

Trail and Challenges of Paramedical Staffs' in Pandemic Period: A Recall

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Conflicts of Interest

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Abstract

In pandemic period, the scarcity of paramedical staff is well known fact all over the world. It's a global issue to face the demand for health seeking behavior of Covid – 19 patients. There are a lot of studies available to express about the health status of targeted patients, but a little attention has been focused on well-being of paramedical staffs, specifically in pandemic period, which put their life into highest risk. Hence, here is an attempt made by the researchers to identify the health problem of paramedical staffs from the articles published and from field study in order to frame policy to protect their life risk.

Keywords: Paramedical Staff, Covid – 19, Health Problems, Occupational Hazards

Introduction

Work is necessary to provide people with the means to live healthily, but since time immemorial, it has also been obvious that work can harm people's health through occupational accidents and the wear and tear of heavy and repetitive physical labour. It is far less obvious, but not necessarily less important, that work can also harm through chemical, social and psychological exposures.(Hanson. I. Hydeand et.al 2018)

Global socio political developments including increased economic globalization,the spread of neo - liberalide as,the changing nature of work,the development of information and communication technology,and significant demographic change shave hada major impact on the nature of today's working conditions(Hyde et al.,2006;Kompier,2006;EU-OSHA,2007).Asa result, psychosocial conditions in the workplace have been identified as significant emerging risks in the global public health agenda(NIOSH,2002;EU-OSHA2007, Hyde, M., & Theorell, T. 2018)

In November 2019, novel corona virus disease (COVID-19) was first reported and then become widespread within Wuhan, the capital city of Hubei Province of China. The disease rapidly spread throughout China and elsewhere, becoming a global health emergency. February 2020 COVID – 19 had spread to numerous other countries, including the USA, Italy, Spain, Germany, France and Iran. As of April 18, COVID-19 has spread to 198 countries, infecting 2.4 million people and causing 150,000 deaths across the planet and is therefore considered a worldwide pandemic. During the pandemic period the role of Paramedical Staffs is inevitable. Paramedics are health professionals who are present to assist the doctors in overall diagnosis and care of the patients and management of health facilities.

Personnel including all types of professions related to medicine, e.g., personnel in the fields of nursing, midwifery, sanitation, dental hygiene, pharmacy, physiotherapy, laboratory medicine, and therapeutic exercise, etc. Paramedical staff means that who give direct support to doctors in the investigation or treatment of ailments. The need for paramedical staffs are experienced in all aspects of health care industries including nursing service, practice of medicine and public health functions such as management of health delivering unit. They include physiotherapists and radiologists. Their primary role is to provide pre-hospital medical care to the patients. The mental health of medical and paramedical staff has been greatly challenged during the immediate wake of the viral epidemic. The paramedical staffs are at the forefront in the battle of COVID-19 pandemic, they are facing several challenges in delivering their duties. In paramedical staffs appeared gradually: fear and anxiety appeared immediately and decreased in the early stages of the epidemic, but depression, psycho physiological symptoms and post traumatic stress symptoms appeared later and lasted for a long time leading to profound impacts. The COVID-19 pandemic has initiated an upheaval in society and has been the explanation for considerable stress during this era. Healthcare professionals have been on the front line during these health crises, particularly paramedical

staff. Socio environmental factors such as the risk of exposure to infection, effective risk communication to paramedical staffs, availability of personal protective equipment, job-related stress, perceived stigma and psychological impact of the isolation/quarantine and interpersonal distancing also play major roles.

The aim of this study was to assess the high level of stress of paramedical workers during the first wave of the pandemic. In fact many physicians and other paramedical staffs have sight of their stress of increased world load, rapidly expanding knowledge base, increasing government regulations, and malpractice suits and how to balance their personal and professional lives. In this article, an effort is formed to elaborate on the issues, prevalence, causes and remedial measure of health problems of paramedical staffs from earlier studies did by various researchers in pandemic period.

Methods

This paper is a part of on-going research project about the economic analysis on health and sanitation with respect to rural transformation in Theni district of Tamil Nadu- India. The related literature was searched within the PubMed, Medline, Google Scholar databases and research gate. Bibliographic search and grey literature search by visiting the website and the reflection of the studies or articles was examined with field data by selecting a district from Tamil Nadu which is predominantly using Indian medical system for their ailing. (Secondary data published by the District hand book of Theni 2019). Primary data were collected from paramedical staffs of Primary Health Centres of Theni district from August to October of 2021 by using an interview schedule. Purposive non random sampling techniques was used to reach the sample element by taking the Primary Health Centres and Community Health Centres of Theni district or by covering five taluks of Theni Districts . The sample collection units in Theni district was 49 , includes the Taulk hospital and all PHC. But for this study researchers took 22 sample units for interviewing their paramedical staffs from PHC of all taluks (4 from each taluk

except Uthamapalayam -6) .The name of the taluks are Aundipatti, Bodinayakkanur, Periyakulam, Theni and Uthamapalayam. The number of villages is more in Uthamapalyamtaluku (39 villages) while comparing with other taluks, So there were six sample collection units of PHC paramedical staffs were selected and all 22 PHC were visited and met by the field investigator for collecting the primary information about their trails and challenges during pandemic period. It's a descriptive study.

Objectives of the Study

The general objective is to explore the issues and challenges of paramedical staffs in pandemic period, specifically the trails of paramedical staffs in primary health centres and Community Health Centre of Theni District in pandemic period.

Trails and Challenges from Reviews of related Studies

Paramedical staffs and professionals are all people engaged in actions whose primary intent is to reinforce health. They study, diagnose, treat and stop human illness, injury and other physical and mental impairments in accordance with the requirements of the populations they serve.

Stress of Paramedical Staffs

Even if patient care is necessarily multidisciplinary, being a paramedic is a further risk factor for stress. Paramedical staff appears to possess been more exposed than physicians. Healthcare professionals must provide basic, comfort and symptomatic care. This type of care preferentially involves paramedical staff were more exposed to the lack of material for protecting themselves from infectious virus and scarcity of human resources to meet the demand for health seeking behaviour of a particular point of health delivery than physicians. Nurse-to-patient ratio standards in critical care services required new resources during the pandemic. This meant that some paramedical staff was reallocated to under staff units to supply help/aids the health care and increase manpower which gave a stress.

This was also not a trivial issue in terms of work related stress and was much less the case for physicians who, because of their specialties, remained within their areas of expertise. The sources of stress were thus more important for paramedical staff, including nurses. The high levels of work-related stress among nurses during the pandemic are resulting in increased burnout among these health professionals. The effects of the pandemic on Covid-19 are major as they increase psychological distress and the desire of nurses to go away the profession. This is a crucial point because the period requires maximum nursing resources and their departure generates recruitment problems which can cause the closure of certain beds or maybe units as could also be the case with critical care beds. Another problem resulting from the strain and burnout of nurses is the decline in the quality of care when nurses are affected.

Insomnia of Paramedical Staffs

Paramedical staffs have long hour work in day by day so they have facing health problems. In the pandemic period night shift work is heavy so the paramedical staffs have appeared insomnia. The studies have reported that the prevalence of insomnia among the front-line paramedical staffs to be around 35%-38%. This is because of demand for paramedical care is greater than the supply of paramedical staffs which resulted more working hours with less leisure and sleeping hours.

Health Hazards of Paramedical Staffs

The types of hazards faced by the paramedical staffs were chemical, biological, radiation, reproductive, health stress, psychiatric disorders, stalking by patients and violence. They are at high risk for musculoskeletal disorders, because of patient handling, compounded by increasing number of obese patients. Despite potential for exposure to hazards, many Paramedical staffs lack awareness about prevention. Also the system is not conductive, policies of prevention not clear, inaccessible, of there is attitude problem. Hence, paramedical staffs still suffer, more so in developing countries specifically in India.

Paramedical staffs are exposed to variety of chemical hazards including cleaning agents used for housekeeping throughout the hospital and waiting areas. Some of these chemicals are Ethylene oxide, Formaldehyde, Gluteraldehyde Methyl methacrylate, Gaseous By – Products, Latex and Mercury. All these chemicals lead to irritation of the eyes, respiratory airways (causing sore throat, cough, and nasal irritation) and prolonged exposure may result in pneumonias, hypersensitivity and asthma.

Physical hazards of Paramedical Staffs

Major physical injuries in paramedical staffs are musculoskeletal disorders seen highest in nurses, and orderlies. It is seen more than seven times of other industries, due to patient handling, positioning, lifting, bed making in extremely awkward postures, transferring to bed, Chair, toilet, for diagnostics and therapy. Sprains, strains are reported fairly often Shoulders, and lower back pain. Musculoskeletal diseases affect mostly paramedical staffs at very early stage of their careers.

Personal Protective Equipment (PPE) related issues

It is not uncommon that front-line paramedical staffs have to work with a limited supply of personal protective equipment (PPE). Such a scenario results in fear and apprehension among the paramedical staffs. The situation is often compounded by clarity regarding which PPEs are adequate in a particular setting leading to confusion and worries.

Violence

In healthcare, there's an increased anticipation of violence due to several factors, a patient population especially under the influence of intoxicants like drugs and alcohol, megabit disorders, trauma, psychosis, or personally disorders. It may even be increased stress levels in patients and relatives because of long waiting hours, unrestricted visitor access, overcrowding then on. Workplace violence can have a negative impact on both paramedical staffs as well as patients.

Physician Burnout

Physician burnout is an under-recognized and under-reported problem, characterized by a state of brain-fag depersonalization, and a decreased sense of private accomplishment. If unrecognized, the costs to the physical and to the healthcare system can be enormous because physician burnout is associated with increased rates of their personal life issues and challenges, medical errors, and attrition. If properly recognized the physician needs and wants an appropriate treatments are available with the cent per cent integration of paramedical staff.

Women Paramedical Staffs are more affected

In the present study, whatever their profession, women had the very best levels of work-related stress during the primary global lockdown. The results concord with the literature revealing that women are more prone to stress, and may also suffer more from the negative psychological impact of the COVID-19 outbreak. Women often have a double life combining work and family life. This is even less reconcilable when both professional and family constraints increase. Even in couples that shared the involvement within the education and care of youngsters women are still mostly implicated.

Findings of Trails and Challenges from Field Study

The table one depicts the recalling of their trails and challenges crossed during the pandemic period and its second, third and fourth phase lock down. During the COVID-19 pandemic, frontline healthcare workers were exposed to a high stress level which is unavoidable. Over time, the negative effects of stress can lead to psychological health problems, such as depressive and anxiety disorders. Therefore, psychosocial, occupational, and personal functioning was severely compromised, negatively affecting quality of life. The findings from field study suggest Paramedical staffs are susceptible to various health consequences due to the COVID-19 pandemic. Several risk factors were identified; long duty hours, working in the high-risk department, lack of PPE, diagnosed family member, and

unqualified hand-washing and improper infection control site. Furthermore, prolonged PPE usage led to skin damage, with the nasal bridge being the foremost common site. A high levels of depression, stress, anxiety, distress, anger, fear, insomnia, and post-traumatic stress disorder were identified among the paramedical staffs. Females were affected more from mental health consequences because of close contact with patients for extended working hours, which ended in fatigue, stress, and anxiety.

Conclusion

The COVID-19 pandemic has and had consequences for each population. Nevertheless, healthcare professionals were more impacted than other workers by work-related stress. Paramedical staff was more impacted on than physicians. Across all occupational categories, age appears to mitigate work-related stress, and perhaps thanks to the consequences of experience. Paramedical staffs are at risk for developing physical and mental health consequences due to their role in providing care to patients with COVID-19. Implementation of the subsequent strategies may help to reduce the burden of health consequences in Paramedical Staffs: the adequate provision and training on the utilization of Private Protective Equipment, new strict infection control practices, shorter shift length, and provision of psychological state and support service for delivering high efficiency services to repair the physical and mental health of society.

References

- Adams, James G., and Ron M. Walls. "Supporting the Health Care Workforce during the COVID-19 Global Epidemic." *JAMA*, vol. 323, 2020.
- Agarwal, Ayush, et al. "Are Health Care Workers Following Preventive Practices in the COVID-19 Pandemic Properly? – A Cross Sectional Survey in India." *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, vol. 15, 2021, pp. 69-75.
- Broche-Perez, Yunier, et al. "Gender and Fear of COVID-19 in a Cuban Population Sample." *International Journal of Mental Health and Addiction*, vol. 20, 2020.
- Brummer, Donald L., et al. "The Role of Paramedical Personnel in Health Care: A Statement by the Committee on Therapy." *American Review of Respiratory Disease*, vol. 100, no. 2, 1969.
- Chitra, M., and S. Pradeepan. "Preparedness of Public Health Care System in India - A Case Study." *Shanlax International Journal of Economics*, vol. 10, no. 4, 2022.
- Cirincione, Luigi, et al. "COVID-19 Pandemic: Prevention and Protection Measures to be Adopted at the Workplace." *Sustainability*, vol. 12, no. 9, 2020.
- Coco, Marinella, et al. "Psychosocial Impact and Role of Resilience on Healthcare Workers during COVID-19 Pandemic." *Sustainability*, vol. 13, no. 13, 2021.
- Couarraze, Sebastien, et al. "The Major Worldwide Stress of Healthcare Professionals during the First Wave of the Covid-19 Pandemic - The International COVISTRESS Survey." *PLoS ONE*, vol. 16, no. 10, 2021.
- EU-OSHA. *Annual report 2007: Bringing Safety and Health Closer to European Workers*.
- Gupta, Snehil, and Swapnajeet Sahoo. "Pandemic and Mental Health of the Front-Line Healthcare Workers: A Review and Implications in the Indian Context amidst COVID-19." *General Psychiatry*, vol. 33, 2020.
- Higginson, Ray, et al. "Paramedic Use of PPE and Testing during the COVID-19 Pandemic." *Journal of Paramedic Practice*, vol. 12, no. 6, 2021, pp. 221-25.
- Kang, Lijun, et al. "Impact on Mental Health and Perceptions of Psychological Care among Medical and Nursing Staff in Wuhan during the 2019 Novel Coronavirus Disease Outbreak: A Cross-Sectional Study." *Brain, Behavior, and Immunity*, vol. 87, 2020, pp. 11-17.
- Khasne, Ruchira W., et al. "Burnout among Healthcare Workers during COVID-19 Pandemic in India: Results of a Questionnaire-based Survey." *Indian Journal of Critical Care Medicine*, vol. 24, no. 8, 2020, pp. 664-71.

- Kompier, Michiel A. J. "New Systems of Work Organization and Workers' Health." *Scandinavian Journal of Work Environment & Health*, vol. 32, 2006, pp. 421-30.
- Koppen, Julia, et al. "Health Workforce Response to COVID-19: What Pandemic Preparedness Planning and Action at the Federal and State Levels in Germany." *The International Journal of Health Planning Management*, vol. 36, 2021, pp. 71-91.
- Leka, Stavroula, and Aditya Jain. *Health Impact of Psychosocial Hazards at Work: An Overview*. World Health Organization, 2010.
- Lu, Wen, et al. "Psychological Status of Medical Workforce during the COVID-19 Pandemic: A Cross-Sectional Study." *Psychiatry Research*, vol. 288, 2020.
- Ministry of Health & Family Welfare. *Report of Rural Health Statistics 2020-2021*. Government of India.
- Park, Crystal L., et al. "Americans' COVID-19 Stress, Coping, and Adherence to CDC Guidelines." *Journal of General Internal Medicine*, vol. 35, 2020.
- Paybast, Sepideh, et al. "The Anxiety Disorder among the Healthcare Providers during the COVID-19 Infection Pandemic: A Systematic Review." *International Clinical Neuroscience Journal*, vol. 7, no. 3, 2020, pp. 115-21.
- Scott, Kerry, et al. "What do we know about Community-based Health Worker Programs? A Systematic Review of Existing Reviews on Community Health Workers." *Human Resources for Health*, vol. 16, 2018.
- Sengupta, Mitali, et al. "Challenges Encountered by Healthcare Providers in COVID-19 Times: An Exploratory Study." *Journal of Health Management*, vol. 23, no. 2, 2021, pp. 339-56.
- Shammi, Mashura, et al. "COVID-19 Pandemic, Socioeconomic Crisis and Human Stress in Resource-limited Settings: A Case from Bangladesh." *Heliyon*, vol. 6, no. 5, 2020.
- Shaukat, Natasha, et al. "Physical and Mental Health Impacts of COVID-19 on Healthcare Workers: A Scoping Review." *International Journal of Emergency Medicine*, vol. 13, 2020.
- Sivanandan, Arulprakash, et al. "Awareness and Preference in Utilizing Primary Health Care Services from Rural Health Center as First Point-of-Care: A Community-based Cross-Sectional Study in South India." *Journal of Education and Health Promotion*, vol. 9, 2020.
- Sukumaran, Anil Bindu, et al. "Psychological Response of Healthcare Workers and Sigma Experienced during Early Covid-19 Pandemic Period in Kerala." *International Journal of Medicine and Public Health*, vol. 11, no. 1, 2021, pp. 33-37.
- Vagni, Monia, et al. "Personal Accomplishment and Hardiness in Reducing Emergency Stress and Burnout among COVID-19 Emergency Workers." *Sustainability*, vol. 12, 2020.
- Vankovska, Biljana. "Dealing with COVID-19 in the European Periphery: Between Securitization and Gaslights." *Journal of Global Faultlines*, vol. 7, no. 1, 2020.
- Yin, Qianlan, et al. "Posttraumatic Stress Symptoms of Health Care Workers during the Corona Virus Disease 2019." *Clinical Psychology & Psychotherapy*, vol. 27, 2020, pp. 384-95.

Table 1 Perceptions of Paramedical Staff's Selected PHCs of Theni Distirct

Name of the Health unit	Stress due to high risk Responsibilities		Conflict on Local Population/ Patients		Residing in the Allotted Village		Shifted to other Village PHC		Served patients over the pandemic period			Attended Sputum/ Sample Collection		Support from family members	
	No	Yes	No	Yes	No	Yes	No	Yes	<3000	3000-5000	>5000	No	Yes	No	Yes

Community Health Centre	--	5	5	--	5	0	5	--	2	2	1	--	5	--	5
PHC	--	17	17	--	16	1	17	--	9	5	3	--	17	--	17
Total	--	22	22	--	21	1	22	--	11	7	4	--	22	--	22

Source: Computed from Survey data

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