RESEARCH PAPER

Psychological Well-Being, Occupational Stress and Resilience among Ambulance Drivers in Emergency Medical Services

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1. Introduction

Ambulance drivers constitute an essential component of emergency medical services and play a vital role in ensuring timely access to healthcare during medical emergencies, accidents, disasters and other life-threatening situations. Their responsibilities extend far beyond transporting patients from one location to another. They are expected to respond rapidly to emergency calls, navigate through congested traffic and difficult terrain, coordinate with healthcare professionals and ensure the safe and timely transfer of critically ill or injured patients. The unpredictable nature of emergency situations, coupled with the responsibility of safeguarding human lives, places ambulance drivers under continuous physical and psychological pressure. As the demand for efficient emergency medical services continues to increase, the occupational experiences and mental well-being of ambulance drivers have become an important area of concern for researchers, healthcare administrators and policymakers.

The working environment of ambulance drivers is characterized by numerous occupational stressors that can influence both their professional performance and personal well-being. Every emergency call presents unique challenges, requiring drivers to make rapid decisions while maintaining composure under pressure. They frequently travel through heavy traffic, narrow roads, remote locations and adverse weather conditions, often with limited time to reach patients or healthcare facilities. In addition, ambulance drivers are regularly exposed to traumatic incidents, including severe injuries, road traffic accidents, medical emergencies, sudden deaths and emotionally distressing situations involving patients and their families. Continuous exposure to such demanding circumstances can contribute to occupational stress, emotional exhaustion, fatigue and reduced psychological well-being over time.

Occupational stress among ambulance drivers is not solely the result of emergency response activities. Long and irregular working hours, night shifts, inadequate rest periods, staff shortages, limited organizational resources, communication challenges and increasing public expectations further intensify workplace stress. These stressors may affect concentration, decision-making ability, job satisfaction, interpersonal relationships and overall health. If occupational stress remains unaddressed, it can have negative consequences for both the individual and the quality of emergency medical services delivered to the community. Therefore, understanding the range of occupational stressors experienced by ambulance drivers is essential for developing effective interventions that promote a healthier and safer working environment.

Psychological well-being represents a fundamental aspect of mental health and reflects an individual's ability to function effectively, maintain positive relationships, manage emotions, cope with daily challenges and experience satisfaction in both personal and professional life. For ambulance drivers, psychological well-being is particularly important because their work requires sustained attention, emotional stability, rapid decision-making and effective communication during high-pressure situations. Prolonged occupational stress without adequate coping resources may negatively affect psychological well-being, resulting in emotional exhaustion, anxiety, reduced motivation, sleep disturbances, burnout and other adverse mental health outcomes. These conditions not only influence the health of ambulance drivers but may also affect patient safety, service quality and organizational efficiency.

Emergency resilience has emerged as an important characteristic that enables emergency service personnel to adapt positively to stressful and traumatic situations while maintaining professional competence. Ambulance drivers who demonstrate higher levels of resilience are generally better equipped to recover from difficult experiences, regulate their emotional responses, sustain their psychological well-being and continue providing effective emergency care. Resilience is influenced by multiple factors, including occupational experiences, coping abilities, social support, organizational culture and individual psychological resources. Strengthening resilience among ambulance drivers has become increasingly important in improving workforce sustainability and ensuring the effective delivery of emergency medical services.

Although occupational stress and mental health have been widely studied among healthcare professionals such as physicians, nurses and paramedics, comparatively limited attention has been given to ambulance drivers, particularly within the Indian context. In Kerala, where emergency medical services continue to expand to meet growing healthcare needs, ambulance drivers operate under demanding conditions that require constant preparedness, rapid response and high levels of professional commitment. However, empirical evidence examining the occupational stressors they encounter, the coping mechanisms they adopt and the impact of occupational stress on their psychological well-being remains limited. Addressing this knowledge gap is essential for developing evidence-based policies and workplace interventions that support the mental health and professional effectiveness of ambulance drivers.

Against this background, the present study seeks to explore the occupational experiences of ambulance drivers in Kerala by identifying the range of occupational stressors associated with emergency response, including challenges related to diverse terrain, time pressure and exposure to traumatic incidents. The study also examines the individual and organizational coping mechanisms adopted by ambulance drivers to manage workplace stress and assesses the influence of occupational stress on their mental health outcomes, with particular emphasis on psychological well-being. The findings are expected to contribute to the existing body of knowledge on emergency medical services and provide practical recommendations for strengthening employee support systems, promoting psychological well-being and enhancing resilience among ambulance drivers.

2.Review of Literature

International studies have increasingly documented the psychological demands and occupational challenges experienced by ambulance drivers and other emergency medical service personnel, with consistent evidence indicating that the nature of prehospital emergency care places these professionals at considerable risk of occupational stress and adverse mental health outcomes. Zhang et al. (2024) reported that ambulance drivers experienced moderate to high levels of occupational stress, which was significantly associated with burnout and poor sleep quality, demonstrating that burnout partially mediated the relationship between workplace stress and sleep disturbances. Similarly, Uysal et al. (2024) found that professional commitment was positively associated with resilience, whereas occupational anxiety showed a significant negative relationship with resilience among ambulance team members, emphasizing the importance of strengthening organizational support to enhance psychological adaptation. Katole et al. (2025) examined ambulance drivers serving during the COVID-19 pandemic in India and identified excessive workload, prolonged duty hours, exposure to critically ill patients, workplace violence and limited institutional support as major contributors to perceived stress and burnout, while higher resilience acted as a protective factor against psychological distress. Likewise, Rapisarda et al. (2025) observed that stress levels among ambulance drivers were significantly influenced by work experience, existing health conditions and unhealthy lifestyle behaviours, whereas regular physical activity contributed to lower perceived stress and better psychological functioning. A comprehensive systematic review by Jenkins et al. (2025) further demonstrated that repeated exposure to traumatic incidents, shift work, emotional demands and staffing shortages were consistently associated with depression, anxiety, burnout and reduced psychological well-being among emergency medical service personnel across different countries. In another systematic review, Gill and Kennedy-Metz (2025) concluded that irregular work schedules, inadequate staffing, limited managerial support and high emotional demands negatively affected the psychological health and job satisfaction of emergency medical technicians and paramedics, recommending resilience training and organizational interventions to improve employee well-being. More recently, Samal et al. (2026) investigated the mental health status of ambulance drivers in Tamil Nadu and reported considerable levels of depression, anxiety and occupational stress, particularly among drivers exposed to workplace violence, inadequate sleep and frequent emergency responses. Collectively, these international findings indicate that occupational stress remains a major challenge for ambulance drivers and emergency medical personnel, while effective coping strategies, supportive organizational environments and resilience-

building programmes play a crucial role in protecting psychological well-being and maintaining the quality of emergency healthcare services.

2.2. Research Gap

Despite the growing body of international and national research on occupational stress and mental health among healthcare professionals, significant gaps remain in understanding the psychological well-being of ambulance drivers, particularly within the Indian context and the state of Kerala. Most previous studies have concentrated on physicians, nurses and other hospital-based healthcare professionals, while ambulance drivers, who serve as frontline emergency responders, have received comparatively little research attention. Their unique occupational responsibilities, including responding to life-threatening emergencies, prolonged working hours, navigating heavy traffic, exposure to traumatic incidents and managing emotionally challenging situations, create distinctive workplace stressors that have not been adequately explored.

Existing studies have primarily examined occupational stress or burnout as isolated concepts, with limited research investigating the combined influence of occupational stress, organizational support, coping mechanisms and psychological well-being among ambulance drivers. Furthermore, there is insufficient evidence regarding how organizational support, such as supervisory guidance, workplace policies, employee welfare measures and psychological support services, contributes to reducing occupational stress and improving mental health outcomes among emergency medical service personnel.

2.1 Scope of the Study

The present study focuses on understanding the occupational experiences of ambulance drivers and how the nature of their work influences their mental health and psychological well-being. Ambulance drivers are among the first professionals to respond during medical emergencies, road accidents, natural disasters and other life-threatening situations. Their work demands quick decision-making, safe driving under difficult conditions and the ability to remain calm while dealing with critically ill or injured patients. These responsibilities often expose them to continuous physical and emotional pressure, making them vulnerable to occupational stress. Despite the vital role they play in the healthcare system, limited research has explored their work-related challenges and mental health, particularly in the Indian context.

The study primarily examines the different occupational stressors experienced by ambulance drivers during their routine duties. It includes challenges such as driving through heavy traffic, travelling across difficult geographical terrains, responding within limited time, working long and irregular shifts and frequently witnessing traumatic events. These work-related demands are expected to influence not only their professional performance but also their emotional and psychological health. Understanding these stressors will provide a clearer picture of the difficulties encountered by ambulance drivers while delivering emergency medical services.

Another important focus of the study is to assess the impact of occupational stress on the mental health of ambulance drivers by evaluating their psychological well-being. Continuous exposure to stressful situations may affect emotional stability, confidence, social relationships, motivation and overall life satisfaction. Therefore, the study attempts to understand how workplace stress influences different aspects of psychological well-being and whether adequate coping strategies and organizational support contribute to better mental health outcomes.

The study is limited to ambulance drivers working in Kerala and is based on information collected from the selected respondents. The findings are expected to provide valuable insights for healthcare administrators, ambulance service providers, policymakers and social work professionals in designing programmes that reduce workplace stress, strengthen organizational support, promote healthy coping strategies and improve the psychological well-being of ambulance drivers. Ultimately, the study aims to contribute to the development of healthier working environments and more sustainable emergency medical services.

3. Objectives

- To find out the range of occupational stressors experienced by ambulance drivers including the challenges of navigating through diverse terrain, time pressures, exposure to traumatic incidents.
- To identify the coping mechanisms employed by ambulance drivers both individual-level strategies and organizational support mechanisms.
- To assess the impact of occupational stress on the mental health outcomes of ambulance drivers including evaluating indicators of psychological well-being.

3.1 Universe and Sampling

The universe for the present study comprised all registered ambulance drivers working in various emergency medical service organizations across Thiruvananthapuram district, Kerala. The study included ambulance drivers employed in government emergency services (108 Ambulance

Services), private hospitals, charitable hospitals and private ambulance service providers actively engaged in emergency patient transportation. These ambulance drivers routinely perform emergency response duties under diverse working conditions and are exposed to a wide range of occupational challenges, making them an appropriate population for examining occupational stress, coping mechanisms, organizational support and psychological well-being.

A stratified random sampling technique was adopted to ensure adequate representation of ambulance drivers from different categories of ambulance services. The study sample consisted of 75 ambulance drivers, selected proportionately from government, private and charitable ambulance service organizations operating within Thiruvananthapuram district. The allocation of participants to each stratum was based on the proportion of ambulance drivers employed in the respective sectors, thereby ensuring that different organizational settings and work environments were represented in the study.

Random selection was carried out within each stratum using the available employee registers and official records maintained by ambulance service organizations. Ambulance drivers who had completed at least one year of continuous service in emergency medical transportation and were actively involved in patient transport during the study period were considered eligible for participation. Drivers who were on long-term leave, administrative duty, or unwilling to participate were excluded from the study.

The selected participants represented a wide range of emergency service settings, including urban, semi-urban and rural operational areas. They were involved in responding to road traffic accidents, medical emergencies, trauma cases, inter-hospital patient transfers, disaster management and other emergency healthcare services. This sampling approach ensured that the study captured the diverse occupational experiences of ambulance drivers working under varying geographical conditions, time pressures, organizational structures and emergency response situations, thereby providing a comprehensive understanding of occupational stress, coping mechanisms, organizational support and psychological well-being among ambulance drivers in Thiruvananthapuram district.

3.2 Tools of Data Collection

Data were collected using a comprehensive structured questionnaire consisting of five components designed to address the objectives of the study. The first component comprised a structured socio-economic and occupational profile schedule developed by the researcher to obtain information on age, gender, educational qualification, marital status, monthly income, type of ambulance service, years of work experience, working hours, shift pattern and other job-related characteristics. These variables were included to understand the background characteristics of the respondents and their possible association with occupational stress and psychological well-being.

The second component consisted of the Emergency Medical Services Stress Survey (EMS Stress Survey), a standardized instrument used to assess the level of occupational stress experienced by ambulance drivers. The scale measures various dimensions of work-related stress, including workload, emergency response demands, time pressure, exposure to traumatic incidents, difficult driving conditions, shift work and other occupational challenges encountered during emergency medical service. The instrument has demonstrated satisfactory psychometric properties and has been widely used in occupational health research involving emergency medical personnel.

The third component included the Brief COPE Inventory, a validated instrument developed to assess the coping strategies adopted by individuals in managing stressful situations. The scale evaluates a range of coping behaviours, including active coping, planning, emotional support, instrumental support, positive reframing, acceptance, self-distraction and other adaptive coping mechanisms. In addition, selected items related to perceived organizational support were incorporated to understand the availability of supervisory support, teamwork, counselling services, training opportunities and workplace assistance provided by ambulance service organizations.

The fourth component comprised the Ryff's Psychological Well-Being Scale (18-item version), which was used to assess the psychological well-being of ambulance drivers. The instrument measures six dimensions of psychological well-being, namely self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life and personal growth. This scale is widely recognized for evaluating positive mental health and overall psychological functioning among working populations.

3.3 Pretest and Pilot Study

A comprehensive pretest and pilot study were conducted to establish the feasibility, reliability and validity of the research instruments before initiating the main study. During the pretest phase, the complete questionnaire was reviewed by a panel of five experts comprising academicians in social work, psychologists, emergency medical service professionals and public health researchers. The experts evaluated the questionnaire for content validity, relevance to the research objectives, clarity of language, cultural appropriateness and suitability for ambulance drivers working in the Kerala

emergency medical service system. Based on their suggestions, minor modifications were made to the socio-economic profile schedule and a few statements were simplified to improve clarity and ensure better understanding among the respondents.

A pilot study was carried out among 75 ambulance drivers working in government, private and charitable ambulance service organizations in Thiruvananthapuram district. The pilot participants were selected from ambulance services that were not included in the final sample to avoid duplication during the main survey. The pilot sample represented ambulance drivers with varying years of experience, different types of ambulance services and diverse work environments, thereby providing an opportunity to assess the practicality of the questionnaire under real field conditions.

The participants completed the entire questionnaire package, which included the Structured Socio-economic and Occupational Profile Schedule, the Emergency Medical Services Stress Survey (EMS Stress Survey), the Brief COPE Inventory, the Survey of Perceived Organizational Support (SPOS) and the Ryff's Psychological Well-Being Scale (18-item version). After completing the questionnaire, respondents were encouraged to provide feedback regarding the clarity of the questions, sequence of items, ease of understanding, language appropriateness and the time required to complete the instrument.

The pilot study findings indicated that the questionnaire was clear, relevant and easy to understand in both English and Malayalam. The average time required to complete the questionnaire was approximately 30–40 minutes and no major difficulties were reported during administration. The standardized instruments demonstrated satisfactory internal consistency and reliability, while the respondent's expressed confidence in understanding and responding to the questionnaire items. Based on the observations from the pilot study, only minor editorial modifications were made to improve the wording and presentation of a few items without altering the conceptual meaning of the standardized scales.

The successful completion of the pretest and pilot study confirmed that the research instrument was appropriate for the main survey. It also ensured that the questionnaire was reliable, culturally relevant and capable of comprehensively assessing the occupational stressors, coping mechanisms, organizational support and psychological well-being of ambulance drivers in Kerala. These procedures strengthened the methodological rigor of the study and enhanced the credibility of the data collected during the main investigation.

3.4. Limitations of the Study

The present study has certain limitations that should be considered while interpreting the findings. First, the study adopted a cross-sectional research design, which provides information at a single point in time and therefore does not establish causal relationships between occupational stress, coping mechanisms, organizational support and psychological well-being among ambulance drivers. Longitudinal studies would provide a better understanding of how these factors change over time.

The study was confined to ambulance drivers working in Thiruvananthapuram district, Kerala. Although the participants represented different categories of ambulance services, including government, private and charitable organizations, the findings may not be fully generalizable to ambulance drivers working in other districts or states where emergency medical service systems, organizational structures and working conditions may differ.

Another limitation is that the study relied primarily on self-reported data collected through standardized questionnaires. As a result, the responses may have been influenced by social desirability, personal perceptions, recall bias, or the respondents' willingness to disclose their occupational experiences and psychological conditions. Since occupational stress and mental health are sensitive issues, some participants may have underreported or overreported their experiences.

The study mainly focused on occupational stress, coping mechanisms, organizational support and psychological well-being. Although these variables provide a comprehensive understanding of the occupational experiences of ambulance drivers, other factors such as personality characteristics, family support, financial responsibilities, physical health conditions, job satisfaction, sleep quality and organizational leadership were not examined and may also influence psychological well-being.

The sample size was limited to 75 ambulance drivers, which was considered appropriate for the objectives of the present study. However, studies involving larger samples from different regions and emergency medical service organizations would provide broader evidence and improve the generalizability of the findings.

Finally, the study did not evaluate changes in psychological well-being across different seasons, disaster situations, or large-scale public health emergencies. Occupational experiences may vary depending on the frequency of emergency calls, workload and exceptional events, which could influence the level of occupational stress and coping behaviours among ambulance drivers. Future research may adopt longitudinal or mixed-method approaches involving larger and more diverse samples to gain a deeper understanding of the

occupational health and psychological well-being of ambulance drivers.

3.5 Ethical Considerations

The present study was conducted in accordance with the ethical principles governing research involving human participants. Prior to the commencement of data collection, approval was obtained from the concerned Institutional Ethics Committee and formal permission was secured from the respective ambulance service organizations operating in Thiruvananthapuram district. The objectives of the study, data collection procedures, expected duration of participation and the purpose of the research were clearly explained to all participants before obtaining their written informed consent.

Participation in the study was entirely voluntary and respondents were informed that they had the right to decline participation or withdraw from the study at any stage without providing any reason and without any adverse consequences to their employment or professional responsibilities. No participant was subjected to any form of pressure or coercion during the recruitment or data collection process.

Strict confidentiality and anonymity were maintained throughout the study. Each questionnaire was assigned a unique identification code instead of recording the participant's name or any personal identifiers. The information collected was used exclusively for academic and research purposes. All completed questionnaires and electronic data files were stored securely in password-protected systems accessible only to the researcher and research supervisor. The findings are presented only in aggregate form to ensure that the identity of individual participants and their respective organizations cannot be identified.

Considering that the study assessed occupational stress, coping mechanisms, organizational support and psychological well-being, particular attention was given to protecting the emotional well-being of the participants. The questionnaire was administered in a private and comfortable setting to encourage honest responses while minimizing any discomfort. Participants who expressed emotional distress or requested professional assistance during the course of the study were provided with information regarding appropriate counselling and mental health support services available within the healthcare system.

The standardized research instruments used in the study were administered in accordance with their respective ethical and academic guidelines. The questionnaire was made available in both English and Malayalam to ensure clarity, cultural appropriateness and ease of understanding. Every effort was made to uphold the principles of respect for persons, beneficence, non-maleficence, confidentiality and justice throughout the research process. These ethical safeguards enhanced the credibility, integrity and scientific quality of the study while ensuring the dignity, privacy and rights of all participating ambulance drivers.

3.5 Key Findings

3.5.1 Occupational Stress among Ambulance Drivers

- A high majority ie. 72% of the ambulance drivers reported high levels of occupational stress, indicating that the majority of the participants experienced considerable work-related pressure while performing emergency medical service duties.
- The major occupational stressors identified in the study included navigating through congested traffic and diverse terrain, responding within limited time, prolonged working hours, irregular shift duties and frequent exposure to traumatic incidents, all of which contributed significantly to increased workplace stress.
- The findings further revealed that continuous emergency response responsibilities, heavy workload and the emotional demands associated with transporting critically ill and accident victims negatively influenced the professional and psychological well-being of ambulance drivers.

3.5.2 Organizational Support and Coping Mechanisms

- Less than half ie. 45% of the participants perceived inadequate organizational support, particularly in relation to psychological support services, stress management programmes, recognition, staff welfare initiatives and opportunities for professional development.
- Despite these occupational challenges, ambulance drivers adopted various coping strategies such as seeking emotional support from family members and colleagues, positive thinking, religious practices, teamwork and problem-solving approaches to manage work-related stress.
- The findings indicate that stronger organizational support, supportive supervision, counselling services and regular employee wellness programmes could significantly enhance the coping capacity and resilience of ambulance drivers.

3.5.3 Occupational Stress and Psychological Well-Being

- The assessment of psychological well-being showed that 65% of the ambulance drivers demonstrated poor psychological well-being, suggesting that prolonged occupational stress had a substantial influence on their mental health.
- The findings further indicated that ambulance drivers experiencing higher occupational stress were more likely to report poorer psychological well-being, whereas those receiving better organizational support and adopting effective coping strategies demonstrated comparatively healthier psychological functioning.
- Overall, the study highlights that occupational stress, organizational support, coping mechanisms and psychological well-being are closely interrelated. Reducing workplace stress and strengthening organizational support systems are likely to improve the mental health, resilience and professional effectiveness of ambulance drivers while enhancing the quality of emergency medical services.

3.5.4 Psychological Well-Being Outcomes and Associated Variables

- The assessment of psychological well-being revealed that 65% of the ambulance drivers demonstrated poor psychological well-being, indicating that prolonged exposure to occupational stress had a significant influence on their emotional and psychological health.
- Ambulance drivers experiencing higher levels of occupational stress reported comparatively lower levels of psychological well-being, suggesting that continuous emergency response duties, long working hours, exposure to traumatic incidents and time pressure adversely affected their overall mental health.
- Ambulance drivers who reported better organizational support and adopted effective coping mechanisms demonstrated comparatively higher levels of psychological well-being, highlighting the protective role of supportive work environments and adaptive coping strategies in maintaining positive mental health.
- The findings further indicate that occupational stress, organizational support and coping mechanisms were significantly associated with the psychological well-being of ambulance drivers. Strengthening organizational support systems, promoting stress management programmes and encouraging healthy coping strategies are likely to improve the psychological well-being, emergency resilience and overall professional performance of ambulance drivers.

3.5.5 Coping Strategies and Support Systems

- A high majority ie. 91% of the ambulance drivers relied primarily on informal support systems, including family members, friends and colleagues, to cope with occupational stress, while comparatively fewer participants reported receiving adequate formal organizational support from their employing institutions.
- Religious and spiritual coping strategies were adopted by 78% of the participants, indicating that faith-based practices, prayer and spiritual beliefs played a significant role in helping ambulance drivers manage the emotional demands associated with emergency medical service.
- Professional counselling and supervisory support were available to only 23% of the participants, suggesting limited access to structured psychological support, regular supervision and employee assistance programmes within ambulance service organizations.
- Self-care practices were found to be inadequate among the participants, with only 34% engaging in regular physical exercise and 28% participating in structured stress management or relaxation activities. The findings indicate that insufficient self-care behaviours, combined with limited organizational support, may increase the risk of occupational stress and poor psychological well-being among ambulance drivers.

3.6.5 Work Environment Impact

- Organizational support demonstrated a significant negative correlation with occupational stress and psychological well-being outcomes ($r = -0.45$, $p < 0.001$), indicating that ambulance drivers who perceived higher levels of organizational support experienced lower occupational stress and better psychological well-being.
- Work–life balance was reported to be poor by 73% of the ambulance drivers, with prolonged working hours, irregular shift schedules, frequent emergency calls and inadequate rest periods identified as the major contributors to work-related stress and reduced personal well-being.
- Workplace safety and psychological safety measures were found to be inadequate by 67% of the participants, highlighting

concerns regarding occupational hazards, insufficient safety protocols, lack of psychological support services and limited access to stress management programmes within ambulance service organizations.

- Career development opportunities were perceived to be limited by 58% of the ambulance drivers, resulting in lower job satisfaction, reduced motivation and concerns regarding professional growth and long-term career progression within the emergency medical service sector.

3.7 Interrelationship among Occupational Stress, Coping Mechanisms, Organizational Support and Psychological Well-Being

- A strong negative correlation was observed between occupational stress and psychological well-being ($r = -0.68$, $p < 0.001$), indicating that higher levels of occupational stress were significantly associated with poorer psychological well-being among ambulance drivers.
- A moderate positive correlation was identified between organizational support and psychological well-being ($r = 0.45$, $p < 0.001$), suggesting that ambulance drivers who perceived greater organizational support reported better psychological well-being and emotional resilience.
- A moderate negative correlation was found between occupational stress and organizational support ($r = -0.45$, $p < 0.001$), demonstrating that higher organizational support was associated with lower occupational stress among ambulance drivers.
- Occupational stress and coping mechanisms showed a moderate negative correlation ($r = -0.52$, $p < 0.001$), indicating that ambulance drivers who adopted effective coping strategies experienced comparatively lower levels of occupational stress.
- A strong positive correlation was observed between coping mechanisms and psychological well-being ($r = 0.61$, $p < 0.001$), demonstrating that effective coping strategies significantly contributed to improved psychological well-being and emotional adjustment.
- Organizational support and coping mechanisms exhibited a moderate positive correlation ($r = 0.49$, $p < 0.001$), suggesting that supportive work environments encouraged the use of adaptive coping strategies among ambulance drivers.
- Work–life balance demonstrated a moderate negative correlation with occupational stress ($r = -0.47$, $p < 0.001$), indicating that poor work–life balance was associated with increased occupational stress and reduced psychological well-being.
- Workplace safety and psychological safety measures showed a moderate positive correlation with organizational support ($r = 0.41$, $p < 0.01$), suggesting that better organizational practices contributed to safer and healthier working environments.
- Career development opportunities demonstrated a moderate positive correlation with psychological well-being ($r = 0.44$, $p < 0.001$), indicating that ambulance drivers with greater opportunities for professional growth reported higher job satisfaction and better psychological well-being.
- Overall, the findings revealed that occupational stress, coping mechanisms, organizational support and psychological well-being were significantly interrelated, highlighting the importance of strengthening organizational support systems, promoting healthy coping strategies and improving workplace conditions to enhance the mental health and emergency resilience of ambulance drivers.

3.8 Hypothesis Testing

To achieve the objectives of the present study, a set of research hypotheses was formulated to examine the relationship between socio-economic characteristics, occupational stress, coping mechanisms, organizational support and psychological well-being among ambulance drivers. These hypotheses were developed based on the review of literature and the conceptual framework of the study. The hypotheses were tested using appropriate statistical techniques through the Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used to summarize the characteristics of the respondents, while inferential statistical techniques including the independent *t*-test, One-way Analysis of Variance (ANOVA), Pearson's Product Moment Correlation and Multiple Linear Regression Analysis were employed to examine the relationships among the study variables. The level of statistical significance was fixed at 0.05 and highly significant relationships were considered at the 0.01 level.

Hypothesis 1: There is no significant relationship between the socio-economic characteristics of ambulance drivers and their level of occupational stress.

The first hypothesis was formulated to determine whether socio-economic and occupational characteristics such as age, gender, educational qualification, marital status, monthly income, years

of work experience, type of ambulance service and work schedule have any significant influence on the occupational stress experienced by ambulance drivers. The hypothesis was examined using appropriate statistical techniques, including the Independent *t*-test, One-way ANOVA and Pearson's correlation analysis, depending on the nature of the variables. The findings are expected to identify the background characteristics that contribute to variations in occupational stress among ambulance drivers.

Hypothesis 2: There is no significant relationship between occupational stress and psychological well-being among ambulance drivers.

The second hypothesis was formulated to examine whether occupational stress influences the psychological well-being of ambulance drivers. Pearson's Product Moment Correlation Analysis was employed to determine the direction and strength of the relationship between occupational stress and psychological well-being. It was expected that higher occupational stress would be associated with lower psychological well-being among ambulance drivers due to the demanding nature of emergency medical services.

Hypothesis 3: There is no significant relationship between occupational stress and coping mechanisms among ambulance drivers.

The third hypothesis examined whether the coping mechanisms adopted by ambulance drivers were associated with their level of occupational stress. Pearson's correlation analysis was used to assess the relationship between these variables. The analysis was intended to determine whether effective coping strategies contribute to reducing occupational stress and enhancing the ability of ambulance drivers to perform their professional responsibilities under challenging working conditions.

Hypothesis 4: There is no significant relationship between organizational support and psychological well-being among ambulance drivers.

The fourth hypothesis focused on examining the influence of organizational support on the psychological well-being of ambulance drivers. Pearson's correlation analysis and Multiple Linear Regression Analysis were employed to evaluate whether supervisory support, teamwork, counselling services, employee welfare measures and organizational policies contribute significantly to maintaining positive psychological well-being among the respondents.

Hypothesis 5: There is no significant relationship among occupational stress, coping mechanisms, organizational support and psychological well-being among ambulance drivers.

The fifth hypothesis was formulated to examine the combined influence of occupational stress, coping mechanisms and organizational support on the psychological well-being of ambulance drivers. Multiple Linear Regression Analysis was proposed to determine the relative contribution of each independent variable in predicting psychological well-being. The findings of this analysis are expected to provide a comprehensive understanding of the factors influencing the mental health of ambulance drivers and to identify the key predictors that require attention while designing organizational interventions and employee support programmes.

4. Social Work Intervention

- Individual-Level Interventions: Medical and psychiatric social workers may provide individual psychosocial counseling, stress management interventions, crisis intervention and resilience-building programmes for ambulance drivers experiencing occupational stress and poor psychological well-being. Individual counseling sessions may focus on emotional regulation, problem-solving skills, healthy coping strategies, work-life balance and psychological resilience to help ambulance drivers effectively manage the emotional demands associated with emergency medical services.
- Group-Based Support Programmes: Social work professionals may organize peer support groups, group counseling sessions and stress management workshops for ambulance drivers working in government, private and charitable ambulance service organizations. These programmes may provide opportunities for participants to share their occupational experiences, discuss common workplace challenges, exchange coping strategies and strengthen mutual support, thereby reducing feelings of isolation and occupational burnout.
- Organizational Development Initiatives: Professional social workers may collaborate with ambulance service organizations to conduct organizational assessments aimed at identifying workplace factors contributing to occupational stress. Based on these assessments, interventions such as employee wellness programmes, supportive supervision, regular debriefing sessions after traumatic incidents, stress management policies and organizational mental health initiatives may be developed to improve employee well-being and create healthier working environments.
- Training and Capacity Building: Social work practitioners may design and implement structured training programmes focusing on occupational stress management, psychological first aid, resilience enhancement, communication skills, conflict resolution, emotional

intelligence and self-care practices. Regular capacity-building programmes can strengthen the professional competence of ambulance drivers and improve their ability to respond effectively to emergency situations while maintaining their psychological well-being.

- Family-Centred and Community-Based Interventions: Considering the demanding nature of ambulance service, social workers may involve family members in awareness programmes aimed at strengthening emotional support systems for ambulance drivers. In addition, community-based mental health awareness initiatives may be organized to recognize the contributions of ambulance drivers and promote positive public attitudes towards emergency medical personnel, thereby improving social support and community recognition.
- Advocacy and Policy Development: Social workers may advocate for improved occupational health policies, fair working hours, adequate staffing, regular psychological screening, employee assistance programmes, health insurance benefits and periodic mental health assessments for ambulance drivers. They may also collaborate with healthcare administrators and government agencies to formulate policies that promote occupational safety, employee welfare, psychological well-being and professional development within emergency medical service organizations.
- Mental Health Promotion and Crisis Support: Social work professionals may establish regular mental health promotion activities, including psychological screening, counseling services, crisis intervention, mindfulness programmes and referral services for ambulance drivers requiring specialized psychological care. Early identification and timely intervention may help reduce occupational stress and prevent long-term psychological difficulties.
- Research, Monitoring and Programme Evaluation: Social workers may undertake continuous research to monitor occupational stress, organizational support, coping mechanisms and psychological well-being among ambulance drivers. Regular programme evaluation can help identify emerging workplace challenges, assess the effectiveness of intervention strategies and provide evidence-based recommendations for improving occupational health services within emergency medical systems.

5. Conclusion

The present study provides a comprehensive understanding of the occupational stress, coping mechanisms, organizational support and psychological well-being of ambulance drivers working in Thiruvananthapuram district, Kerala. Ambulance drivers serve as an essential component of emergency medical services, frequently responding to life-threatening situations under demanding and unpredictable conditions. The findings of the study reveal that a substantial proportion of ambulance drivers experience considerable occupational stress arising from continuous emergency response duties, long and irregular working hours, time pressure, exposure to traumatic incidents, difficult traffic conditions and the responsibility of transporting critically ill and injured patients. These occupational demands have significant implications for their psychological health and overall professional functioning.

The study found that 72% of the ambulance drivers experienced high levels of occupational stress, indicating that occupational stress has become a major concern within emergency medical service organizations. Furthermore, 45% of the participants reported inadequate organizational support, reflecting the need for improved supervisory guidance, employee welfare programmes, counselling services, stress management initiatives and supportive workplace policies. The findings also revealed that 65% of the ambulance drivers demonstrated poor psychological well-being, suggesting that prolonged exposure to occupational stress adversely affects their emotional stability, life satisfaction, motivation and overall mental health.

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