Assessment of parents knowledge about first aid in Al-Najaf Al-Ashraf governorate

Ahmed Saleh Redha AL-Qadi[1*], Nabeel Basem Nasser[2], Mohammed Murtadha Jabbar ALSANAM[3]

[1*]High Health Institute, Al-Najaf Al-Ashraf, Iraq | PhD of Adult Nursing Branch | Email: ahmed.reda.nurh52@student.uobabylon.edu.iq | Email: nur354.ahmed.salah@student.uobabylon.edu.iq

[2]Department of Radiology, College of Health and Medical Technology, University of Alkafeel, Najaf, Iraq | M.Sc.N. Community Health Nursing | Email: naneel049@gmail.com | Email: nabeel.basem@alkafeel.edu.iq | Phone: +964 7805935423

[3]Department of Anesthesia, College of Health and Medical Technology, University of Alkafeel, Najaf, Iraq | M.Sc.N. RN | Email: mohammad90874@gmail.com | Email: mohammed.murtada@alkafeel.edu.iq

***Corresponding Author:** Ahmed Saleh Redha AL-Qadi, High Health Institute, Al-Najaf Al-Ashraf, Iraq | Email: ahmed.reda.nurh52@student.uobabylon.edu.iq

Background

First aid is the fastest and most successful way to save the lives of the injured in some cases that require rapid vital intervention, and it is possible to train and teach people the steps of first aid at home, in the workplace, at school and other places.

Aims of study

1. Assess parents' knowledge of first aid for children's accidents and the necessary steps to prevent them.
2. Involve parents in the necessary training program to enhance their first aid skills in case of accidents.

Methods

Descriptive cross sectional (purposive sample) study design was selected to achieve the objectives of study Assessment of parents knowledge about first aid in Al-Najaf Al-Ashraf governorate started from January between 22 January 2024 and 8 March 2024. The Northern Sector, The Southern Sector, And The Kufa Sector to selected Assessment of parents knowledge about first aid in Al-Najaf Al-Ashraf governorate.

Results

The study results showed similar participation between males and females, while the lowest percentage was that of those who could not read and write, in addition to the participation of a small percentage of the rural population in the study. The results showed a relationship between demographic data and the parents' cognitive level.

Conclusion and Recommendation

The study included different age groups among the parents, with a similar ratio between males and females, and also found a relationship between the cognitive level and the demographic distribution of the participants. The most important recommendation based on the study's findings is the need to support the community with health programs and nurses who can train parents on the importance of first aid at home.

Introduction

First aid training is a way to improve this initial response by laypeople. Since the introduction around 1960 of external cardiopulmonary resuscitation (CPR) basic life support (BLS) without equipment, i.e. steps A (airway control)-B (mouth-to-mouth breathing)-C (chest (cardiac) compressions), training courses by instructors have been provided, first to medical personnel and later to some but not all lay persons. At present, fewer than 30% of out-of-hospital resuscitation attempts are initiated by lay bystanders. The numbers of lives saved have remained suboptimal, in part because of a weak or absent first link in the life (Aaberg et al., 2024).

Childhood injury is a major public health problem that requires urgent attention. Injury and violence is a major killer of children worldwide, responsible for about 950 000 deaths in children and young people under the age of 18 years each year (Rotimi, 2022).

Unintentional injuries account for almost 90% of these cases. They are the leading cause of death for children aged 10–19 years. In addition to the deaths, tens of millions of children require hospital care for nonfatal injuries. Many are left with some form of disability, often with lifelong consequences (Deegan et al., 2023).

Children spend most of their time at home under the care of their parents, especially their mother. Children are interested in discovering new things, this make them at high risk of unintentional injuries and death. Rapid and right intervention from parents can limit disability and increase the chances of survival of the injured child and make a big difference in the outcome. A caregiver should have an appropriate and adequate amount of first-aid knowledge and practice (Sekar, 2023).

First aid can define as helping behaviors and initial care provided for an acute illness or injury. The goals of a first-aid provider include preserving life, alleviating suffering, preventing further illness or injury, and promoting recovery (Ala'a, 2018).

First aid is the first and immediate assistance given to any person with either a minor or serious illness or injury with care provided to preserve life, prevent the condition from worsening, or to promote recovery until medical

services arrive. First aid is generally performed by someone with basic medical training. Mental health first aid is an extension of the concept of first aid to cover mental health (Sholokhova et al, 2023).

Basic first aid is being able to provide basic medical care to someone who is experiencing a sudden injury or illness. It often comes in forms such as treatment to burns, cuts, or even insect stings; but could also consist of providing support to someone in the middle of a medical emergency. (Kharbanda, 2020).

Review of Literatures

Organizations like the American Red Cross advocate for widespread first aid training because hundreds of thousands of people in the United States die every year from treatable, or preventable deaths that could have been avoided through immediate first aid. For example, 350,000 Americans die from Sudden Cardiac Arrest every year, while another 60,000 die from heavy bleeding or rapid blood loss from emergency accidents. Drowning and choking also account for several thousand other preventable deaths each year (Skvoretz et al., 2020).

The purpose of first aid training is to empower everyday people with the skills to step up and provide care in an emergency situation until professional help arrives. The nature of emergencies is that they often happen when and where they are *least* expected, so having a background in general first aid is always a good idea (Bull et al., 2020).

First aid is the immediate assistance given to someone who is ill or injured. In the vital few minutes before the emergency services arrive basic first aid can be the difference between life and death. In the vital few minutes before the emergency services arrive basic first aid can be the difference between life and death (Donthireddy et al., 2022). The five most common causes of needless death from a lack of first aid are:

1. Choking
2. The Heart Not Beating
3. Severe Bleeding
4. Heart Attack
5. Blocked Airway.

BLS techniques are fundamental skills that teach people how to provide immediate care to those who may be experiencing a life-threatening cardiac emergency, like Sudden Cardiac Arrest or a heart attack. With BLS training, participants will learn how to recognize the signs and symptoms of cardiac arrest, perform chest compressions, and use an Automated External Defibrillator (Svartzman et al., 2021).

Basic life support (BLS) refers to a set of essential emergency procedures designed to sustain life in individuals experiencing cardiac arrest, respiratory failure, or other life-threatening conditions. BLS techniques include recognizing and responding to emergency situations, calling for help, performing cardiopulmonary resuscitation (CPR), using automated external defibrillators (AEDs), and providing basic airway management and breathing assistance. BLS is typically provided by trained medical professionals or bystanders until advanced medical care can be obtained (Sakaue, 2021).

CPR training teaches proper techniques for performing chest compressions and delivering rescue breaths – both skills can help to revive someone who is unconscious and not breathing normally. Immediate action with CPR can significantly increase a person's chances of surviving a cardiac arrest (Sholokhova et al, 2023).

It is essential to evaluate the area for potential dangers such as debris, shrapnel, or hazardous materials before initiating CPR. Ensuring scene safety before starting CPR will prevent injuries to you, the patient, and any bystanders (Karal, 2023).

It is common for participants in first aid classes to learn how to stabilize and immobilize fractures and sprains with the goal of preventing further injury and alleviating pain before professional medical attention is available (Falk, 2023).

To treat burns and thermal injuries, participants in a first aid class will learn how to assess the severity of a burn and treat it by cooling the burn with water, covering it with clean dressing, and calling on professional help for more severe burns (Deegan et al., 2023).

It is crucial to activate the emergency medical services (EMS) system as soon as possible to ensure that professional help arrives on the scene. You can call the emergency number in your area and follow the instructions provided by the dispatcher (Sekar, 2023).

An airway obstruction is usually a medical emergency. Call 911 someone near you is experiencing an airway obstruction. There are some things you can do to help while you're waiting for emergency services to arrive, including the following (Eskander et al., 2019):

During a first aid class, participants will also learn how to recognize and respond to choking emergencies. They'll receive instructions for how to clear airway obstructions using the Heimlich maneuver for adults, or back blows for children (Quinn et al., 2021).

Most first aid classes will include some instruction on how to manage wounds and prevent excessive blood loss from injuries that could lead to death. Participants will learn how to apply direct pressure, elevate the wound, and use dressings or bandages to control the bleeding (Shefa et al., 2019).

An airway obstruction is a blockage in any part of the airway. The airway is a complex system of tubes that transmits inhaled air from your nose and mouth into your lungs. An obstruction may partially or totally prevent air from getting into your lungs (Nwainya, 2023).

Choking is the obstruction of the airway. Obstruction of the airway can be caused by food, swallowing foreign objects, laughing or crying while eating or drinking. It can also be caused by running while eating or drinking, swallowing food when not chewed enough and breathing in while eating or drinking or swallowing bone splinters (Cross et al., 2019).

Types of airway obstructions

The types of airway obstructions are classified based on where the obstruction occurs and how much it blocks (Restin et al., 2023):

- **Upper airway obstructions** occur in the area from your nose and lips to your larynx (voice box).
- **Lower airway obstructions** occur between your larynx and the narrow passageways of your lungs.
- **Partial airway obstructions** allow some air to pass. You can still breathe with a partial airway obstruction, but it's difficult.
- **Complete airway obstructions** don't allow any air to pass. You can't breathe if you have a complete airway obstruction.
- **Acute airway obstructions** are blockages that occur quickly. Choking on a foreign object is an example of an acute airway obstruction.
- **Chronic airway obstructions** occur two ways: by blockages that take a long time to develop or by blockages that last for a long time.

Methodology

1. Design of the Study:

Descriptive cross sectional study design was selected to achieve the objectives of study Assessment of parents knowledge about first aid in Al-Najaf Al-Ashraf governorate started from January between 22 January 2024 and 8 March 2024.

2. Setting of the Study:

The Northern Sector, The Southern Sector, And The Kufa Sector to selected Assessment of parents knowledge about first aid in Al-Najaf Al-Ashraf governorate.

3. Sample of the Study:

Non probability (purposive) sample of 100 parents (52) male and (48) female was selected to Assessment of parents knowledge about first aid in Al-Najaf Al-Ashraf governorate visited the primary health centers which in The Northern Sector, The Southern Sector, And The Kufa Sector with Agree to participate in the study

4. The Study Instrument:

An assessment questionnaire was adopted and developed by the researcher to Assessment of parents knowledge about first aid in Al-Najaf Al-Ashraf governorate after intensive review of related literatures.

Part 1: Demographic Data:

A demographic data sheet, consists of (6) items, which included residency, gender, age, marital status, level of education, and occupational status.

Part 2: assessment the parents knowledge about first aids

presents an assessment of parents' knowledge about first aid. The assessment reveals that parents' knowledge about first aid varies across different items, with some demonstrating low, moderate, or high levels of knowledge.

Part 3: Validity of the Study Instrument:

Validity of the questionnaire obtain by (10) experts, who work in high health institute , with not less than (10) years of experience to investigate clarity, relevancy, and adequacy of the questionnaire to measure the concept of interest, All their suggestion taken under consideration. A preliminary copy of the questionnaire was designed and presented to (10) experts.

Results

Table (1) distribution the demographical data

Items		Frequency	Percentage
Age groups	20-40 years	67	67
	41-60 years	33	33
Gender	Male	52	52
	Female	48	48
Level of education	Unable to read and write	3	3
	Able to read and write	9	9
	Primary school	29	29
	Intermediate school	12	12
	Preparatory school	15	15

	Institute	12	12
	Collage	20	20
Occupation	Employed	44	44
	Free worker	34	34
	Retired	0	0
	Jobless	4	4
	Housewife	18	18
Residence	Rural area	16	16
	Urban area	84	84

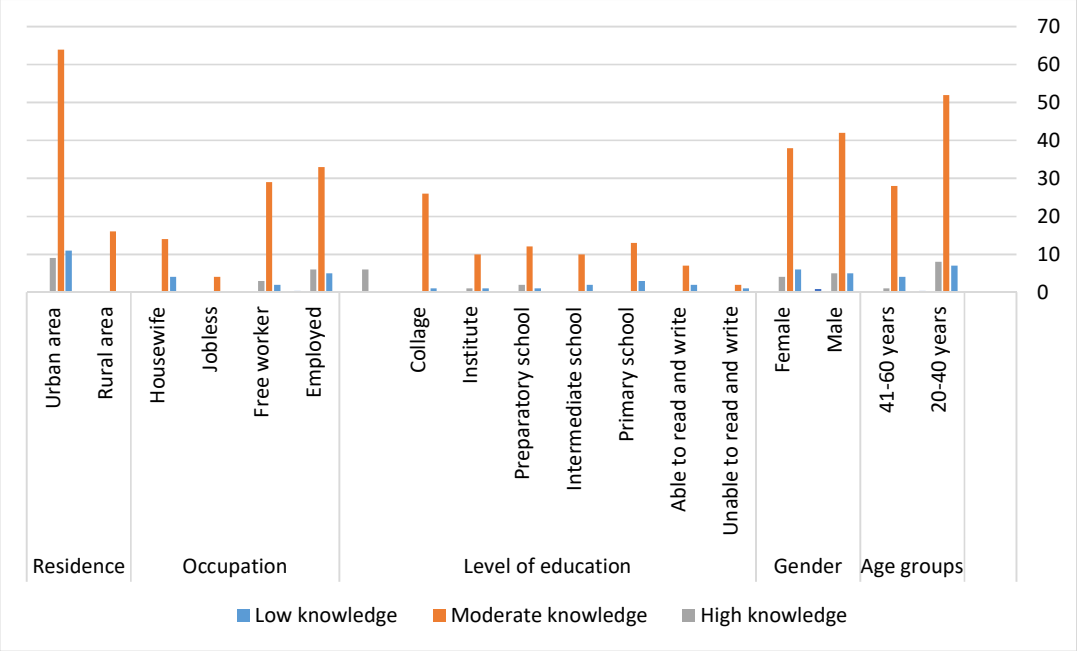
Table (1) provides a distribution of demographical data, summarizing key characteristics of the surveyed population. Related to age the 20-40 years the major group 67% of the sample, gender almost equal distribution is observed between males (52%) and females (48%). The educational spectrum ranges from individuals unable to read and write (3%) to those having achieved higher education, such as college graduates (20%).The workforce composition includes employed individuals (44%), free workers (34%), jobless individuals (4%), and housewives (18%). No respondents reported being retired. The surveyed population is predominantly urban (84%), with a minority residing in rural areas (16%).

Table (2) Association Between The Demographical Data And Parent's Knowledge

Items		Low knowledge	Moderate knowledge	High knowledge	Chi-seq.	p-value
		Freq. (%)	Freq. (%)	Freq. (%)		
Age groups	20-40 years	7	52	8	2.151[a]	0.341
	41-60 years	4	28	1		
Gender	Male	5	42	5	0.242[a]	0.886
	Female	6	38	4		
Level of education	Unable to read and write	1	2	0	19.635[a]	0.074
	Able to read and write	2	7	0		
	Primary school	3	13	0		
	Intermediate school	2	10	0		
	Preparatory school	1	12	2		
	Institute	1	10	1		
	Collage	1	26	6		
Occupation	Employed	5	33	6	6.815[a]	0.338
	Free worker	2	29	3		
	Jobless	0	4	0		
	Housewife	4	14	0		
Residence	Rural area	0	16	0	4.762[a]	0.092
	Urban area	11	64	9		

Table (2) illustrates the association between demographical data and parents' knowledge levels regarding first aid. The table displays the frequency and percentage of respondents with low, moderate, and high knowledge levels across different demographic categories. Chi-square tests were conducted to examine the significance of these associations, with corresponding p-values provided.

Figure (1) illustrating the cognitive distribution among the learning levels of the community members participating in the study.



Discussion

Part-1st: Discussion of the Demographic:

The results related to the demographical characteristics of the study sample which is presented in table (1) shows that the higher percentage 67(67%) of the study sample were between (20-40) years of age, 52(52%) were males, This result was parallel with the finding of the study, which is carried out in Iraq (Bull et al., 2020).

Individuals who are married and have low educational level were label to expose to determining Assessment of parents knowledge about first aid in Al-Najaf Al-Ashraf governorate (Cross et al., 2019).

The results of table (1) presented the distribution of the sample related to residency, the current study results show that most of the sample 84(84%) were urban area residency, This result was agreement with a study with carried out by (Eskander et al., 2019) which shows that 72% from the subjects in the study live in city.

Part-2nd: parents knowledge about first aid:

The study findings indicate that the overall Assessment of parents knowledge about first aid in Al-Najaf Al-Ashraf governorate is moderate knowledge. This result agree with (Quinn et al., 2021) (A descriptive comparative study was conducted between the second and fourth stage students in the College of Nursing for the purpose of achieving the research objectives for the period: November 1, 2019, to January 15, 2021. A non-probability (objective) sample was selected of 60 students (30 students of the second stage and 30 students of the fourth stage). The data was collected using a questionnaire and by the Google form. Descriptive statistics (frequencies, percentages, and mean) and inferential statistics (t-test) were used in the data analysis), The results showed that students 'knowledge related to first aid measures was insufficient with low and moderate score, and there is no significant statistical difference in knowledge between the second and fourth stage students.

Limitations:

The study focuses on a specific demographic group in a particular geographic area, which limits the possibility of generalizing its results to a wider segment of the population at present, whereas areas with populations of different socioeconomic backgrounds could be selected.

Conclusion and Recommendation

1. Conclusions

1. The majority of the study sample are age the 20-40 years the major group 67% of the sample, gender almost equal distribution is observed between males (52%) and females (48%).
2. The study findings indicate that the overall Assessment of parents knowledge about first aid in Al-Najaf Al-Ashraf governorate is moderate knowledge.

2. Recommendations:

1. The study recommended further research on a broad population to assess the knowledge and practices of parents and family members regarding first aid in critical situations.
2. Licensed nurses and a case manager should be available to assess the needs of family members and parents and provide guidance, advice, and referrals to prevent complications following accidents.

Ethical approvals

The study obtained ethical approvals from the scientific and ethical committees of the Higher Institute of Health in AL-Najaf AL-Ashraf Governorate before data collection from participants began. After ensuring the confidentiality of the information obtained from the study participants, their written consent was obtained for inclusion in the study sample prior to the commencement of the research. The study was conducted in accordance with the ethical principles stipulated in the Declaration of Helsinki.

References

1. Aaberg, A. M. R., Larsen, C. E. B., Rasmussen, B. S., Hansen, C. M., & Larsen, J. M. (2024). Basic life support knowledge, self-reported skills and fears in Danish high school students and effect of a single 45-min training session run by junior doctors; a prospective cohort study. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, *22*, 1-6.
2. Rotimi, D. E., & Singh, S. K. (2022). Interaction between apoptosis and autophagy in testicular function. *Andrologia*, *54*(11), e14602.
3. Deegan, E., Wilson, N. J., Pullin, L. H., & Lewis, P. (2023). Cardiopulmonary resuscitation and basic life support for people with atypical chest shapes and wheelchair users: Toward supplemented education and emergency management plans. Disability and Health Journal, 16(4), 101501.
4. Sekar, K. (2023). National Institutes of Health (NIH) Provisions Expiring in 2023. Congressional Research Service (CRS) Reports and Issue Briefs, NA-NA.
5. Ala'a, A. S., Sabor, S., & Aldubai, S. A. (2018). Knowledge and practice of first aid among parents attending primary health care centers in Madinah City, Saudi Arabia, A cross sectional study. Journal of family medicine and primary care, 7(2), 380-388.
6. Kharbanda, O. P. (Ed.). (2020). Mosby's Dental Dictionary, 4e-South Asia Edition-E Book. Elsevier Health Sciences.
7. Skvoretz, J., Kersaint, G., Campbell-Montalvo, R., Ware, J. D., Smith, C. A., Puccia, E., ... & Wao, H. (2020). Pursuing an engineering major: social capital of women and underrepresented minorities. Studies in Higher Education, 45(3), 592-607.
8. Bull, F. C., Al-Ansari, S. S., Biddle, S., Borodulin, K., Buman, M. P., Cardon, G., ... & Willumsen, J. F. (2020). World Health Organization 2020 guidelines on physical activity and sedentary behaviour. British journal of sports medicine, 54(24), 1451-1462.
9. Donthireddy, L., Vonteddu, P., Murthy, T., Kwak, T., Eraslan, R. N., Podojil, J. R., ... & Gabrilovich, D. I. (2022). ONP-302 nanoparticles inhibit tumor growth by altering tumor-associated macrophages and cancer-associated fibroblasts. Journal of Cancer, 13(6), 1933.
10. Svartzman, R., Espagne, E., Julien, G., Paul, H. L., Mathilde, S., Allen, T., ... & Vallier, A. (2021). A'Silent Spring'for the Financial System? Exploring Biodiversity-Related Financial Risks in France.
11. Sakaue, S., Kanai, M., Tanigawa, Y., Karjalainen, J., Kurki, M., Koshiba, S., ... & Okada, Y. (2021). A cross-population atlas of genetic associations for 220 human phenotypes. Nature genetics, 53(10), 1415-1424.
12. Sholokhova, D., Michalak, M., & Wejnarski, A. (2023). Knowledge of CPR and first aid for children among pedagogy students. Critical Care Innovations, 6(4), 23-33.
13. Karal, M. A. S., Sultana, S., Billah, M. M., Moniruzzaman, M., Wadud, M. A., & Gosh, R. C. (2023). Effects of polyethylene glycol-grafted phospholipid on the anionic magnetite nanoparticles-induced deformation and poration in giant lipid vesicles. PLoS One, 18(7), e0289087.
14. Quinn, K. M., Hardy, W. A., Seigler, S. W., Holman, H. L., Kwon, J. H., & Rajab, T. K. (2022, November). Peripheral Arterial Compression as a New Adjunct Technique to Cardiopulmonary Resuscitation. In Healthcare (Vol. 10, No. 11, p. 2194). MDPI.
15. Nwainya, H. O. (2023). Addressing the Need for Recognition: A Fundamental and Constitutive Point of Departure for Catholic Social Ethics (Doctoral dissertation, Boston College).
16. Cross, M., Harlow, E., Morrison, S. R., Place, M., Sutherland, M., Thomas, J., & Leslie, S. J. (2019). Bystander CPR trainning: Is non-classroom based CPR training as effective as a classroom based approach? A systematic review of randomised controlled trails. Rural and remote health, 19(3), 1-9.
17. Restin, T., Hönes, M., Hummler, H. D., & Bryant, M. B. (2023). Effective ventilation and chest compressions during neonatal resuscitation–the role of the respiratory device: A randomized cross-over simulation study to assess the coordination between chest compressions and breathing support. The Journal of Maternal-Fetal & Neonatal Medicine, 36(2), 2276042.
18. Eskander, A., De Almeida, J. R., & Irish, J. C. (2019). Acute upper airway obstruction. New England Journal of Medicine, 381(20), 1940-1949.
19. Shefa, A. A., Taz, M., Hossain, M., Kim, Y. S., Lee, S. Y., & Lee, B. T. (2019). Investigation of efficiency of a novel, zinc oxide loaded TEMPO-oxidized cellulose nanofiber based hemostat for topical bleeding. International journal of biological macromolecules, 126, 786-795.
20. Falk, S. S., Mittlmeier, T., & Gradl, G. (2023). Residual dorsal displacement following surgery in distal radial fractures: A cause for trouble?. European Journal of Trauma and Emergency Surgery, 49(2), 843-850.