidarbha region. • It helps in improving awareness and reducing the risk of road traffic accidents among children. • The findings may be useful for nurses, teachers, and health educators in planning educational programs.

ASSUMPTIONS: - • School-going children may have inadequate knowledge regarding road safety measures. • Video-assisted teaching is an effective method for enhancing learning. • Children will respond honestly to the questionnaire. 34 • Improved knowledge can help in adopting safe practices. • Teaching through audiovisual aids is more effective than traditional methods.

DELIMITATIONS: - The study will be limited to: - • 60 sample size of student. • Study limited to selected school in Vidarbha region. • Includes only students of 7th and 8th standard. • Focuses only on knowledge, not long-term behavior change. • Time period of study is limited. • Sample size is restricted. • The study will focus only on the assessment of knowledge, without examining practical performance.

ETHICAL ASPECTS: - Informed Consent: Permission obtained from students and authorities before conducting the study. Confidentiality: Personal information kept private anonymity of participants will be maintained. Voluntary Participation: Students can withdraw anytime. No Harm: Study involves no

physical or psychological risk. Approval: Ethical approval will be obtained from the institutional ethical committee.

CONCEPTUAL FRAMEWORK: - The theoretical framework for the present study is based on the Health Belief Model (HBM), which seeks to explain and predict health behaviors by focusing on individual perceptions and beliefs about health threats and the actions taken in response to those beliefs. The study is based on the assumption that video-assisted teaching can influence the knowledge and perception of school children regarding road safety, which in turn improves their preventive behaviors. The HBM includes the following components: - a) Individual Perception: - Refers to student's road safety. Includes: - Perceived susceptibility (risk of road safety accidents) Perceived severity (seriousness of accidents) 35 b) Modifying Factors: - These include factors such as demographic variables (e.g., age, education, years of experience) that influence the student's perception on school children regarding road safety, which in turn improves their preventive behaviors. Factors influencing perception: - • Age • Education level • Socioeconomic status • Cultural beliefs • Previous knowledge c) Likelihood of Action:- Probability that students will adopt preventive measures. Depends on: - • Perceived benefits (e.g., Belief that following road safety measures will reduce risk) • Perceived barriers (e.g., fear, lack of awareness) d) Cues to Action:- These are triggers that motivate children to take action. • Video-assisted teaching program • Teacher guidance • Posters, demonstrations • Media messages e) Individual perception: - Perceived Susceptibility: - In this study, perceived susceptibility refers to the student's awareness of the frequency and importance of prevention of road safety in their study. f) Likelihood of action: - Perceived Benefits: - Students will be more likely to take action in prevention of road safety if they believe that having knowledge and skills in this area will benefit their teachers, parents, friends and themselves. g) Modifying Factors: - Demographic Variables: - Factors such as age, education, and previous training that may impact the student's knowledge of cervical cancer.

36 DEMOGRAPHIC VARIABLES • Age • Gender • Marital Status • Religion • Types of Family • Source of knowledge • Education level • Socioeconomic status • Cultural beliefs • Previous knowledge h) Cues of action: - Cues to Action: - Events, triggers, or reminders (such as training programs or critical incidents) that may prompt students to improve their knowledge and skills regarding road safety. Individual Perception Modify Factors Likelihood action Individual Susceptibility: - Students having less knowledge about road safety.

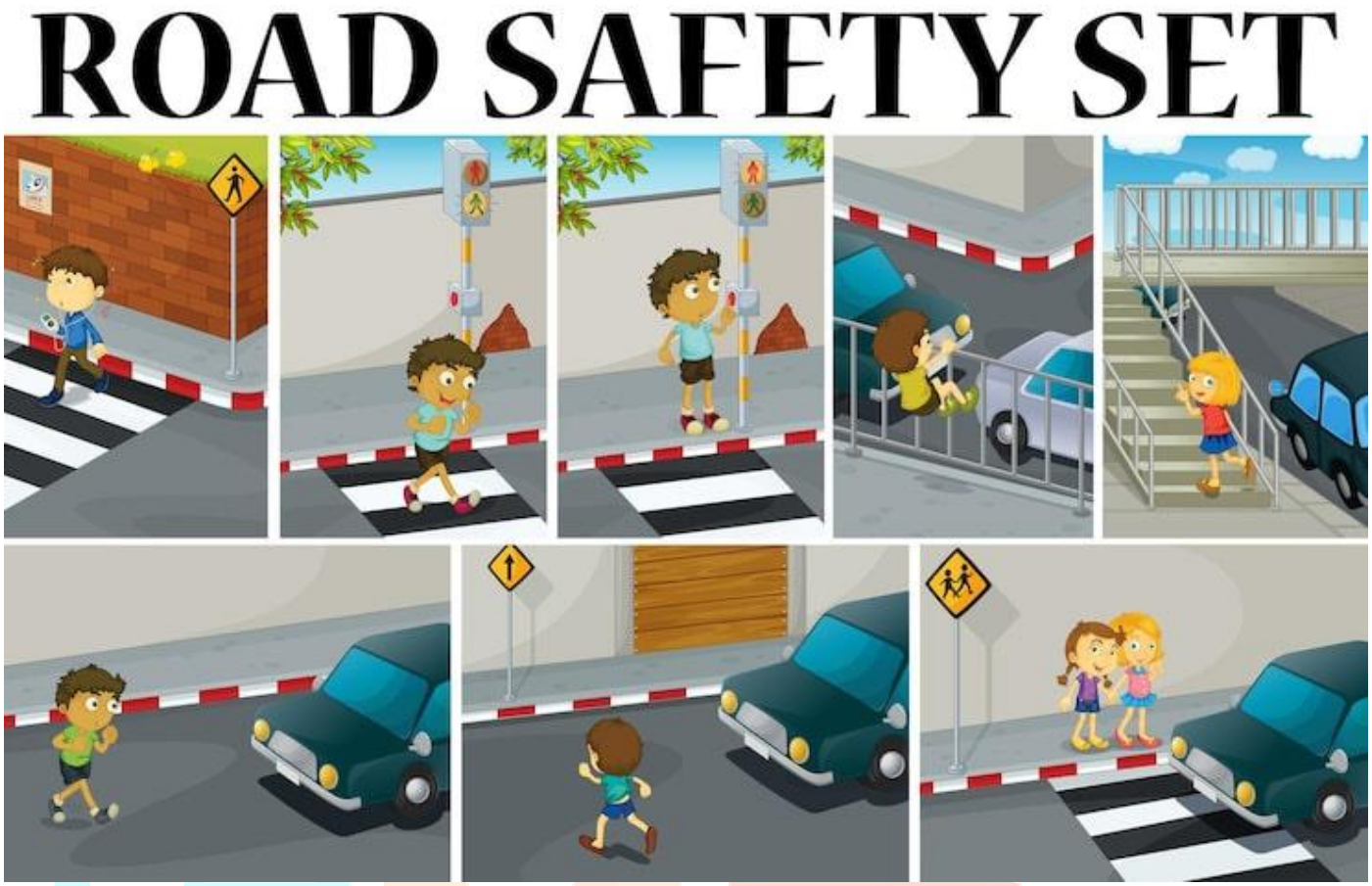
PERCEIVED THREAT: - • Knowledge deficit regarding road safety. • Assessment of knowledge regarding road safety. ➢ Perceived Benefits = Adequate knowledge regarding road safety ➢ Perceived Barrier = Lack of knowledge Clues to action Students Likelihood of taking Educational Action Educating students 37

CHAPTER :- 2 REVIEW OF LITERATURE

INTRODUCTION: - The task of reviewing research literature involves the identification, selection, critical analysis, and written description of existing information on a topic. A thorough literature review provides the foundation upon which to base new knowledge and is generally conducted before any data are collected in a quantitative study. This chapter aims to review the existing literature to assess the knowledge of effectiveness of safety measures regarding prevention of road safety measures among school going children in selected school in Vidarbha. The review of literature is an extensive, in-depth, systematic, and critical review of scholarly publications, unpublished materials, audio-visual materials, and personal communications. The purpose of this chapter is to present the literature reviewed by the investigator in order to study the problem at hand. Reviewing literature broadens the understanding and offers insight into the issue. This chapter presents a comprehensive review of studies conducted, the methods used, and the conclusions drawn by previous investigators, ultimately aiding in a deeper understanding of the issue under investigation.

The literature as follows: -

1) Literature related to road safety knowledge among school-going children.
2) Literature related to video-assisted teaching methods on road safety in education.
3) Literature related to effectiveness on road safety in day-to-day life in India.
4) Literature related to road safety knowledge among school-going children: - Road traffic injuries are a significant issue for society in the twenty-first century, but public health experts frequently ignore them despite the fact that massive and coordinated efforts are required for their effective and long-term prevention. Human factors and poor driving performance are the most significant contributors to car accidents globally, as shown by a series of studies exploring the causes of traffic road 40 accidents. Since road safety is a key concern in developing countries, our research focuses on the car driver behavioral risk factors in the India.[15] With millions of lives endangered worldwide, road traffic accidents (RTA) rank alarmingly high in the recent trends of pressing social issues. Approximately 328 lives are lost daily, much of which could have been prevented with timely rescue and intervention. Despite the innumerable road safety campaigns and awareness drives, India still ranks first in the number of road accident deaths across 199 countries and accounts for almost 11% of all accident- related deaths in the world. Despite global stagnancy and uncertainty owing to the Covid 19 pandemic and consequent lockdown, road accidents have managed to claim 29,415 lives just between March and June, with an additional 51970 casualties. Clearly, road safety continues to be a major developmental and public health concern, acting as a leading cause of death and injuries worldwide. Recognizing road accidents as a leading cause of death in the country, the Ministry of Road Transport and Highways, Government of India has called for a joint effort of the state and central government to facilitate the improvement of road and safety infrastructure and to reduce casualties and mortality. While the situation might appear rather grim, people need to come together as changemakers, now more than ever before. We must all strive to do our part to ensure that we receive what we deserve - safer roads and safer communities, once and for all. To improve safety and reduce road crash casualties, the Ministry of Road Transport & Highways (MoRT&H) has entrusted the Indian Road Safety Campaign (a non-profit organization) to lead road safety activities aimed at upping grassroot level citizen involvement in road safety measures across the nation.[16] Available statistics about road safety in India indicates that more than a lakh people die in road accidents every year. Pedestrians, cyclists, and riders of motorized 2- and 3-wheelers and their passengers are collectively known as "vulnerable road users" and account for half of all road traffic deaths around the world. A higher proportion of vulnerable road users die in low-income countries than in high-income countries. 41 There is an increasing trend of unsafe driving that leads to vehicle accidents in which many people die, undergo serious injuries or lose their body parts permanently. Many of these accidents occur due to poor driving skills, non-adherence to road safety precautions, lack of awareness and violation of traffic rules. The government of India celebrates Road safety week from 11th to 17th of January every year. This program is aimed at raising public awareness about traffic rules and ultimately to reduce casualties due to road accidents. The key objectives of celebrating 'National Road Safety Week' are: • To create awareness and promote road safety in schools, colleges and to customers. • Minimizing injuries and deaths because of road accidents by applying road safety measures including wearing seat belts and helmets. Based on recommendations of the WHO, following general safety tips if implemented would help make our roads safer:



42 FIGURE-4: -ROAD SAFETY RULES.

1) Always drive at safe speed. Statistics indicate that for every 1% increase in mean speed, there is a 4% increase in the risk of a fatal crash.

2) Wear a helmet (of ISI standard) which is strapped on while riding a two-wheeler. Wearing a good quality helmet can reduce the risk of death by 42% and severe injury by approximately 70%.

3) Wear seat belt (both driver and passenger) to avoid injury. Wearing a seat-belt reduces the risk of injuries and deaths among front seat occupants by 45-50% and rear-seat car occupants by 25–75%.

4) Do not make children sit in front seats. Placing children in child restraints reduces the risk of death by at least 60%, particularly for children aged less than 4 years.

5) Do not use mobile phones or other gadgets that can distract concentration while driving. Driver reaction times are 50% slower while using a telephone than without.

6) Ensure the voice level of music systems are within safe audible limits

7) Avoid unwanted honking on the road which may distract other vehicle drivers or pedestrians.

8) Ensure your vehicle is properly serviced as per the vehicle maintenance frequency.

9) Do not drive under the influence of alcohol. Drinking and driving increase the risk of an accident dramatically when the driver has a blood-alcohol concentration (BAC) of above 0.05 g/dl. These are some important safety measures that everyone should follow in order to stay safe and secure. Also, it is very important to teach these safety measures to the children at an early age so that they can avoid unfortunate incidents in the future.[17] In India, this crisis has prompted the Ministry of Road Transport and Highways (MoRTH) to observes National Road Safety Month from January 18 to February 17, reinforcing the need for consistent road safety awareness across all sections of society. This period is a reminder that safer roads depend on daily choices, disciplined behaviour, and respect for the importance of road safety rules, not just during awareness months, but throughout the year. Road safety remains one of the most critical public health issues in India, as millions of road accidents occur every year. Understanding the importance of road safety awareness and everyday safety habits is essential not just for drivers, but for pedestrians, cyclists, passengers, and communities at large. In this guide, we explain how to ensure road safety in daily life with practical, safety-first behaviours that save lives.[18] 43 Globally road traffic injuries are the leading cause of death among young people aged 15-19 years and second leading cause among 5–14-year-old. That's why in this research we find out the effectiveness on road safety measures among the school going children in Vidarbha region.

2) Literature related to video-assisted teaching methods on road safety in education: - The study aims to assess children's current knowledge of road safety, determining the impact of a video-assisted teaching program on their knowledge of road safety, and determining the relationship between the mean knowledge score of children on road safety and specific demographic variables. Additionally, the study aimed to evaluate childrens6 knowledge of road safety on both the pre-test and post-test. In the hectic world, the children are prone to meet with the accidents, consequently it will affect the children's life such as loss of limbs, depression etc., Therefore, it is imperative to protect the children from the road traffic accidents the quasi-experimental research design was adopted. Through randomization method, 60 school age children were selected based on the inclusion criteria. The pre-test data collected through 25 self-administered questionnaires related to knowledge on road safety measures followed by video assisted teaching Program and video show for 45 minutes. After 4 weeks, the post-test data was collected with same questionnaire. It depicts that, the VATP had a significant impact on the knowledge on the road safety measures among the school age children. In the worldwide, the school age children represent about 25% of the total population. The health care needs of this school children can contribute to the overall health status of the country. The health and well-being of this population have become high profile issue, lying at the heart of numerous government initiatives and policies make to the considerable public attention. The road traffic injuries were responsible for the maximum mortalities, i.e. 38.4% among the children and adolescents when compared with other reasons. There was more than two-fold increase in injury-related mortalities from the childhood to adolescence (1:2.3). In gender wise, the mortalities are high in males, i.e. 45.2% and 37.4% in females. Nirmala AS et al. (2015) stated that, 2.5 million people are hospitalized, 8-9 million people were suffered with minor injuries and nearly 1030 of the hospital registrations are due to road traffic injuries. The study suggests a clear road safety policy, a central coordinating agency, allocation of adequate resources, strict implementation of proven interventions and reliable information systems are urgently required. 44 The number of deaths on the world's roads remains unacceptably high, with an estimated 1.35 million people dying every year. The road traffic injuries are 8th leading cause of mortality for all the ages and number one causes for the children and young adults aged 5-29 years, However, it also indicates that progress to realise Sustainable Development Goal (SDG) target 3.6 which emphasis for a 50% reduction in the number of road traffic deaths by 2020. In India, according to National survey on the road traffic accidents, every year, nearly million people are injured and mortality rate of more than 70,000 people; this needs to be recognized as an important public health issue. The other traffic violations such as jumping and red lights at intersections have increased. In Maharashtra, the incidence of road traffic accidents in 2016 was, the children between 5-9 years fatality rate were 448, 10-14 years injured rate was 30% among them 69.4% were males and 30.6% female children. The major causes for the accidents are 44% due to two-wheeler crashes and 36% falls. The Pedestrian Road traffic injuries among the children and adolescents are most important cause of death and disability. Therefore, it is very much important to protect the life of the children and to provide safer environment.

METHODS: - The necessary ethical and administrative permission was obtained. The Quasi experimental, pre and posttest research design was carried out in government schools in Vidarbha region. Based on inclusion criteria, the non- randomized convenient sampling technique was used to select the samples of 60 school age children. Description of instrument Section I: It consists of demographic variables of the students age, gender, level of education, education of father & mother, father's occupation, family income, type of family and residence Section II: It comprises of the background variables of, source of information, playing outdoor games and mode of travelling to school. Section III: This section deals with 25 open ended questionnaires related to the knowledge on road safety measures among school age children. Each correct answer given a score of one and the Wrong answer scored as (0) zero. The knowledge score was interpreted as follows, Inadequate (≤50%) Moderately adequate (51-75%) and adequate (75% and above). 45 Data collection procedure The Pre-test was conducted on the knowledge regarding road safety measures and on the same day, the students were engaged with video assisted teaching program with power point presentation and video show for 45 minutes.[19] We assessed the knowledge related to road traffic rules like road traffic signs, speed limits and penalties related to violation of traffic rules. A video-assisted health education session was provided to all, and change in knowledge assessed. We included school going students studying in 6th,7th,8th,9th class. Assuming a 10% increase in knowledge due to intervention from the base knowledge of 60%, with80% power and 95% confidence interval the calculated sample size for the study was 60. Information on age,

education, residence, mode of transport, valid driving license, insurance of the vehicle, use of helmet, previous exposure to road safety measures and driving experience, and knowledge related to traffic signs, speed limit, and penalties were collected through a questionnaire. Also, include: - • The study tool was validated by experts of the Nursing Department, Preventive and Social Medicine Department, and a Motor Vehicle inspector. The suggestions given by a team of experts were Incorpo-rated. • The data was collected after getting consent from the students. The classroom environment was conducive and adequate distance was maintained between the students. • The students were instructed not to discuss the questions and the pre-test was given over 30 minutes. • The investigator explained the importance of road safety followed by was displayed to the students along with explanations related to rules and regulations of road safety. • All doubts regarding were cleared during the sessions. • The entire health education session lasted for 40 minutes. • Post-test was conducted after one week over 30 minutes and the knowledg

CHAPTER-3 RESEARCH METHODOLOGY

INTRODUCTION: - Methodology refers to the systematic approach to techniques and procedures used for gathering and analysing data in a research investigation. It serves as a blueprint for the research study. This chapter describes the research approach, research design, setting, population, sample criteria, sampling technique, data collection tool, pilot study, and data analysis plan. RESEARCH APPROACH: - The research approach is a plan to investigate the phenomenon under study, which can be structured (Quantitative), unstructured (Qualitative), or a combination of both (Qualitative- Quantitative integrated approach). This approach helps decide on the presence or absence of variables, as well as the level of control and manipulation over them. In the present study, a quantitative approach was used to assess the knowledge regarding prevention of road safety measures among school going children in selected school.

RESEARCH DESIGN: - Research design refers to the "overall plan for obtaining answers to research questions and testing hypotheses." In this study, the adopted design is pre-experimental one-group pre-test and post-test descriptive design. 51 "To assess the effectiveness of video assistant teaching method on knowledge regarding road safety measures among school going children in selected school in vidarbha.." RESEARCH DESIGN VIDEO ASSISTANT TEACHING METHOD SETTING OF THE STUDY ACCESSIBLE POLLUTION SELECTED SCHOOL GOING CHILDREN STUDENT SAMPLE TECHNIQUE NON-PROBABILITY CONVENIENT SAMPLING TECHNIQUE TOOL FOR DATA COLLECTION SAMPLE SIZE (60 STUDENTS OF SCHOOL GOING CHILDRENS) DESCRIPTIVE STATISTICAL ANALYSIS REPORT WRITTING 52 FIGURE-6: - SCHEMATIC PRESENTATION ON RESEARCH DESIGN. SETTING OF THE STUDY: - • The study will be conducted in selected school of Vidarbha region, Maharashtra. • The setting is chosen due to accessibility, availability of participants, and relevance to the study topic. VARIABLES: - Variables are attributes of individuals or objects that vary, meaning they can take different values. ➢ Independent Variable: - Video-assisted teaching method on road safety measures. ➢ Dependent Variable: - Knowledge regarding road safety, measured through a structured questionnaire.

POPULATION: - The population consists of All students studying in school of Vidarbha region, Maharashtra. Target Population: - All students studying in school of Vidarbha region, Maharashtra. Accessible Population: - The accessible population refers to the portion of the target population that the researcher can reasonably access. Students studying in selected school of Vidarbha region who are available during the data collection period. SAMPLE: - A sample refers to a subset of the population selected to participate in the research. The sample for this study consists of school going children in selected school of Vidarbha, Maharashtra.

SAMPLE SIZE: - 53 The sample size for study is will consist of 60 students. SAMPLING TECHNIQUE: - • Sampling is the process of selecting a group of people, events, or other elements to study. In this study, the non-probability purposive sampling technique was used. • This technique is selected because the researcher will choose school-going children who meet the study criteria and are available during the data collection period.

SAMPLING CRITERIA: - The sampling criteria specify the population characteristics. Inclusion criteria: - • School-going children studying in selected schools of Vidarbha • Students present at the time of data collection • Students who can understand Marathi/English • Students who are willing to participate in the study Exclusion Criteria: - • Students who are absent during data collection • Students who have already received formal training on road safety education • Students who are not willing to participate

DATA COLLECTION TOOLS AND TECHNIQUES: - Data collection is a crucial aspect of research. The study aims to assess the effectiveness of video-assisted teaching method on knowledge regarding road safety measures among school-going children, and for this purpose, a self-structured questionnaire was developed. The tool was divided into three sections: - Section A: - This section consists of a self-structured questionnaire on demographic data, which includes: • Age. • Marital Status. • Religion. 54 • Type of family. • Area of residence. • Do you know about road safety? • Sources of information. Section B: - Pre-test Self-structured questionnaires on knowledge on assess the effectiveness of video-assisted teaching method on knowledge regarding road safety measures, consisting of: • 10 multiple-choice questions. • Each correct response was awarded 1 mark. • Incorrect responses received 0 marks. • The total score was 10. Section C: - Post-test Self-structured questionnaires on knowledge on assess the effectiveness of video-assisted teaching method on knowledge regarding road safety measures, consisting of: • 15 multiple-choice questions. • Each correct response was awarded 1 mark. • Incorrect responses received 0 marks. • The total score was 15. SCALING: - • Excellent: 21-25 • Very Good: 16-20 • Good: 11-15 • Average: 6-10 • Poor: 0-5

CONTENT VALIDITY OF THE TOOL: - Validity refers to the extent to which an instrument accurately reflects the construct being examined. A group of 16 experts from the nursing field reviewed the content validity of the tool. Their feedback and suggestions were incorporated into the final version of the questionnaire, ensuring its appropriateness for assessing knowledge regarding awareness of road safety measures. FEASIBILITY STUDY: - Feasibility is an essential consideration in any research project. The study was feasible in terms of time, subject availability, resources, and ethical considerations. The sample size was sufficient to collect data within the allotted time frame, and there were minimal economic constraints for conducting the study. 55

RELIABILITY OF THE TOOL: - • Reliability will be tested using split-half method or test-retest method. • The reliability coefficient (r value) should be ≥ 0.7 or above, indicating acceptable reliability.

PILOT STUDY: - A pilot study is a small-scale trial conducted to ensure the feasibility of the full study. The pilot study was conducted from 28th October to 1st November 2025. Objectives of Pilot Study: • To test feasibility of the study • To assess clarity and effectiveness of the tool • To estimate time required for data collection • To identify any difficulties in conducting the study Procedure: - • Pilot study will be conducted on 10% of sample size • Data collected will not be included in main study • Necessary modifications will be made MAIN STUDY: - The main study was conducted among selected students. Pre-test was administered, followed by knowledge regarding road safety intervention, and post-test was conducted after a specified period. • The main study was conducted from 22nd February to 27th Februray 2026. • Permission was obtained from the concerned authority. • Informed consent was taken from the participants, and the objectives of the study were discussed with them. • Data were collected from school student at the selected school in Vidarbha using the self-structured questionnaire. 56

PLAN FOR DATA ANALYSIS: - Data will be analyzed using descriptive and inferential statistics. Data Analysis Steps: - • Organization of data in a master sheet. • Frequencies and percentages will be calculated to analyses the demographic characteristics. • Calculation of mean and standard deviation for pre-test scores. • Paired t-test are to compare pre-test and post-test knowledge scores. • Chi-square test will be applied to determine any associations between the knowledge score and selected demographic variables.

SUMMARY: - This chapter outlines the research approach, design, setting, variables, population, sample, sampling techniques, data collection tools, reliability, feasibility, pilot study, and the plan for data analysis. These components will help in assessing the knowledge regarding prevention of road safety measures among school going children in selected school. Data will be analyzed using both descriptive and inferential statistics to assess the effectiveness of video-assisted teaching on knowledge regarding road safety measures among school children. Data will be collected using a structured questionnaire before and after the educational intervention. Statistical analysis will determine the effectiveness of the program, contributing to improved awareness and preventive practices among students.

OBJECTIVES OF ROAD SAFETY To reduce road traffic accidents and deaths To promote safe driving behavior To create awareness among the public To ensure smooth and organized traffic movement

PRINCIPLES OF ROAD SAFETY Alertness: Always stay attentive while on the road Discipline: Follow traffic rules strictly Patience: Avoid rash and aggressive driving Responsibility: Protect your life and others

101 ROAD SAFETY MEASURES

➢ For Pedestrians Use sidewalks and footpaths Cross only at designated crossings Follow pedestrian signals Wear bright clothes at night

➢ For Drivers Follow speed limits Always carry a valid driving license Maintain vehicle condition (brakes, lights, tires) Avoid distractions (mobile phones, loud music)

➢ For Two-Wheeler Riders Wear ISI-mark helmets Avoid triple riding Follow traffic lanes

➢ For Cyclists Use cycle lanes where available Wear helmets and reflective gear Use lights during night riding THE "3 E'S" OF ROAD SAFETY Education: Awareness programs, school teaching Engineering: Better Road design, signals, speed breakers Enforcement: Strict implementation of traffic laws COMMON TRAFFIC RULES

FIGURE-17: - IMAGE OF COMMON TRAFFIC RULES IN INDIA. 102 Drive on the left side of the road (in India) Obey traffic signals Give way to emergency vehicles Do not overtake from the wrong side

CAUSES OF ROAD ACCIDENTS Human factors: over-speeding, fatigue, alcohol use Vehicle factors: brake failure, tire burst Environmental factors: poor roads, weather conditions Lack of enforcement of traffic laws

EFFECTS OF ROAD ACCIDENTS Physical injuries and disabilities Loss of life Emotional trauma Economic loss to families and society ROAD SAFETY LAWS IN INDIA Wearing helmets and seat belts is compulsory Heavy penalties for drunk driving Fines for over-speeding and signal jumping Use of mobile phone while driving is punishable

ROLE OF GOVERNMENT AND SOCIETY Government: Build safe roads, enforce laws, awareness campaigns Schools: Educate children about safety rules Media: Spread awareness through campaigns Individuals: Follow rules responsibly ROAD

SAFETY EDUCATION FOR CHILDREN Teach basic traffic signals Use practical demonstrations (videos, charts) Conduct road safety drills Encourage safe habits from a young age

103 FIRST AID AND EMERGENCY CARE Check breathing and consciousness Control bleeding using pressure Do not move seriously injured persons unnecessarily Call ambulance (108 in India) immediately

RECENT INITIATIVES IN INDIA Road safety awareness campaigns Use of CCTV and speed cameras Strict motor vehicle amendment laws School-based safety education programs TIPS FOR SAFE DRIVING Stay calm and avoid road rage Keep safe distance (2-second rule) Use mirrors and indicators properly Avoid driving when tired