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# Knowledge of Cardiac Arrest among Auto Rickshaw Drivers: A Descriptive Cross-Sectional Study

**Hattarki K[1], Devulkar N[2]**

[1]Post Graduate, KLE's Institute of Nursing sciences, KLE Academy of Higher Education and Research, Nehru Nagar, Belagavi, Karnataka.

[2]Assistant Professor, KLE's Institute of Nursing sciences, KLE Academy of Higher Education and Research, Nehru Nagar, Belagavi, Karnataka.

**Corresponding Author:** Hattarki K [kartik007h@gmail.com]

## ABSTRACT

In India, cardiac arrest is a serious public health issue and one of the biggest causes of unexpected deaths, especially in emergency situations that happen on public roadways and in public spaces. Autorickshaw drivers are frequently the first to see accidents or unexpected medical situations because of their constant presence in the community and frequent involvement in road traffic. Hence this study is undertaken to assess the level of knowledge regarding cardiac arrest among auto rickshaw drivers and to find the association between knowledge scores and selected socio-demographic variables.

**Methods:** A descriptive study design is used and collected data from 60auto rickshaw drivers of Belagavi city. Knowledge of cardiac arrest and how to treat it immediately was gathered using a structured knowledge questionnaire. A non-probability convenience sampling technique will be used to select the participants.

**Results:** the results revealed that only 8.3% had good knowledge, 58.3% had average knowledge and 33.3% poor knowledge. With regard to association, educational status ($\chi^2$ = 11.050, p = 0.013) and age group ($\chi^2$ = 11.701, p = 0.036) had significant association with knowledge.

**Conclusion**: The study's findings demonstrated that autorickshaw drivers lacked a basic knowledge of cardiac arrest. Regular awareness and training campaigns are needed for enhancement of their knowledge.

**Key words:** Knowledge, Cardiac Arrest, Auto Rickshaw Drivers, Emergency Response

## INTRODUCTION

The abrupt cessation of heart activity that causes loss of circulation, unconsciousness, and inability to breathe is the hallmark of cardiac arrest, a potentially fatal condition. It is a serious global public health issue that greatly raises death rates, especially in low- and middle-income nations like India. Early defibrillation and prompt cardiopulmonary resuscitation (CPR) are critical for survival from cardiac arrest. However, poor outcomes frequently result from a lack of awareness and insufficient first-response actions.[1]

In public settings, where prompt professional medical care may not be easily accessible, out-of-hospital cardiac arrest (OHCA) regularly takes occurred. Bystanders are crucial in starting life-saving actions in these situations. Early CPR performed by laypeople can double or even treble survival chances, according to studies.[2] Despite this, the general people's level of awareness and readiness is still inadequate, particularly among occupational groups that frequently interact with public spaces.[3]

In India, auto rickshaw drivers make up a sizable portion of the urban labor force. They frequently observe medical catastrophes, such as cardiac arrest, initially because they are on the road for long periods of time. They could be first responders in an emergency due to their strategic position and accessibility. However, nothing is known about how they recognize cardiac arrest and how to perform basic life support.[4]

To find gaps and create focused educational initiatives, it is crucial to evaluate auto rickshaw drivers' understanding of cardiac arrest. Improving their knowledge and abilities can greatly increase the chances of survival and early reaction in cardiac crises.

In both urban and semi-urban populations, cardiac arrest is becoming more common and remains a major cause of sudden death. Due to changes in lifestyle, an increase in cardiovascular disease prevalence, and delayed access to emergency medical services, the burden is growing in India.[5] One of the most important factors in determining survival is early detection and CPR commencement.

Auto rickshaw drivers are likely to see emergencies because they operate in crowded public areas on a regular basis. Despite this, the majority of them do not have official first aid or CPR training. Missed opportunities to save lives might arise from a lack of information and confidence to act in an emergency.[6]

Community-based emergency preparedness is severely lacking, especially among occupational groups with high levels of public interaction, such as auto drivers. Planning organized training

programs and community awareness campaigns can be aided by knowing their level of cardiac arrest knowledge.

In order to improve emergency response capabilities, this study is necessary to evaluate auto rickshaw drivers' understanding of cardiac arrest, identify shortcomings, and offer evidence for implementing targeted educational interventions.

## MATERIALS AND METHODS

Auto rickshaw drivers' knowledge of cardiac arrest will be evaluated using a descriptive cross-sectional study design.The study will be carried out in a few chosen cities. Registered auto rickshaw drivers who are accessible and willing to participate during the data collecting period will make up the study population. There are 60 participants who were chosen using a non-probability convenience sampling method.

A systematic questionnaire created by the researcher will be used to gather data. It will have two sections: sociodemographic information and questions about basic life support techniques, cardiac arrest, and how to recognize it.Expert evaluation will guarantee the tool's content validity, and suitable statistical techniques like Cronbach's alpha or the split-half methodology will be used to determine reliability.

After participants have given their informed consent and ethics approval, data collection will begin. Anonymity and confidentiality will be upheld during the research. Descriptive statistics like frequency, percentage, mean, and standard deviation will be used to examine the gathered data. To ascertain the relationship between knowledge levels and demographic factors, inferential statistics like the chi-square test will be employed.

## RESULTS AND DISCUSSION

Results are explained in three sections

**Section 1: Socio demographic information**

**Table 1 : Distribution of participants by socio demographic characteristics**

| | | n | % |
|---|---|---|---|
| Age Group | 20-30 | 21 | 35.0 |
| | 31-40 | 20 | 33.3 |
| | 41-50 | 15 | 25.0 |
| | >51 | 4 | 6.7 |

| | | | |
|---|---|---|---|
| Gender | Male | 60 | 100.0 |
| | Female | 0 | 0.0 |
| Area of Residence | Rural | 55 | 91.7 |
| | Urban | 5 | 8.3 |
| Type of Family | Nuclear | 52 | 86.7 |
| | Joint | 8 | 13.3 |
| | Extended | 0 | 0.0 |
| Educational Status | Noformal education | 4 | 6.7 |
| | Primary | 14 | 23.3 |
| | Secondary | 42 | 70.0 |
| | Graduate | 0 | 0.0 |
| Working Hours Per Day | <6hrs | 4 | 6.7 |
| | 6-10hrs | 45 | 75.0 |
| | >10hrs | 11 | 18.3 |
| Dietary Habits | Vegetarian | 12 | 20.0 |
| | Mixeddiet | 48 | 80.0 |
| Family history of cardiac arrest | Yes | 4 | 6.7 |
| | No | 56 | 93.3 |
| Previous knowledge on cardiac arrest | Yes | 56 | 93.3 |
| | No | 4 | 6.7 |
| If yes,Source of information | Friends | 2 | 3.4 |
| | FamilyMembers | 6 | 10.2 |
| | Healthpersonnel | 3 | 5.1 |
| | Socialmedia | 48 | 81.4 |

**Section 2: Knowledge level of Auto rikshaw drivers about cardiac arrest**

It is observed that, only 8.3% of participants had high knowledge, 33.3% had low knowledge, and more than half (58.3%) had average information. This implies that the majority of auto rickshaw drivers had little to no knowledge about cardiac arrest.

Abdullah Alhajjaj et al. (2019) found that baseline knowledge regarding CPR among the general population was inadequate[7]

**Section 3: Association of knowledge with socio demographic information**

Age group have shown to be statistically significantly association ($\chi^2 = 11.701$, $p = 0.036$*). Participants under 30 years old had superior knowledge than those over 30 because more younger participants (14.3%) had strong knowledge and most (76.2%) had average knowledge, whereas more participants over 30 years old (46.2%) had low knowledge.

There was significantly association was observed in educational status ($\chi^2 = 11.050$, $p = 0.013$*).While those with only a primary education or no formal education had a larger percentage of inadequate knowledge, those with secondary education had relatively higher knowledge levels. This suggests that knowledge of cardiac arrest is significantly influenced by schooling.

The association between educational status and knowledge observed in the present study is supported by Tadesse Fikadu et al. (2020), who reported that higher educational levels are significantly associated with better awareness of cardiac arrest and CPR[8]

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