

# Critical Analysis Of The Doctoral Survey On CPR And Brain Death

Dr. Asfandiyar Khan<sup>1</sup>, Dr. Hardi Sidiq Mohammed<sup>2</sup>, Dr. Shajia Haider<sup>3</sup>, Dr. Aeliya Batool<sup>4</sup>, Dr. Katherine Villarreal<sup>5</sup>, Dr. Umair Safdar<sup>6</sup>, Dr. Muhammad Khan<sup>7</sup>, Dr. Muhammad Imtiaz<sup>8</sup>

<sup>1</sup>Bacha Khan Medical Complex Swabi, Pakistan. Email: [asfandiyar90@gmail.com](mailto:asfandiyar90@gmail.com)

<sup>2</sup>Pharmacy Department, Shar Teaching Hospital, As Sulaimanyah, Iraq. Email: [hardimedical89@gmail.com](mailto:hardimedical89@gmail.com)

<sup>3</sup>Department of Pharmacology, Karachi Medical and Dental College, Pakistan.

Email: [shaaajia@gmail.com](mailto:shaaajia@gmail.com)

<sup>4</sup>Department of Pharmacology, Karachi Medical and Dental College, Karachi, Pakistan. Email: [aeliyajaffery@gmail.com](mailto:aeliyajaffery@gmail.com)

<sup>5</sup>Ministry of Public Health, Ecuador. Email: [katherinevillarreal24@gmail.com](mailto:katherinevillarreal24@gmail.com)

<sup>6</sup>Govt. Children Hospital Mandi Bahauddin, Pakistan. Email: [U.safdar.222@gmail.com](mailto:U.safdar.222@gmail.com)

<sup>7</sup>District Headquarters Hospital Sargodha, Pakistan. Email: [drmkhanmalik@gmail.com](mailto:drmkhanmalik@gmail.com)

<sup>8</sup>FMH College of Medicine and Dentistry, Shaman, Lahore, Pakistan.

Email: [mimtiaz\\_pk@yahoo.com](mailto:mimtiaz_pk@yahoo.com)

DOI: 10.47750/pnr.2022.13.510.453

## Abstract

The study aims to assess the state of CPR Cardiopulmonary resuscitation and AED training among primary care physicians in Karachi. In May 2018, doctors working in Primary Healthcare in Karachi participated in a survey for a descriptive longitudinal study. The chi-square value and goodness of fit were calculated for these outcomes. The poll results show that more than half of respondents highly value the first Professional Technical factor. The doctor's leadership performance indicator was only stable below this threshold. In conclusion, the medical staff has difficulty keeping up with the latest developments in Cardiopulmonary and Cerebral Resuscitation techniques, so it's essential to actively promote and encourage such actions in teaching and training doctors in Resuscitation.

**Keywords:** CPR; Cardiopulmonary Resuscitation; cardiac arrest; first aid; emergency medical services; primary care; Resuscitation.

## Introduction:

A cardiorespiratory arrest is a medical emergency that occurs at the end of a long and fruitful life. Still, many people are impacted by this phenomenon far too early. In terms of the definition of cardiorespiratory arrest (PCR). A medical condition characterized by the unexpected and rapid halt of spontaneous respiratory and cardiovascular functioning that may be reversed. Regardless of the cause of death, sickness, or trauma, all patients eventually experience cardiorespiratory arrest as their ultimate medical event for preventing the patient from PCR death; the final stage of a disease's natural and terminal progression is made possible by its classification as reversible (Machado et al., 2020).

Although hospitals account for most deaths, researchers have shown that just 10% of all PCRs occur there (Almasri et al., 2022; Pinheiro et al., 2018; Ronzón-Tirado et al., 2022; Wakasaki et al., 2018; Xiong et al., 2020). Ninety percent of these events happen outside of a hospital setting. The American Heart Association popularised the concept of a "chain of survival," which calls for developing a healthcare system that enables a cardiac arrest victim to receive primary and emergency care as quickly as feasible. Optimal functioning of the "Chain of Survival," a crucial component of effective care in cardiac arrest, can be attained through regular and up-to-date education and training in Cardiopulmonary and Brain Resuscitation (CPR). In a high-stakes circumstance like PCR, the victim's chances of survival drop by 10% for every minute that passes without Resuscitation; hence, after 10 minutes, the victim has no chance of being revived.

CPR Cardiopulmonary and brain resuscitation have significantly increased a victim's chance of survival in several international trials. According to the International Committee on what constitutes CPR, this encompasses all the actions taken first to replace and then try to restore the victim's regular breathing, heart rate, and brain function. The Karachi municipality's Primary Health Care (PHC) is where this study is being conducted; the city is located at a crossroads of several major east-west and north-south arteries in our capital, which results in a high number of traffic accidents; furthermore, the Karachi municipality is one of the largest in our capital, with a population that includes many young families and the elderly. This study's overarching goal is to assess the state of primary care cardiopulmonary resuscitation and cerebral Resuscitation in Karachi.

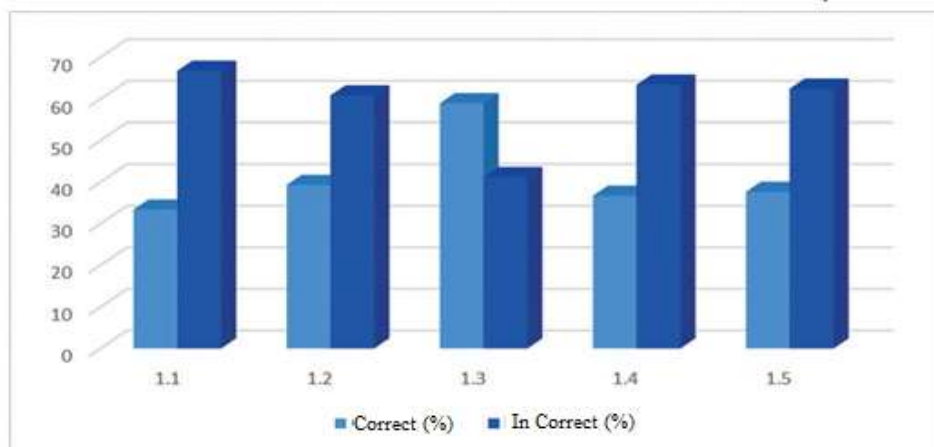
## Materials and Methods:

The Primary Healthcare Department in DHQ Karachi was the site of an exploratory, descriptive study in May 2018. Twenty-one clinicians from the "Pedro Fonseca" Polyclinic, thirteen from the "Pulido Humearán," and six from the "Elpidio Berovides" were selected at random to participate in the study. Each respondent signed an informed permission form before being given the survey about their cardiopulmonary and cerebral Resuscitation knowledge. The data were analyzed using the chi-square percentage and the goodness-of-fit test, with a significance level of 0.05.

## Results:

Since the right question was not answered for the indicators indicating non-medical personnel's knowledge, skills, talents, and training, the first Professional Technical dimension survey findings are greater than 50%. The doctor's leadership performance indicator started behaving, providing proper responses, at a threshold below this proportion. Most interviewees (66.66%) reacted erroneously to a question designed to gauge their understanding of Rcp-related material. Each doctor got only one of seven questions about this indicator right, with the other six being wrong.

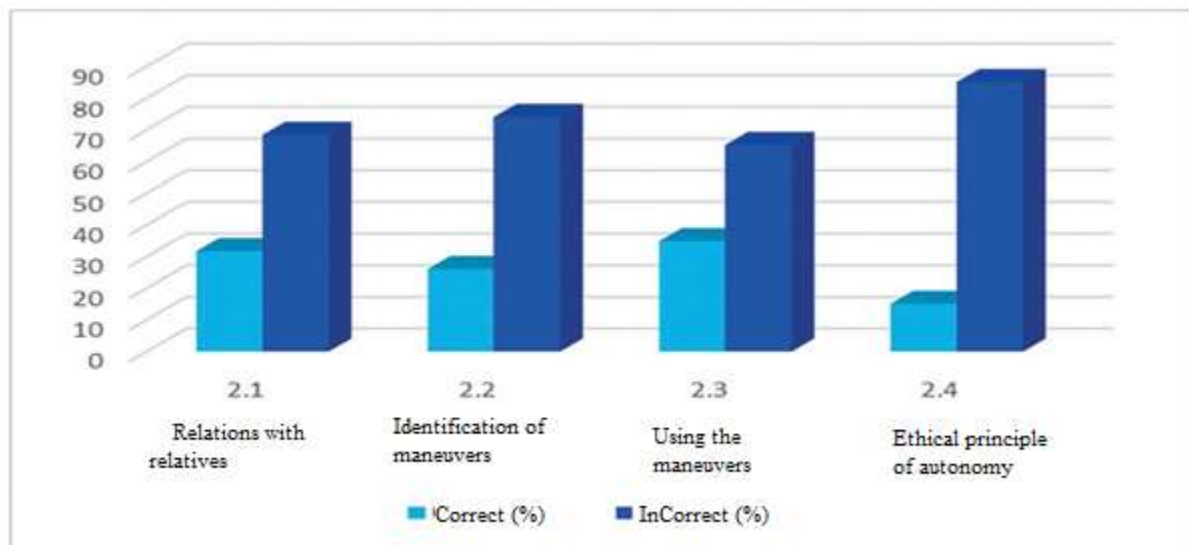
Most responders (60.74%) got an inaccurate score on an indicator measuring the development of abilities in the various CPR Cardiopulmonary resuscitation procedures. Some doctors checked the correct box for 1.4 (which asks how the doctor rates the CPR training of non-medical staff), and others didn't bother to respond at all (63.33%). Most responders (62.38%) gave incorrect answers to the 1.5 questions, gauging the level of expertise in performing the manoeuvres in Rcp. The highest percentage of correct answers came from indicator 1.3, which measures the extent to which medical team management is led by health team integration in CPR Cardiopulmonary Resuscitation. Example 1



GRAPH 1: Results of the Professional Technical Dimension.

Doctors gave incorrect answers on all indicators for the Professional Ethics Dimension. To evaluate this aspect, we considered many medical professionals got the first level of interpersonal ties with family wrong (level 2.1; 68.33%). Doctors responded poorly in the survey's 2.2 categories, gauging the degree of professional responsibility in determining CPR Cardiopulmonary resuscitation techniques (74%). The majority of physicians

(65.18%) made the incorrect selection on the indicator of professional commitment in the use of CPR techniques (2.3), demonstrating a lack of accountability in the section of the right manoeuvre in CPR (Cardiopulmonary resuscitation). Doctors did not follow the ethical principle of autonomy (85%) as measured by the final indicator, 2.4, which measured the extent to which doctors used the guide in their professional work. Graph 2



Graph 2. Results of the Professional Ethics Dimension.

Source: Survey

### Discussion:

Indicators 1.1, 1.2, and 1.8, where incorrect responses were most common, are consistent with research linking familiarity with the material and prior training to skills retention. As a result of their education and experience, doctors are uniquely positioned to contribute to the advancement of CPR techniques (Espinosa et al., 2019). Still, they also need to refresh and update their expertise regularly. This research shows that frequent recycling is warranted because there appears to be no correlation between a person's self-perception of competence and his actual degree of knowledge (Lobo-Valbuena & Martin-Gorgojo, 2022; Sota, 2021; Velásquez-Velásquez et al., 2021).

When we put these findings next to those given by Vergara and Torregrosa, we see that the interviewees' low proportion of correct answers reflects an overall lack of understanding of RCPC. All survey indicators were found to be statistically significant after applying the chi-squared with the goodness-of-fit test, except for indicator 1.3 (Degree of leadership for managing the medical team in integrating the health team in CPR), which yielded. As a result, 0.058. Table 1

No	Indicator	Chi-square	gl	sig-asymptotic
1.1	Level of knowledge of the contents related to the Repts.	38,400	1	0
1.2	development of skills in the different manoeuvres in Repci	22,5333	1	0
1.3	Degree of leadership for the direction of the medical team in the integration of the health team in the Repts	3600	1	0.058
1.4	The degree to which the doctor values the education of non-medical personnel in Repts.	4,267	1	0.039

1.5	Level of skills to perform the manoeuvres in Repe	11,905	1	0.001
2.1	Level of interpersonal relationships with the patient and health service team.	8,067	1	0.005
2.2	the companion and Level of professional responsibility in the identification of manoeuvres in Rep.	20,907	1	0
2.3	Level of professional responsibility in the use of manoeuvres in Repci	22,533	1	0
2.4	Level of application of the ethical principle of patient autonomy in professional work	35,267	1	0

(a) 0 cells (0.0%) have expected frequencies less than s. The minimum box frequency expected is 120.0.

(b) Or cells (0.0%) have expected frequencies less than s. The minimum box frequency expected is 135.0

(c) o boxes (0.0%) have expected frequencies less than s. The predicted minimum box frequency is 45.0.

(d) Or cells (0.0%) have expected lower frequencies

• than S. The expected minimum cell frequency is 30.0.

C or cells (0.0%) have expected frequencies less than s. The minimum box frequency expected is 105.0.

(6) or cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 75.0.

Accurate and successful Resuscitation, early activation by qualified rescuers, prompt CPR, Cardiopulmonary Resuscitation and defibrillation, and advanced life support care to decrease mortality and improve the survival chain's efficiency is necessary to train the entire crew, not only the medical professionals. According to these studies, medical professionals do not believe educating the public on these procedures is necessary. Since the goal of any resuscitation attempt is to prevent death and preserve life, the moral exercise is completed rapidly when a patient is at imminent risk of dying, as is the situation with a PCR. On the other hand, we need to consider whether or not CPR Cardiopulmonary resuscitation could cause more harm to the patient (Caro García & Moreno García, 2020; Domínguez & González, 2020).

Although the success of an intervention is contingent on the intervention's outcome, the patient's perception of that outcome is the most critical factor in determining the treatment's success. Some patients want to be resuscitated despite the low likelihood of survival. Still, the vast majority do not want to risk "pre-survival" with extended stays in the intensive care unit (ICU) if it means not restoring their quality of life, which can be far more critical than the length of life offered. Indicator 2.4 reflects this reality by showing that clinicians who participate in research often report disregarding the bioethical tenet of patient autonomy (Gómez & Argüelles, 2021).

The first question a clinician should ask is whether or not a patient should undergo lifesaving treatment when doing so may have no value and rarely result in a future life equivalent to the one the patient had before the traumatic occurrence. This study reveals that the doctor in our institution's guardhouse has a sense of leadership among the health staff surrounding him. The team believes they are familiar with RcpC but are unaware of the most recent changes (Velásquez-Zambrano et al., 2021).

The brain's phenomenon of retroactive inhibition causes learned information to be forgotten unless it is actively used. Hence, knowledge must be strengthened by updating skills and abilities through these Cardiopulmonary and Cerebral Resuscitation courses before it is ignored. Many training programs, protocols, and educational opportunities have focused on medical professionals to increase the likelihood of a patient's survival following cardiac arrest. Still, they have ignored the public's responsibility to initiate lifesaving measures as soon as possible following the onset of cardiac arrest.

The twice-yearly or triennial course intervals Alcor offers would be practical for the participants. This study provides valuable information for identifying areas for development in medical professionals' CPR Cardiopulmonary resuscitation training. To ensure that all medical professionals are adequately trained in CPR Cardiopulmonary Resuscitation, polyclinics must organize and provide postgraduate education opportunities for their medical staff (Torres et al., 2019).

## Conclusion:

The medical personnel is having trouble keeping up with the latest CPR Cardiopulmonary resuscitation procedures. Medical professionals in Cuba should be required to learn CPR as part of their postgraduate medical education, which the Cuban National Health System should support and encourage.

## REFERENCES:

1. Almasri, N. A., Audette, J., Bury, T., Cruz Velandia, I., Chigbo, N., Demey, D., Islam, M., Jalovic, D., Jones, A., & Law, M. (2022). Guidance for developing a curriculum for a physiotherapist entry level programme. In: World Physiotherapy.
2. Caro García, M. d. M., & Moreno García, E. (2020). Consorcio de CPR de Extremadura: internacionalización, innovación y nuevas metodologías en la enseñanza de adultos. *Cáparra: revista de innovación y experiencias educativas de los Centros de Profesores y Recursos de la Provincia de Cáceres*.
3. Domínguez, A. C., & González, R. F. (2020). Avaliação da competência comunicativa intercultural em Bacharelato. O CPR Plurilingüe La Salle. *Revista de Investigación en Educación*, 18(1), 40-69.
4. Espinosa, C., Melgarejo, S., Ruiz, M., García-Collado, Á. J., Caballero, N., Rodríguez, J., Ríos, P., Torrano, G., Stutz, L., & Ríos, P. (2019). Virtual reality in cardiopulmonary resuscitation training: a randomized trial. *Emergencias: revista de la Sociedad Española de Medicina de Emergencias*, 31(1), 43-46.
5. Gómez, J. S. L., & Argüelles, R. A. F. (2021). Information needs about drugs and public health among doctors from a Mexican hospital. *Revista Cubana de Información en Ciencias de la Salud (ACIMED)*, 32(2), 1-34.
6. Lobo-Valbuena, B., & Martín-Gorgojo, A. (2022). [[Translated article]] Safety in Dermatologic Procedures: Basic and Advanced Cardiopulmonary Resuscitation. *Actas dermo-sifiliográficas*.
7. Machado, V. R. N., Escudero, V. C. G., Roque, M. O. R., Hernández, A. F., & Carcassés, L. M. G. (2020). Cardio-protected hospital, antithesis of sudden death: A proposal of the "Hospital General de Cienfuegos". *CorSalud (Revista de Enfermedades Cardiovasculares)*, 12(2), 189-197.
8. Pinheiro, D. B. S., dos Santos Júnior, E. B., & Pinheiro, L. d. S. B. (2018). Parada cardiorrespiratória: vigilância, prevenção e cuidados após PCR. *Revista de Pesquisa: Cuidado é fundamental online*, 10(2), 577-584.
9. Ronzón-Tirado, R., Charak, R., & Cano-Gonzalez, I. (2022). Daily Heterosexual Experiences in LGBTQ+ Adults from Spain: Measurement, Prevalence, and Clinical Implications. *Psychosocial Intervention*.
10. Sota, M. L. (2021). Feasibility of waveform capnography as a non-invasive monitoring tool during cardiopulmonary resuscitation Universidad del País Vasco-Euskal Herriko Unibertsitatea].
11. Torres, J. A., Viera, L. M., Gutiérrez, G. Á., & Álvarez, Y. P. (2019). Professional Burnout syndrome in doctors of the Pediatric Teaching Hospital of Cerro. *Revista Habanera de Ciencias Médicas*, 18(2), 336-345.
12. Velásquez-Velásquez, E., Zapata-Ospina, J. P., Mora-Escallón, D., & Patiño-Lugo, D. F. (2021). Virtual versus standard training of cardiopulmonary resuscitation for neonates and infants: a systematic review. *Revista Mexicana de Pediatría*, 88(4), 133-142.
13. Velásquez-Zambrano, E., Contreras-Santos, F., & Angelucci-Bastidas, L. (2021). Adaptación y análisis psicométrico de una encuesta de conocimientos sobre diabetes mellitus Adaptation and psychometric analysis of a knowledge survey on diabetes mellitus. *Rev Mex Endocrinol Metab Nutr*, 8, 33-42.
14. Wakasaki, R., Eiwaz, M., McClellan, N., Matsushita, K., Kirsti Golgotiu, K. G., & Hutchens, M. P. (2018). Automated systematic random sampling and Cavalieri stereology of histologic sections demonstrating acute tubular necrosis after cardiac arrest and cardiopulmonary resuscitation in the mouse.
15. Xiong, Y.-q., Liu, Y.-m., Qi, Y.-n., Liu, C.-r., Wang, J., Li, L., Zou, K., Tan, J., & Sun, X. (2020). Association between prepregnancy subnormal body weight and obstetrical outcomes after autologous in vitro fertilization cycles: systematic review and meta-analysis. *Fertility and sterility*, 113(2), 344-353. e342.