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ASSESSING KNOWLEDGE REGARDING BASIC LIFE SUPPORT AMONG HEALTH CARE PROFESSIONALS WORKING AT TERTIARY CARE HOSPITALS IN DISTRICT SWAT

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ABSTRACT

Basic Life Support (BLS) refers to the fundamental medical assistance provided by trained individuals like emergency medical technicians in situations where advanced medical care is not readily accessible. The primary goal is to stabilize a critically ill person. BLS training teaches participants how to rapidly recognize severe life-threatening conditions, carry out effective chest compressions, deliver appropriate breathing assistance, and promptly use automated external defibrillators (AEDs).(2) A majority of the participants, around 58.3%, displayed a lack of proper understanding regarding Basic Life Support (BLS). On average, doctors achieved a score of 53.5%, dentists scored 43.3%, and nurses scored 38.4%. The research also indicated that doctors, those with prior BLS training experience, and individuals who graduated 6 to 10 years ago were more likely to possess sufficient knowledge of BLS, as revealed through a thorough analysis of


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the data.(4) Adequate knowledge of BLS was shown by only 12%, 55% had a moderate level of knowledge, and 32% had insufficient knowledge.(2)

KEYWORDS: Chest Compressions, Breathing Assistance, BLS Training, Medical Knowledge, Healthcare Professionals, Doctors, Dentists, Nurses, Medical Education.

OBJECTIVE

To Identify the Knowledge About Basic Life Support (BLS) Among health care Professionals.

METHODOLOGY

This Will be a Descriptive Cross-sectional Study.

ANALYSIS

Descriptive and inferential statistics have been employed for data analysis, with clean data entered and analyzed using SPSS version 27 software; mean and standard deviation have been calculated for continuous variables such as gender, age, profession, and education, while frequencies and percentages have been computed to assess knowledge levels among various healthcare professionals (HCPs), and additional tests have been applied as appropriate.

RESULTS

The study found that most healthcare workers knew that "BLS" stands for "Basic Life Support" (96%). When faced with an unresponsive adult on the road, they would typically ask for help (54%) or maintain the airway (32%). In accidents involving unresponsive adults, the preferred action was recognizing cardiac arrest and calling for emergency help (73%), with some suggesting rapid defibrillation (8%). About 78% would check for a pulse before starting chest compressions. The majority understood the correct compression depths for adults (78%) and children (59%) during CPR. In choking situations, most respondents correctly opted for abdominal thrusts (66%) to help a choking colleague.

CONCLUSION

Healthcare workers exhibit a strong understanding of Basic Life Support (BLS) principles, showcasing awareness of proper actions for unresponsive adults such as recognizing cardiac arrest, calling for emergency help, and performing correct chest compressions. However, further emphasis on rapid defibrillation and comprehensive choking response training could enhance


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overall preparedness.

KEYWORDS: Basic Life Support, Cardiopulmonary resuscitative, cardiac arrest, defibrillation

INTRODUCTION

Basic Life Support (BLS) entails a set of actions taken to assist individuals facing respiratory or cardiac arrest, along with cases of airway blockage. It involves a systematic approach to provide essential medical care and support in these critical situations.(1) Basic Life Support (BLS) is a basic level of medical aid given by trained responders, such as emergency medical technicians, when advanced medical help isn't immediately available. The aim is to stabilize the patient's critical state. BLS training educates participants to quickly identify severe life-threatening situations, perform effective chest compressions, administer proper ventilation, and utilize automated external defibrillators (AEDs) promptly.(2) As per the guidelines of the American Heart Association (AHA), the chances of survival during a cardiac arrest decrease by 7% to 10% for each minute that defibrillation is delayed.(3) Medical professionals undergo training in advanced cardiac life support to ensure they possess the knowledge and skills needed to deliver effective and efficient medical care throughout their careers.(4)

In instances of cardiac arrest within a hospital setting, healthcare practitioners often take on the role of initial responders. Their familiarity with advanced cardiac life support plays a crucial role in enhancing patient results. It's essential for them to possess both expertise and a constructive outlook toward advanced cardiac life support. This is because advanced cardiac life support serves as a pivotal element in the sequence of actions that heighten the probability of surviving until hospital discharge.(5) Starting basic life support promptly, including effective chest compressions and timely external defibrillation, offers the highest likelihood of successfully reestablishing natural circulation.(6) Given the critical significance of CPR (Cardiopulmonary Resuscitation), it's imperative that healthcare professionals (HCPs) possess the capability to initiate and carry out CPR, regardless of their training level or where they work. Hospitals should ensure that their staff receive proper training in CPR.(7)

A 15% of worldwide deaths or mortality that account from (CA) cardiac arrest. Worldwide incidence of (SAC) sudden cardiac arrest ranged between 20 to 140 for every 100000 people occur

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out side from hospital with this frightened survival rate will low ranging between 2 to 11%. Approximately death rate was 46.2% from cardiovascular diseases in 2015. (8)

The coronary heart disease and hypertension impressed around 8.5% and 25% of the all population raising the liability to (SAC) sudden cardiac arrest. Accidents and cardiac arrest are the majority of daily emergencies with highly deaths and disease or disability. (9)

Cardiac arrest is the consequence of termination of blood supply to brain and depression of the breathing this the mix of no circulation and breathing causes generalized ischemia, in the cases of brain permit a narrow window of 10 minutes only, that's if anything to be over it has to be done within 10 minutes for the reason after that survival is impossible. As claimed by (AHA) American heart association the recognition of cardiac arrest (CPR) should be start within 10 seconds.

The main goals of this study are to assess how well healthcare professionals grasp Basic Life Support (BLS) procedures, pinpoint areas where they might lack accurate information or have misunderstandings, gauge how effective their previous BLS training has been, figure out how confident they feel about carrying out BLS actions, and delve into what factors play a role in how quickly they initiate BLS actions. Moreover, the research also seeks to make comparisons in BLS knowledge between various healthcare specialties and gather valuable insights that can be used to create better-suited BLS training programs to enhance the quality of care provided to patients.

Basic Life Support (BLS) is a fundamental set of life-saving techniques aimed at providing immediate care to individuals experiencing cardiac arrest, respiratory failure, or other medical emergencies. Healthcare professionals play a crucial role in delivering BLS interventions effectively. This literature review aims to assess the current state of knowledge among healthcare professionals regarding basic life support techniques and its implications for patient outcomes.

In March 2019, a cross-sectional survey was conducted among 112 nursing officers employed at a tertiary care hospital in New Delhi, India. The participants were selected using a convenient sampling technique and hailed from diverse departments. The survey employed a semi-structured questionnaire to evaluate their knowledge and skill levels pertaining to Cardiopulmonary

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Resuscitation (CPR). The findings revealed that the participants displayed moderate knowledge but demonstrated inadequate skill in CPR techniques. Interestingly, those working in the Intensive Care Unit (ICU) and Emergency departments exhibited more proficient knowledge and better performance in CPR compared to individuals in other selected areas.(3)

A research was conducted to assess the understanding of Basic Life Support (BLS) and Advanced Cardiac Life Support (ACLS) among healthcare practitioners in North Kerala, involving 461 participants. These comprised 141 (30.6%) practicing physicians, 268 (58.1%) nurses, and 52 (11.3%) supporting staff members. The maximum achievable score on the assessment was 20, with BLS accounting for 15 points and ACLS for 5 points. The average score for all healthcare professionals stood at 8.9±4.7. When examining individual roles, the mean scores were 8.6±3.4 for physicians, 9±3.6 for nurses, and 9±3.3 for supporting staff. The analysis revealed that a majority of healthcare professionals (237, 51.4%) scored 50% or lower, while 204 (44.3%) achieved scores ranging from 51% to 80%, and a smaller fraction of 20 (4.34%) scored above 80%.(5)

research investigation focused on the perceptions and viewpoints of healthcare practitioners concerning advanced cardiac life support revealed significant insights. Out of the total 400 participants, 96% responded, yielding a robust dataset. Notably, a majority of the healthcare workers, comprising both nurses and physicians (59.5%), demonstrated inadequate familiarity with advanced cardiac life support concepts. Conversely, a substantial proportion of participants (56.25%) showcased a positive disposition and approach towards the subject.(6)

In Kabul, Afghanistan, a cross-sectional study was conducted (March-June 2022) across public and private hospitals to evaluate healthcare workers' BLS training and knowledge. Approved by Ariana Medical Complex's ethics committee, the study employed nonprobability convenience sampling. Among active health center workers, primarily aged 21-30 (71.3%) and comprising 32.3% doctors, results highlighted insufficient BLS knowledge (95.3%) with a mean score of 4.47±1.58 out of 13.(7)

An examination focused on the Proficiency and Awareness of First Aid and Basic Life Support

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(BLS) Abilities among Speech and Hearing Students engaged 442 participants from 26 distinct institutions specializing in speech and hearing. A notable 88.23% of respondents expressed the importance of acquiring knowledge concerning BLS techniques and initial aid. Among the participants, 55% encountered at least one emergency situation during their training. A noteworthy contrast surfaced between the recognition of these skills and the confidence to execute them, as substantiated by the Mann–Whitney U test ($U = 76.5$, $z = -2.39$, $p = 0.019$, effect size = 0.27). A majority of students (92.5%) disclosed that they had not received training in performing first aid and BLS techniques.(12)

Research Design

This research employs a descriptive cross-sectional study design to assess the knowledge about Basic Life Support (BLS) among healthcare professionals (HCPs) working in tertiary care hospitals in District Swat, Khyber Pakhtunkhwa, Pakistan. A descriptive cross-sectional approach allows for the collection of data at a single point in time, providing a snapshot of the knowledge levels among healthcare professionals regarding BLS.

Study Setting

The study is conducted in tertiary care hospitals located in District Swat, Khyber Pakhtunkhwa, Pakistan. These hospitals serve as a critical healthcare infrastructure and employ a diverse range of healthcare professionals, including doctors, nurses, and technicians.

Study Population

The target population for this study comprises healthcare professionals (HCPs) working in the selected tertiary care hospitals. The study includes doctors, nurses, and technicians who are actively involved in patient care and are likely to encounter emergency situations where knowledge of BLS is essential.

Sampling Technique

A convenient sampling technique is employed to select participants for the study. Given the practical constraints and accessibility to healthcare professionals in the chosen hospitals, convenient sampling allows for the selection of participants who are readily available and willing to participate in the study.

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Sample Size

Sample size were calculated through online WHO openEpi Calculator with a parameters of

Population size(for finite population correction factor or fpc)(*N*):	134
Hypothesized % frequency of outcome factor in the population (*p*):	50%+/-5
Confidence limits as % of 100(absolute +/- %)(*d*):	5%
Design effect (for cluster surveys-*DEFF*):	1

Thus sample size of the study is 100

Data Collection

Data is collected through structured questionnaires that assess the knowledge of healthcare professionals regarding BLS procedures. The questionnaire is designed to cover various aspects of BLS, including recognition of abbreviations, response to unresponsive individuals, CPR techniques, chest compression depth, compression-ventilation ratios, and actions in choking incidents.

Data Analysis

Descriptive and inferential statistics are employed for data analysis. Cleaned data is entered and analyzed using Statistical Package for the Social Sciences (SPSS) version 27 software. Descriptive statistics such as mean and standard deviation are calculated for continuous variables such as age, gender, profession, and education. Frequencies and percentages are computed to assess knowledge levels among different healthcare professionals (HCPs).

Inferential statistics, such as chi-square tests or t-tests, are applied as appropriate to identify any significant differences in knowledge levels between different professional categories and demographic factors.

Ethical Considerations

Ethical approval is obtained from the relevant ethics committee or institutional review board of the participating hospitals. Informed consent is obtained from each participant before data


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collection, ensuring that they understand the purpose of the study, their voluntary participation, and the confidentiality of their responses.

Limitations

This study has some limitations, including the use of convenient sampling, which may not represent the entire population of healthcare professionals. Additionally, the study's findings are based on self-reported knowledge, which may not always reflect actual performance in emergency situations. Furthermore, the study is limited to a specific geographic area, which may affect the generalizability of the results to other regions or healthcare settings.

Conclusion

The methodology employed in this study aims to comprehensively assess the knowledge of healthcare professionals regarding Basic Life Support (BLS) procedures. Through structured questionnaires and data analysis, the study seeks to provide insights into the current state of BLS knowledge among healthcare professionals in tertiary care hospitals in District Swat, Khyber Pakhtunkhwa, Pakistan. The findings from this research will contribute to the understanding of the knowledge gaps and potential areas for improvement in BLS training and education among healthcare professionals.

Results

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Question 1. Sociodemographic variables of participants

Table 1.1

Questions	Options	Response	Percent
Gander of participants	male	74	74.0
	female	26	26.0
the highest level of education that a person has completed	BSN	30	30.0
	MBBS	51	51.0
	Health Technician	19	19.0
Nurses, doctors, Technicians	nurse	30	30.0
	doctor	51	51.0
	Technician	19	19.0

table 1.1 presents the sociodemographic characteristics of the participants. The gender distribution shows that 74% are male and 26% are female. In terms of education, 30% have completed BSN, 51% hold an MBBS degree, and 19% are Health Technicians. The participants' professional roles within the medical field consist of 30% nurses, 51% doctors, and 19% technicians.

Q2. Knowledge regarding Basic Life Support among HCWs

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Questions	Options	Response	Percent
What is the abbreviation "BLS" stands for?	Basic Life Support	96	96.0
	Best Life Services	2	2.0
	Basic Lung Support	2	2.0
What will be your first step? When you find an adult person unresponsive on the road? (Note: If you are alone at that place)	Maintain airway	32	32.0
	Start chest compression	12	12.0
	Ask for help	54	54.0
	Start giving breathings	2	2.0
If an adult person after accident is not responding to you even after shaking and shouting at him, what will be your immediate action plan? (Note – If multiple rescuers are present)	Rapid defibrillation	8	8.0
	Immediate recognition of cardiac arrest and activation of emergency response system	73	73.0
	Put him in recovery position	18	18.0
	d) Observe	1	1.0
. If a. If an adult person after accident is not responding to you even after shaking and shouting at him, for how much time you will try to feel for pulse before moving to start chest compressions? n adult person after accident is not responding	Minimum 5 sec and Maximum 10 seconds	78	78.0
	Minimum 10 sec and Maximum 15 seconds	12	12.0
	Minimum 15 sec and Maximum 20 seconds	4	4.0
	any of the above	6	6.0

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to you e			
What is the location for chest compression in adults?	Right side of the chest	12	12.0
	Left side of the chest	14	14.0
	Centre of the chest on breastbone	72	72.0
	anywhere on chest region	2	2.0
Technique to give breaths in infants? (Note- Preferred method)	Mouth-to-mouth only	43	43.0
	Mouth-to-Mouth and- nose	45	45.0
	Mouth-to-nose only	3	3.0
	Mouth-to-mouth without nose pinched	9	9.0
Technique to give breaths in infants? (Note- If you are not able to apply preferred method)	Make a Mouth-to-mouth seal only	63	63.0
	Use of some instruments	14	14.0
	Make a Mouth-to-nose seal	20	20.0
	none of the above	3	3.0
What is Depth of compression in adults during CPR?	At least 2 inches	78	78.0
	2½ – 3 inches	12	12.0
	Less than 2 inche	7	7.0
	According to your comfortable level.	3	3.0
What is Depth of compression in Children during CPR?	About 2 inches	59	59.0
	2½ – 3 inches	5	5.0
	One - fourth to one-half depth of chest	21	21.0

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	About1 inches.	15	15.0
Depth of compression in infants during CPR?	More than 1½ – 3 inches	38	38.0
	About 1and 1/2 inches	42	42.0
	About ½ – 1 CM	14	14.0
	One-half to one-third depth of chest	6	6.0
. Rate of chest compression in adult and Children during CPR?	At least 100 / min	70	70.0
	At least 90 / min	10	10.0
	At least 80 / min	15	15.0
	At least 70 / min	5	5.0
Compression-Ventilation ratio in adult? (Note- If single rescuer)	30:1	41	41.0
	15:2	18	18.0
	30:2	37	37.0
	15:1	4	4.0
Compression-Ventilation ratio in adult? (Note- If double rescuer)	30:2	62	62.0
	15:2	22	22.0
	30:1	13	13.0
	15:1	3	3.0
In a child, chest compression and ventilation ratio is? (Note- If single rescuer)	15:2	48	48.0
	5:1	16	16.0
	30:2	33	33.0
	3:1	3	3.0

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. In a child, chest compression and ventilation ratio is? (Note- If double rescuer)	15:2	68	68.0
	5:1	8	8.0
	30:2	20	20.0
	3:1	4	4.0
Abbreviation AED stands for?	Automated External Defibrillator	58	58.0
	Automated Electrical Defibrillator	22	22.0
	Advanced Electrical Defibrillator	13	13.0
	Advanced External Defibrillator	7	7.0
What does abbreviation EMS stands for?	Effective Medical Support	8	8.0
	Emergency Management Services	28	28.0
	Emergency Medical Services	61	61.0
	External Medical Services	3	3.0
If you and your colleague are eating food and suddenly your colleague starts symptoms of choking and is confirmed by taking to him, what will be your first response on the spot?	Give back blows	15	15.0
	Give chest compression	14	14.0
	Give abdominal thrusts	66	66.0
	any of the above	5	5.0
If you and your colleague are eating food and suddenly your colleague starts symptoms of choking and is confirmed by	Give abdominal thrusts	11	11.0
	Give back blows	26	26.0
	Give chest thrusts	53	53.0

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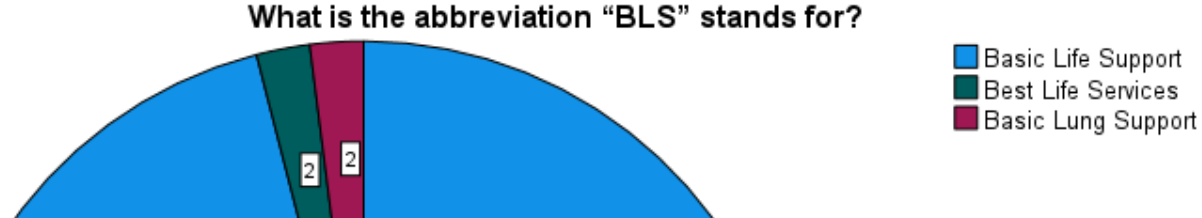
taking to him/her, what will be your first response? (Note- If your colleague is pregnant /obese)	none of the above	10	10.0

The table summarizes responses from healthcare workers' knowledge of Basic Life Support (BLS) procedures. When asked about the abbreviation "BLS," the vast majority correctly identified it as "Basic Life Support" (96%). When encountering an unresponsive adult on the road, most respondents indicated they would ask for help (54%), followed by maintaining the airway (32%). In cases of an unresponsive adult after an accident, the immediate action plan preferred was recognizing cardiac arrest and activating emergency response (73%), with a significant number also suggesting rapid defibrillation (8%). Approximately 78% would attempt to feel for a pulse for 5-10 seconds before starting chest compressions. Correct chest compression location was recognized by 72% as the center of the chest on the breastbone. Preferred techniques for giving breaths to infants were divided between "Mouth-to-Mouth and Nose" (45%) and "Mouth-to-Mouth Only" (43%). Depth of compression for adults (78%) and children (59%) during CPR was understood by the majority. Compression-ventilation ratios for single rescuers (30:2) and double rescuers (15:2) were correctly identified by significant portions of respondents. "Automated External Defibrillator" was correctly associated with the abbreviation AED by 58%. Similarly, "Emergency Medical Services" was accurately recognized as the meaning of EMS by 61%. In scenarios of choking, most respondents chose the appropriate action of giving abdominal thrusts to a choking colleague (66%).



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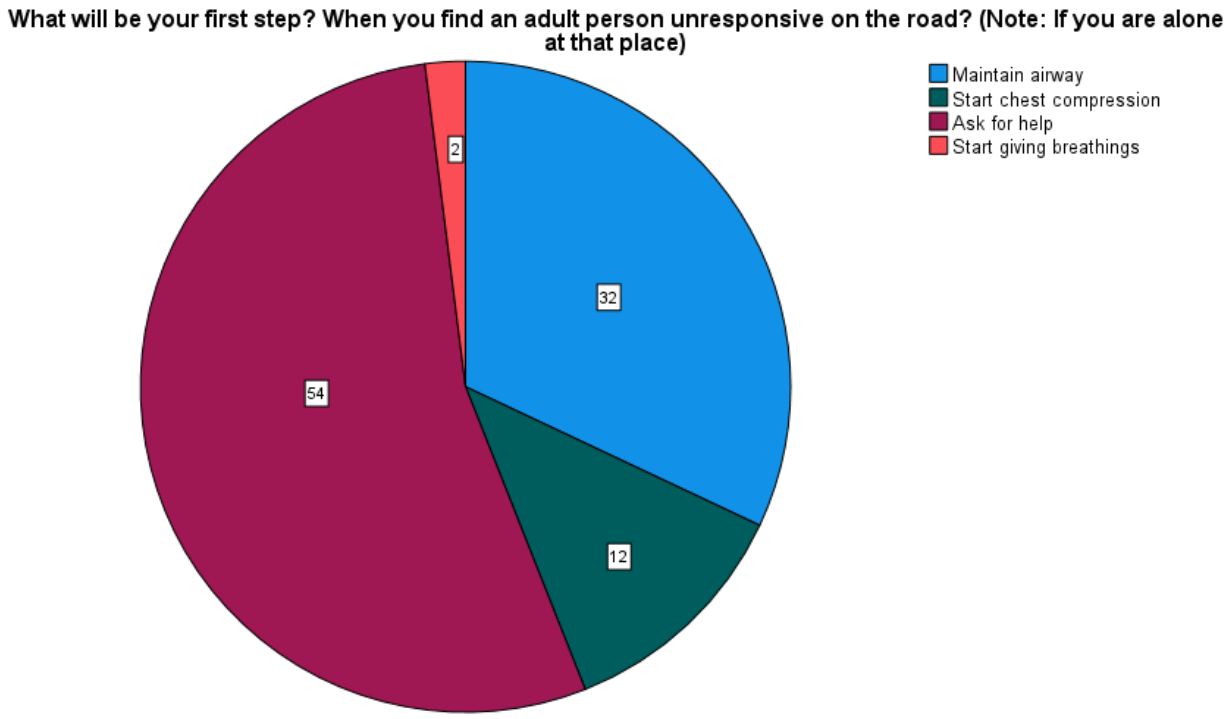

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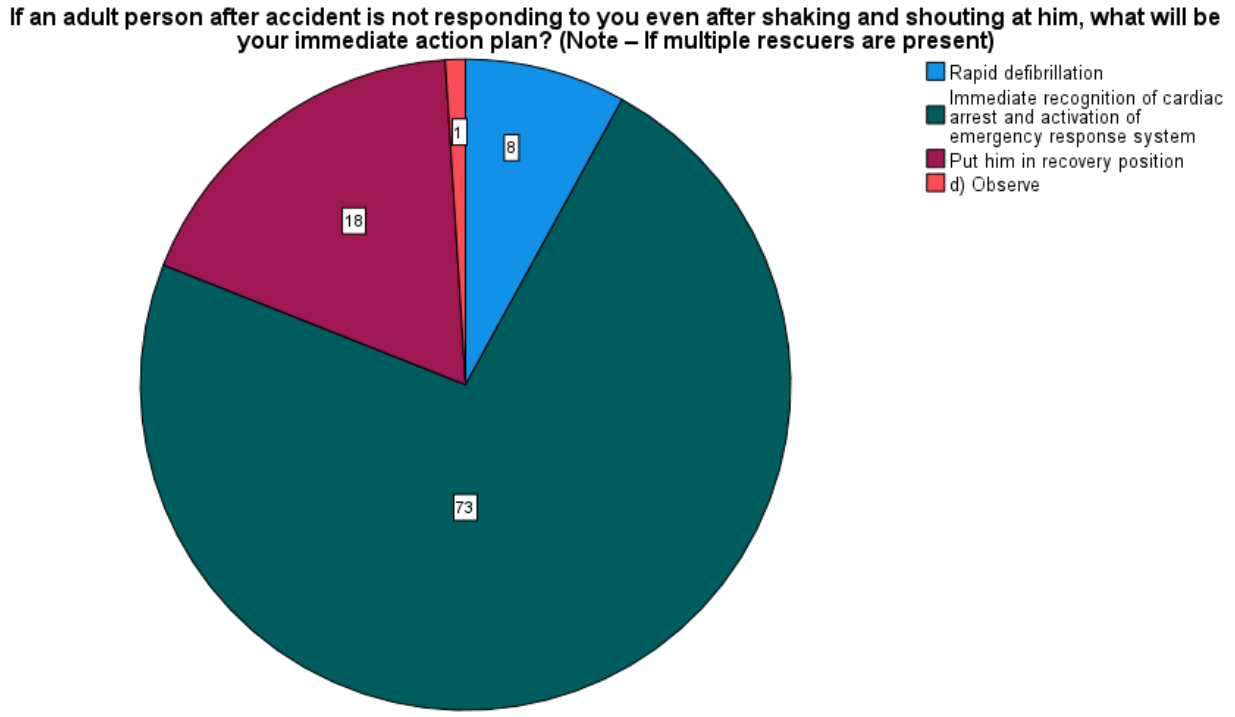

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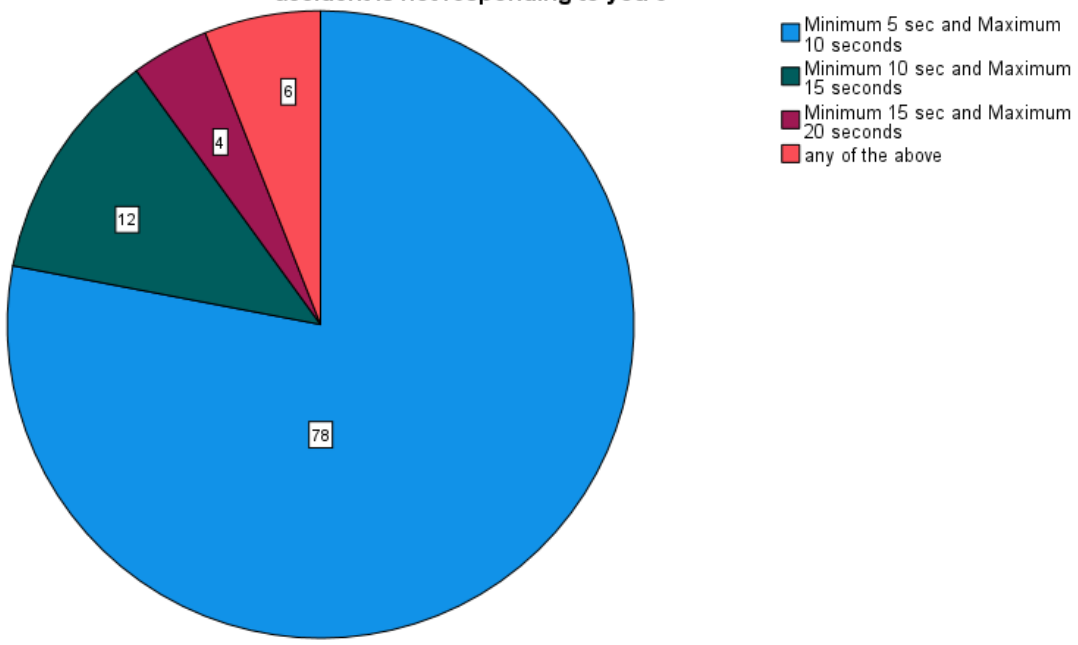

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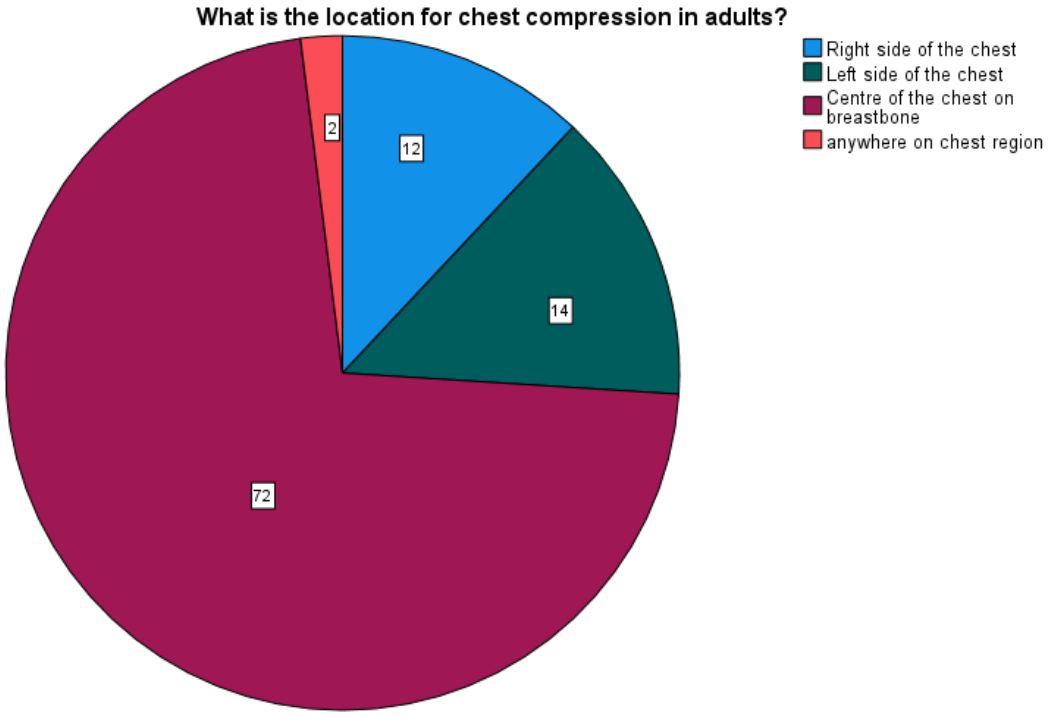

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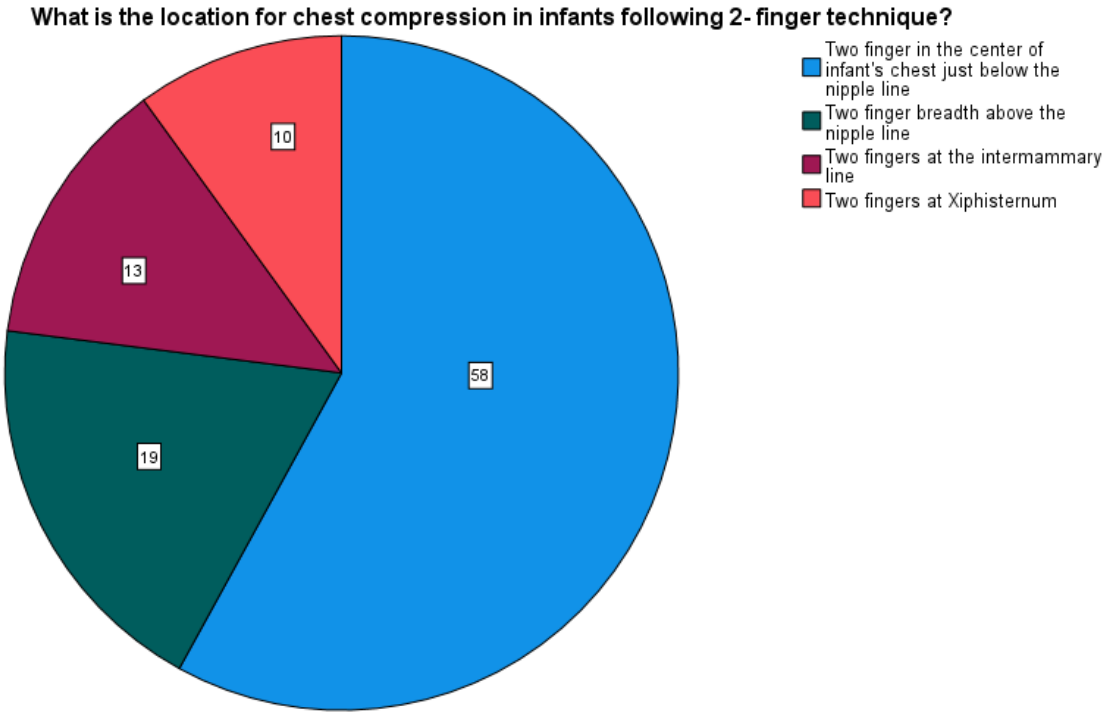

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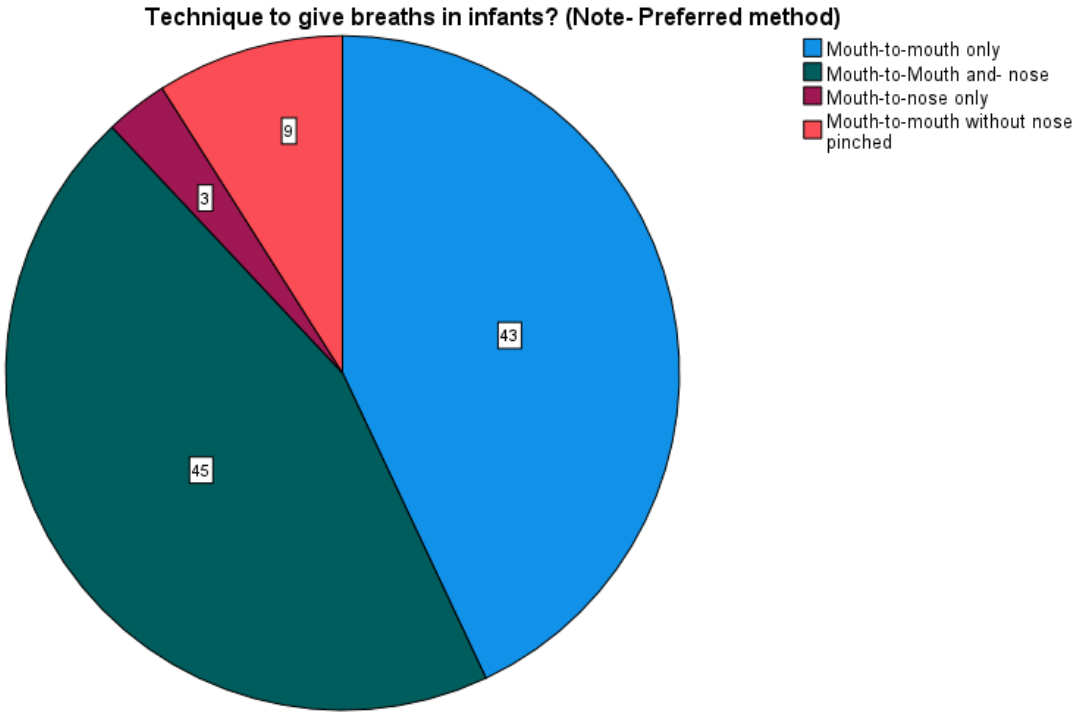

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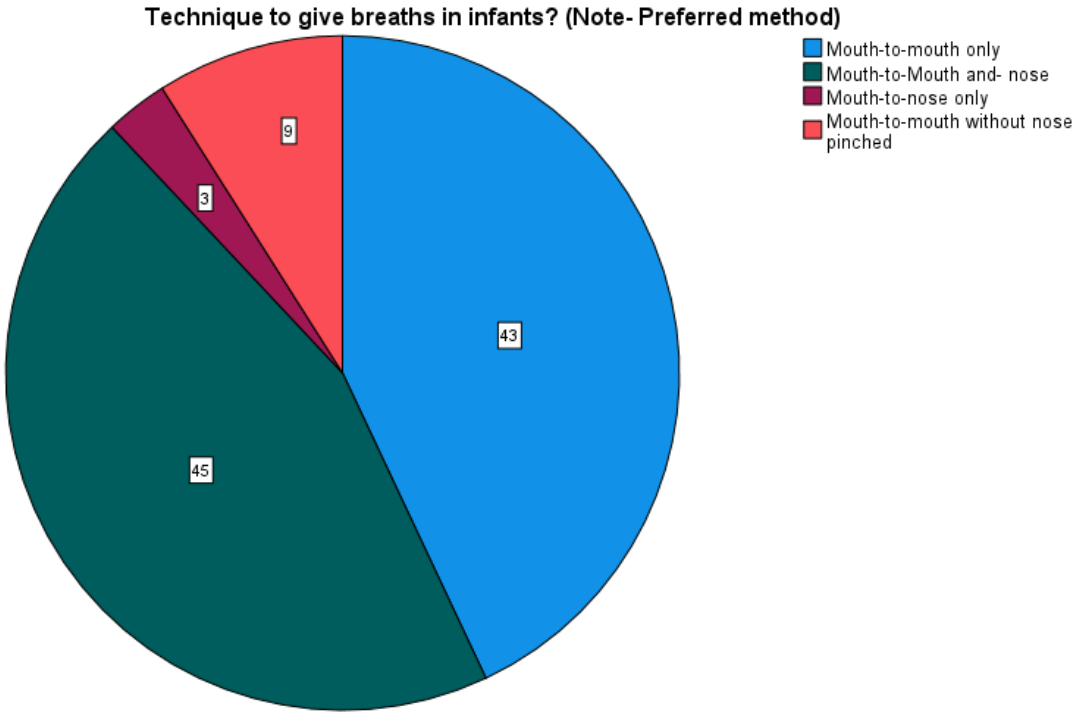

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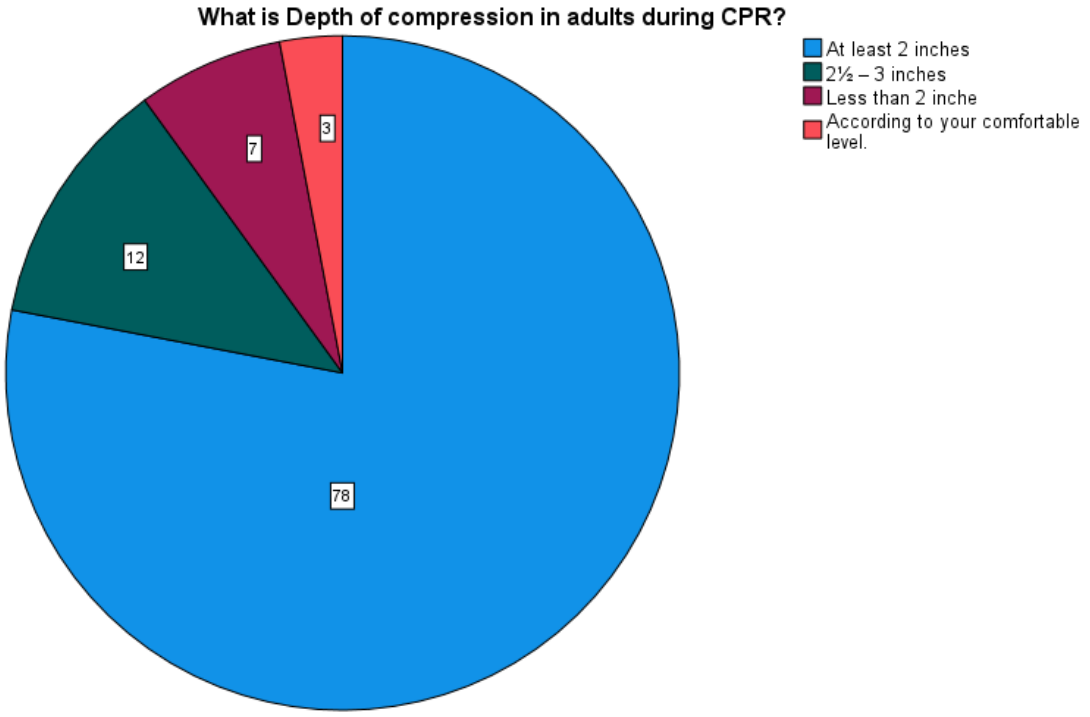

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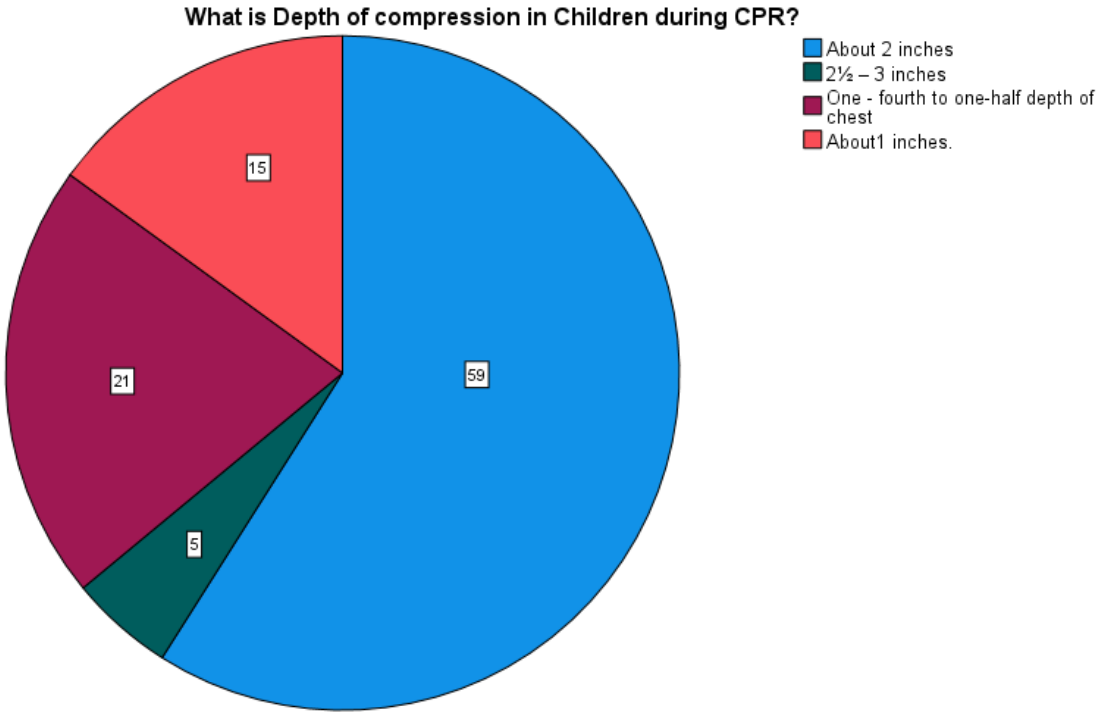

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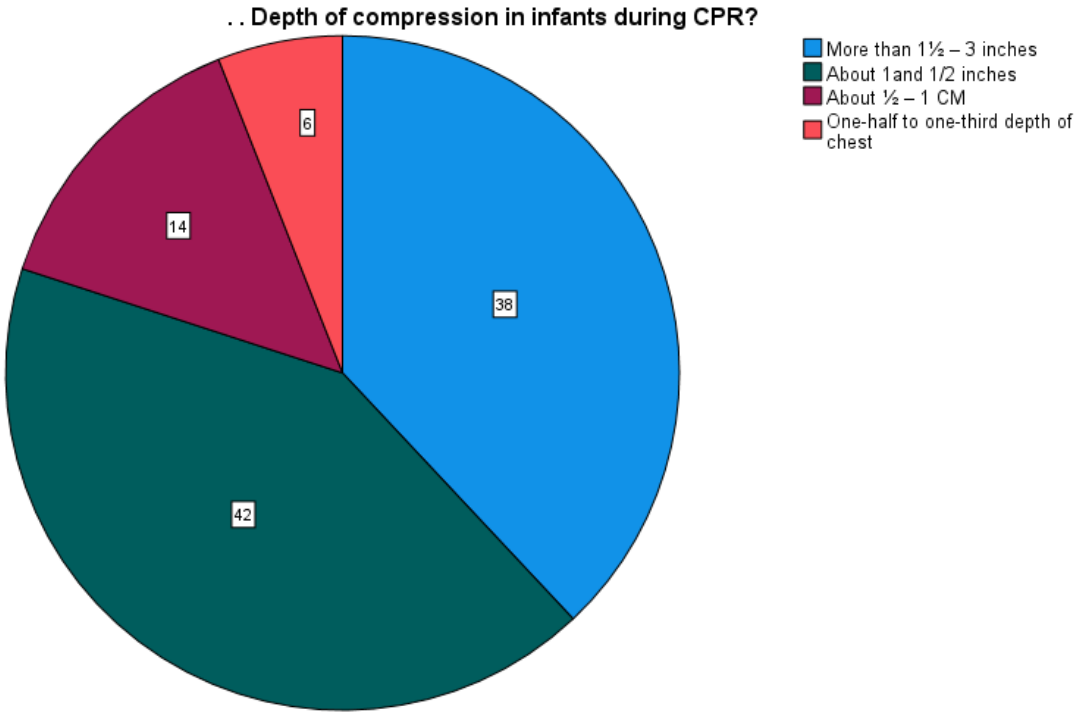

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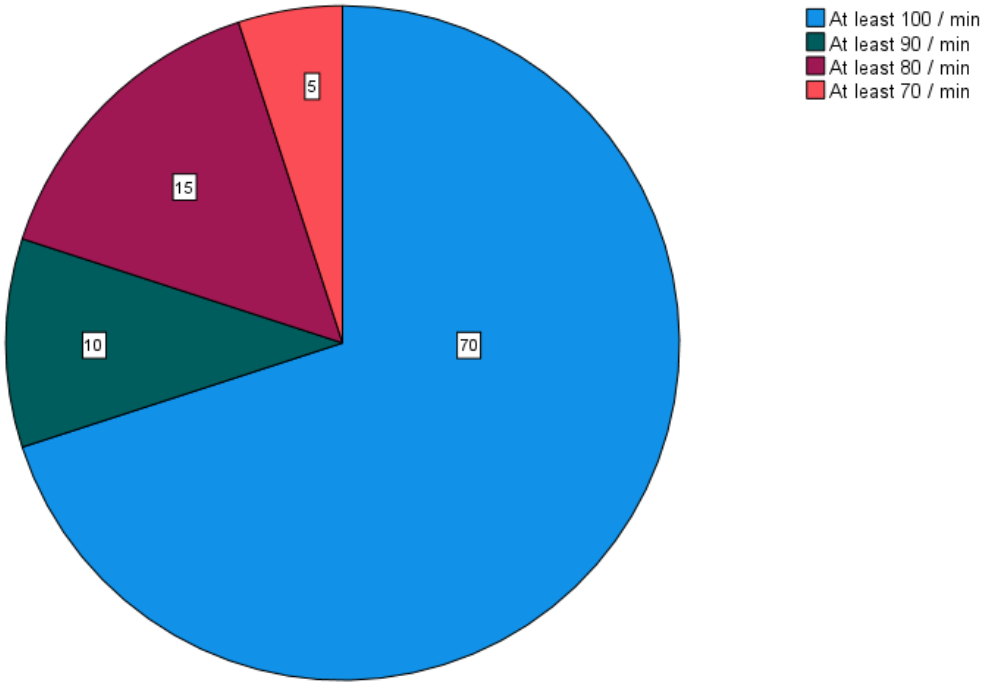
. Rate of chest compression in adult and Children during CPR?



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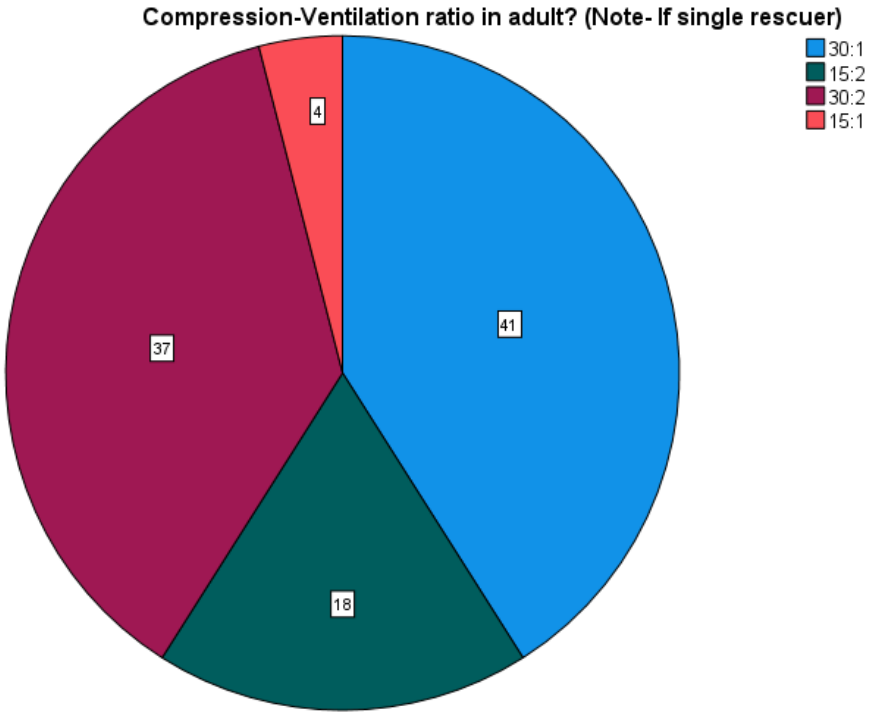

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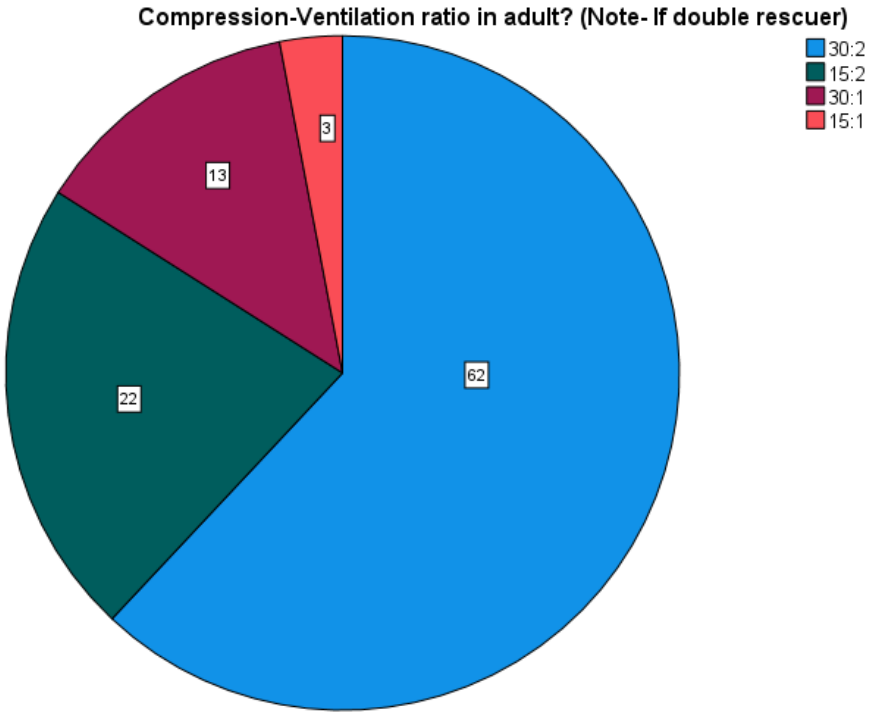

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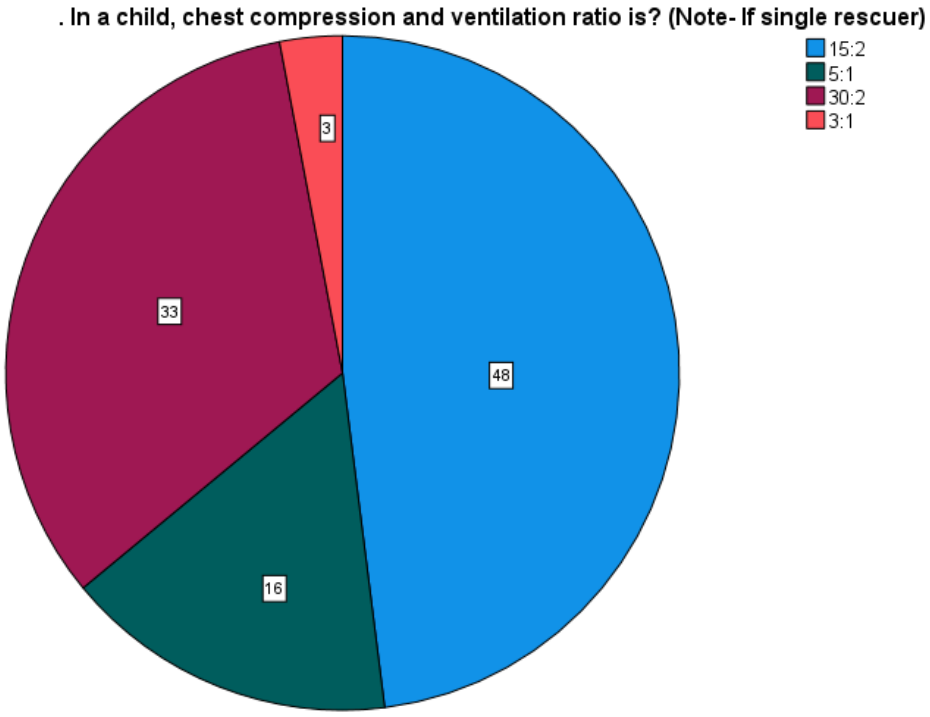

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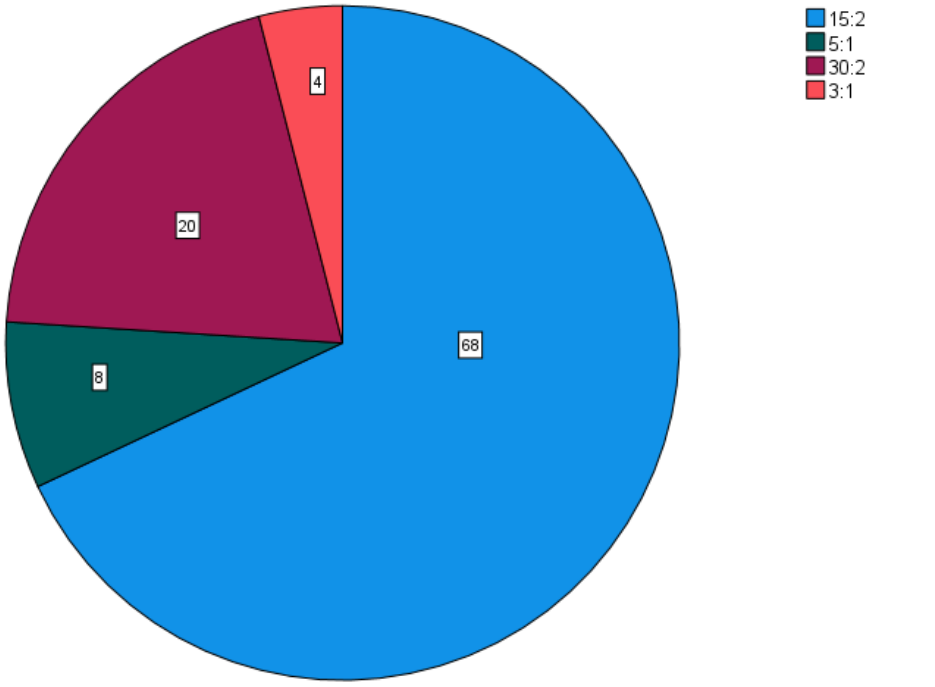
. In a child, chest compression and ventilation ratio is? (Note- If double rescuer)



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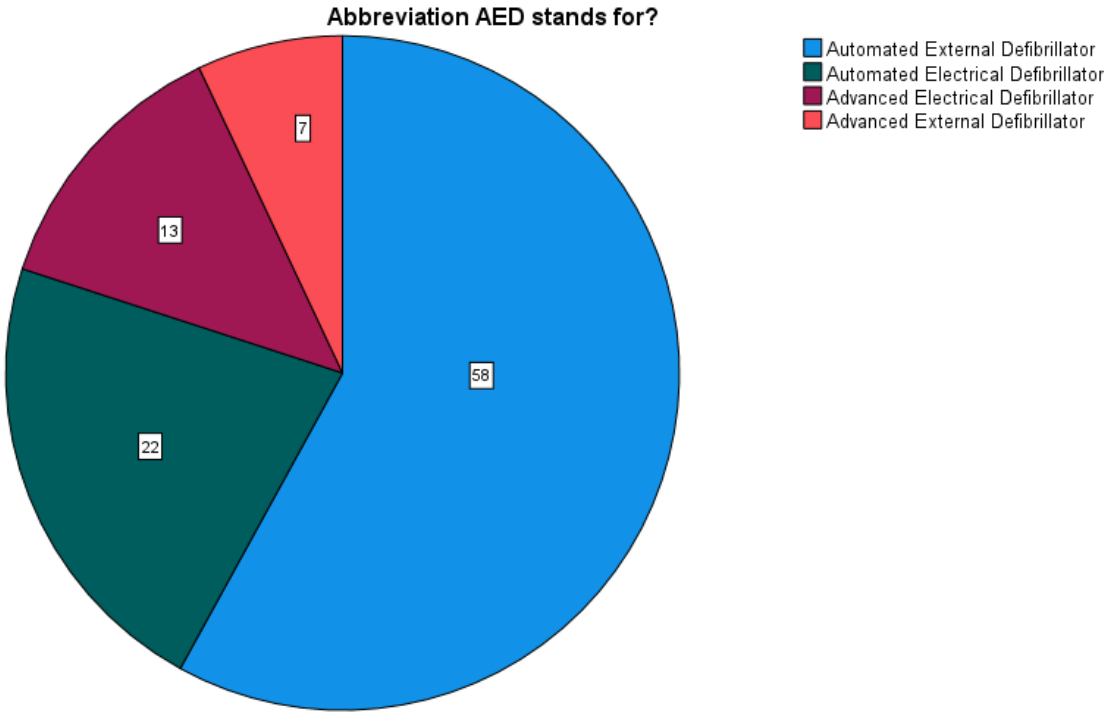

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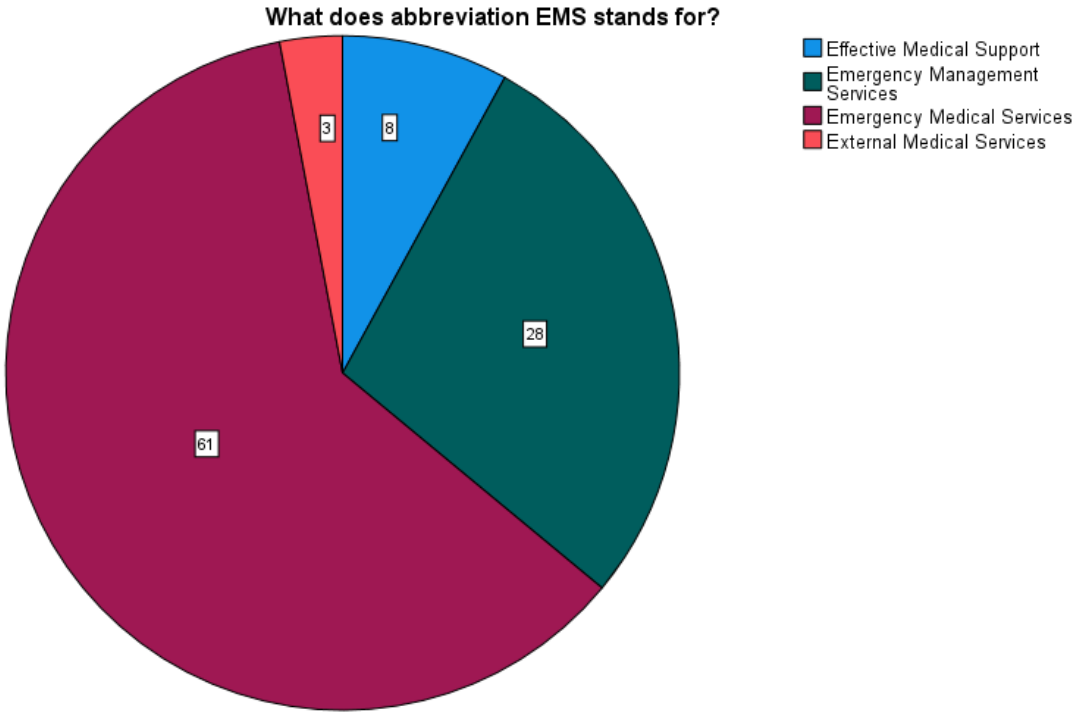

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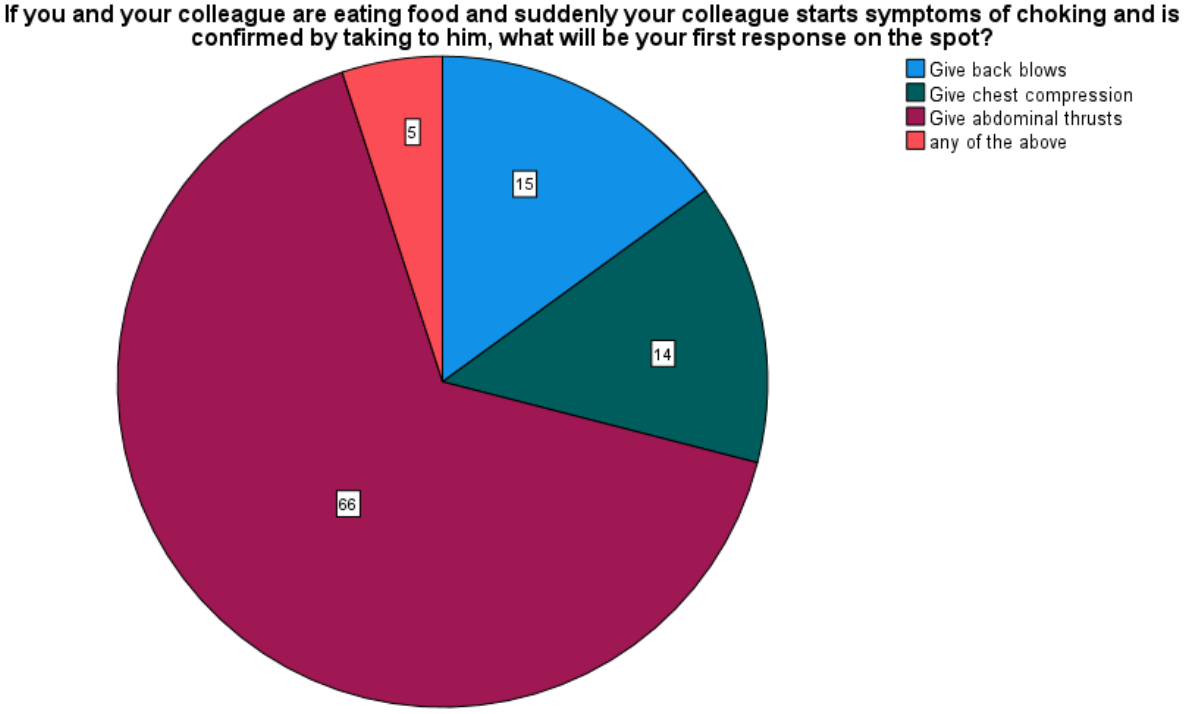

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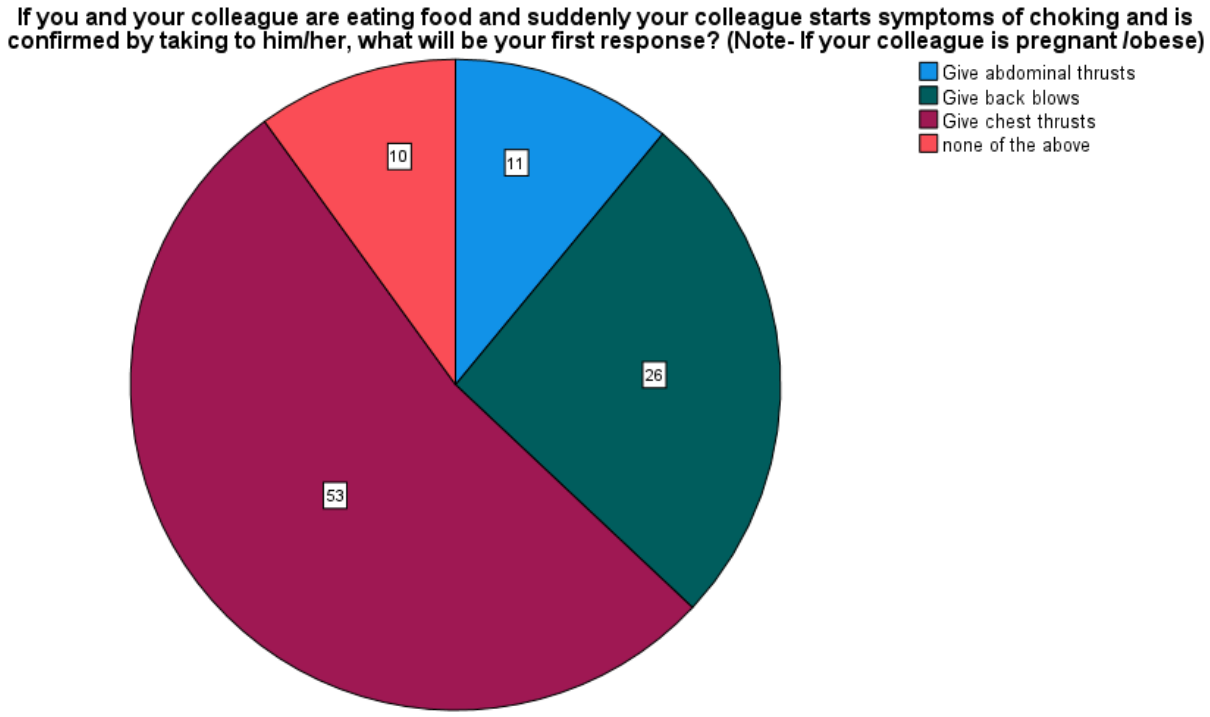

CHAPTER 5

Discussion

In the study regarding chest compressions in adults, it was observed that around half of the participants correctly recognized key aspects of performing chest compressions, including the proper hand placement (at the center of the chest between the nipples), the recommended compression rate (100 compressions per minute), and the chest compression to ventilation ratio (30 chest compressions followed by 2 ventilations). However, a significant knowledge gap was identified in another critical dimension: only 30% of the participants were aware of the recommended depth of chest compression in adults, which should fall within the range of 1.5 to 2 inches. This highlights the need for improved awareness and education on the importance of achieving the correct compression depth in adult CPR (15)

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In this research study, it was found that approximately 72% of the participants correctly identified the accurate location for chest compressions, which is the center of the chest on the breastbone. Furthermore, the study revealed that a substantial proportion of respondents were able to correctly identify the recommended compression-ventilation ratios for both single rescuers (30 compressions followed by 2 ventilations) and double rescuers (15 compressions followed by 2 ventilations)

Both research studies focused on the awareness and knowledge of key aspects of performing chest compressions in adult CPR. , there was a notable knowledge gap regarding the recommended compression depth, with only 30% awareness. In contrast, this reseach showed a higher level of awareness (72%) regarding the correct hand placement for chest compressions.

Both studies highlighted the importance of education and training to improve individuals' knowledge and understanding of essential CPR techniques. Previous research emphasized the need for greater awareness about compression depth, while this reseach demonstrated that participants were more knowledgeable about chest compression location and compression-ventilation ratios. Together, these findings underscore the significance of comprehensive CPR training to ensure effective life-saving responses during emergencies.

it was found that out of 25 participants, which accounted for 18% of the total respondents, a significant portion did not correctly understand the meaning of the abbreviation 'BLS.' Additionally, 59 individuals, making up 42% of the respondents, were unable to identify 'looking for safety' as the initial step in Basic Life Support (BLS). Furthermore, a substantial 104 participants, equivalent to 75% of the total, failed to recognize the appropriate course of action, which is activating Emergency Medical Services (EMS), immediately upon confirming the unresponsiveness of an adult in an emergency situation.(16)

in this research when people were quizzed about the abbreviation "BLS," an overwhelming majority, specifically 96% of the participants, correctly associated it with "Basic Life Support." Similarly, the abbreviation "EMS" was correctly understood by 61% of those surveyed, with

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respondents recognizing it as an abbreviation for "Emergency Medical Services."

Previous study focuses on assessing specific aspects of Basic Life Support (BLS) understanding, revealing knowledge gaps such as 18% not correctly identifying the BLS abbreviation's meaning, 42% failing to recognize 'looking for safety' as the first BLS step, and 75% not identifying activating Emergency Medical Services (EMS) as the immediate response after confirming adult unresponsiveness. In contrast, this study has a broader scope, assessing the recognition of medical abbreviations, with a focus on 'BLS' and 'EMS.' It reports that a significant majority (96%) correctly identified 'BLS' as 'Basic Life Support' and 61% accurately recognized 'EMS' as 'Emergency Medical Services.' While Research 1 delves into specific procedural knowledge gaps within BLS, Research 2 provides a more general assessment of abbreviation recognition in the medical field.

Approximately 38% of respondents were able to correctly identify the appropriate method for managing a choking pediatric patient. However, it is noteworthy that less than one-third of those surveyed could accurately pinpoint the correct approach for dealing with a choking adult.(17)

In this study ,In situations involving choking incidents, the majority of respondents, approximately 66%, demonstrated a good understanding of the correct course of action, which involved administering abdominal thrusts to a choking colleague. In the previous study, it was found that only approximately 38% of respondents were able to correctly identify the appropriate method for managing a choking pediatric patient, and less than one-third could accurately pinpoint the correct approach for dealing with a choking adult. This suggests a significant knowledge gap and potential lack of preparedness among respondents when it comes to choking incidents, particularly in the context of different age groups. However, in the current study, there is a more positive trend, as around 66% of respondents demonstrated a good understanding of the correct course of action, which involved administering abdominal thrusts to a choking colleague. This indicates an improvement in knowledge and readiness when compared to the previous study, potentially reflecting increased awareness and training efforts in the intervening period. Nevertheless, there is still room for improvement in educating individuals on proper choking response, especially when

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dealing with different age groups.

Conclusion

This study is conducted at tertiary care hospitals in district swat, Khyber Pakhtunkhwa, Pakistan. The aim of the study was to assessing knowledge regarding BLS among Health care professionals. this study highlights the commendable level of knowledge and awareness among healthcare workers regarding Basic Life Support (BLS) procedures. The responses gathered from the participants demonstrate a strong grasp of fundamental BLS principles and actions necessary in critical situations. The majority of healthcare workers correctly identified the abbreviation "BLS" as "Basic Life Support," showcasing a solid foundational understanding of the field.

The study's findings reveal a clear emphasis on collaboration and prompt action when faced with emergencies. Participants recognized the importance of seeking assistance and involving emergency response teams in scenarios involving unresponsive adults. The preference for maintaining the airway and promptly recognizing cardiac arrest in accident-related incidents further underscores the respondents' commitment to immediate and effective intervention.

It is heartening to observe that a significant portion of healthcare workers are well-versed in the essential steps of cardiopulmonary resuscitation (CPR). From determining compression locations to understanding compression depths for various age groups, the majority of participants displayed accurate knowledge of these critical techniques. Additionally, familiarity with compression-ventilation ratios and the usage of Automated External Defibrillators (AEDs) and Emergency Medical Services (EMS) demonstrates a comprehensive awareness of the tools and resources available in emergency situations.

Moreover, the study reveals that healthcare workers are well-prepared to handle choking incidents, as evidenced by their appropriate selection of actions such as abdominal thrusts for a choking colleague.

Overall, this study underscores the importance of continuous training and education in maintaining and enhancing healthcare workers' proficiency in Basic Life Support procedures. While the

majority of respondents displayed a strong understanding of BLS principles, there may still be opportunities to reinforce certain aspects and ensure a consistently high level of competence across all healthcare professionals. As medical practices and protocols evolve, ongoing education will be crucial in equipping healthcare workers to provide the best possible care in emergency scenarios, ultimately contributing to improved patient outcomes and safety.

Recommendations

In conclusion, it is strongly recommended that further research be conducted to expand our understanding of BLS knowledge among healthcare professionals across different regions. The implementation of similar comprehensive studies, involving an equal representation of nurses, doctors, and paramedics in diverse locations, holds immense potential. By replicating these large-scale investigations, we can gather more substantial evidence regarding individuals' BLS awareness. This approach will not only validate our findings but also unearth additional areas for improvement within BLS training programs and emergency response protocols. Such multi-dimensional research endeavors will contribute significantly to enhancing patient care and healthcare system readiness on a global scale.

Limitations

We're thankful to Allah that our research has been successful, though not without facing some challenges. One big challenge was the lack of enough relevant information about our topic, especially when it comes to Pakistan. There were very few previous studies to guide us, making it harder to start. Another big problem was the large number of people we studied – 100 participants. This made it take more time to carefully look at and organize all the information we collected from them. But even with these tough parts, our strong commitment kept us going and helped us achieve our research goals.

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