PREVALENCE OF BURNOUT AMONG HEALTH CARE PROFESSIONAL DURING COVID-19 PANDEMIC AND COPING STRATEGIES ADOPTED BY THEM

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PREVALENCE OF BURNOUT AMONG HEALTH CARE PROFESSIONAL DURING COVID-19 PANDEMIC AND COPING STRATEGIES ADOPTED BY THEM

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CHAPTER – I

INTRODUCTION

On December 31, 2019, the China office of World Health Organization (WHO) was notified regarding some cases of pneumonia of unknown etiology in Wuhan City of Hubei province. It was subsequently termed Coronavirus disease 2019 (COVID-19) by the WHO. The rapid global spread of the disease led to the declaration of COVID-19 as a pandemic on March 11, 2020 (WHO, 2020). The disease causes respiratory illness (like the flu) with symptoms such as a cough, fever, and in more severe cases, difficulty breathing. It spreads primarily through contact with an infected person when they cough or sneeze. It also spreads when a person touches a surface or objects that has the virus on it, and then touches their eyes, nose, or mouth. Between February 19 to April 17, 2020, India has reported less than 13,000 confirmed cases with less than 400 deaths (The Times of India, 2020).

Covid-19 is creating havoc among the masses. First case was reported on 30 January in Kerala followed by 3 more cases by 3rd February, 2020. Numbers escalated in March after a Sikh preacher who returned from travel to Italy and Germany, carrying the virus, and later turned into "super spreader" by attending a Sikh festival in Anandpur Sahib. Amid the worsening situation, Indian Prime Minister Narendra Modi asked for Junta Curfew to be observed on 22 March from 7am to 9 pm. This measure aimed at creating awareness among masses and acknowledging the work of healthcare professionals involved in combatting the Covid-19 pandemic. On 24 March 2020, Prime Minister announced a nationwide lockdown in order to control the pandemic and contain the infection from spreading further. All these measures in place, but still India is facing a crisis situation as the number of positive cases keep on rising (Kazmi, et. al., 2020).

While there has been regular tracking and reporting of total cases and deaths across the world, what is less well known is the contribution to these numbers from different types of workers through workplace exposure. Clearly, those workers involved in healthcare are at the front line in terms of risk of infection and death (Schwartz, et. al., 2020). Infectious disease outbreaks are known to have psychological impact on

healthcare workers as well as the general population. A notable example would be the psychological sequelae observed during the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 (Ministry of Health, 2004; McAlonan et al., 2007). Studies on the SARS outbreak revealed that healthcare workers experienced acute stress reactions (Tam et al., 2004; Grace et al., 2005). In addition to the specific physical manifestations of various diseases, some symptoms may arise due to the psychological sequelae of these infection outbreaks. Such psychosomatic symptoms have been reported with increased prevalence during and after the outbreaks, such as the SARS and Ebola virus (Lee et al., 2005; Lam et al., 2009; Marco et al., 2015; Matua and Wal, 2015; Xiang et al., 2020). In the COVID-19 pandemic, frontline healthcare workers have to work under particularly intense stress levels. They must work in makeshift settings created to handle the overflow of patients from intensive care units, sometimes with inadequate access to optimal protective equipment. They often need to cover additional shifts to compensate for the absence of their colleagues who have become ill or who are quarantined. They must quickly adapt to medical interventions as they are asked to intervene outside of their typical area of medical expertise. Day after day, they must optimize the treatment of patients with COVID-19 and make complicated clinical and ethical decisions that affect the mortality of their patients, at unprecedented rates. It will be important to identify and support healthcare workers who are struggling in the context of the pandemic (Petzold, et. al., 2020).

A shortage of personal protective equipment endangers health workers worldwide (WHO, 2020). The absence of appropriate protective measures is a major cause of concern among medical personnel. Especially in a country like India which is a densely populated country without a robust healthcare infrastructure, it is a cause of worry (MoHFW, 2020**).** According to report of Business Today (06 April 2020) due to shortage of PPE equipment and facilities the healthcare professionals are at huge risk across the country, which has been turning into nightmare with the number of medical professionals including doctors and nurses are getting infected while treating the patients. Due to its tremendous infectious ability the disease has instilled a considerable degree of fear, worry and concern in the population at large and among certain groups in particular, such as older adults, care providers and people with underlying health conditions (Kazmi, et. al., 2020). Apart from the direct infection

risks arising from close contact with patients and/ or potentially infectious co-workers during the COVID-19 pandemic, healthcare workers are also under increasing stress and mental health risks (Wu, et. al., 2009). The number of infected and severely ill patients is escalating as well as the number of exposed healthcare workers who are under self-quarantine, either because they have been infected with COVID-19 or have been in contact with a case. This is leading to a much greater workload and stress for those left in the healthcare workforce and a serious weakening of the health service provided. Mental health risks are further exacerbated by reported shortages of protective equipment for healthcare workers in many parts of the world (Xiang, et. al., 2020). Apart from the direct health effects on workers from COVID-19 infection, there will be many flow-on effects which will have an impact on workers' health. These include the strict home isolation orders and major restrictions on gatherings in most countries in response to the pandemic, resulting in declining business confidence and a sharp downturn in the global economy (Milner, et. al., 2020).

In the case of COVID-19-related stress, one would expect symptoms that include preoccupation with the risks of COVID-19, compulsive attention to COVID-19-related news, insomnia, healthcare work–related anxiety, guilt, bereavement, avoidance of returning to the healthcare setting, irritability, intrusive thoughts, nightmares and depression. For most people, these symptoms will resolve without intervention. However, if not addressed urgently, these symptoms may contribute to burnout and functional impairment among healthcare workers. Moreover, natural disasters both cause post-traumatic stress disorder and increase the rates of other psychiatric disorders, including mood and anxiety disorders and addictions, which may cause another wave of stress-related difficulties for healthcare workers and others profoundly affected by the pandemic. During this pandemic, as in everyday life, there is no health without mental health (Krystal, 2020).

According to reports, 10% of confirmed cases of COVID-19 involved healthcare providers. The high rate of infection and mortality has a tremendous impact on the healthcare system (Salimi and Torun,2020). Studies on the SARS outbreak revealed that healthcare workers experienced acute stress reactions (Tam et al., 2004; Grace et al., 2005).

Burnout

Burnout is a syndrome seen in demanding jobs and in people who care for others such as social workers, teachers, and healthcare professionals (Keel, 1993). Healthcare workers, particularly physicians, are exposed to high levels of distress at work. Persistent tension can lead to exhaustion, psychological, and/or physical distress. Moreover, burnout syndrome may increase the risk of medical errors and decrease job satisfaction, which incites early retirement (Maslach, 2001; Harper et al., 2008; Satele et al., 2010). Professional burnout is a major global health concern among physicians, nurses, and other healthcare providers (Imo, 2017; De Simone, et. al., 2019; Woo, et. al., 2020). Burnout is a syndrome characterized by emotional exhaustion, depersonalization, and a diminished sense of personal achievement (Maslach and Jackson, 1981). Evidence suggests that healthcare professionals are especially susceptible to experiencing burnout (Bender and Farvolden, 2011; Morse, et. al.,2019; Gelsema, et. al.,) and the rise of burnout prevalence among healthcare providers in recent years has been well documented (Shanafelt, et. al., 2015).

Burnout among healthcare professionals has been found to be associated with a wide range of occupational stressors, which are likely to increase during COVID-19. More number of suspected cases arriving in the hospitals, whereas institutional capacities for treating diagnosed cases are often constrained, which results in additional workplace-related stress on healthcare providers, especially among emergency care providers (Sleep, 2020). A study by the Canadian Medical Association found emergency physicians are almost three times as likely to suffer depression compared to the national average whereas one in seven physicians had suicidal thoughts (Chochinov and Lim, 2020). Furthermore, studies have shown that healthcare providers who had worked in infection control or treated isolated or quarantined individuals are likely to experience multiple mental health problems (Hossain, et. al., 2020). These challenges may increase psychosocial stressors amidst of COVID-19. In addition, many of the existing providers are withdrawn or suggested self-isolation after working on COVID-19 cases (Alessi, 2020). Such concurrent experience of high workload, the impending fear of being infected, or disrupted social support during isolation or quarantine are critical factors that may influence burnout and associated psychosocial health outcomes. Many other

challenges may crucially affect the mental health and wellbeing among healthcare providers (Hossain, et, al., 2020; Sasangohar, et. al., 2020). For example, a lack of personal protective equipment and other preventive measures is associated with burnout and other mental health problems among front-line healthcare providers (Sasangohar, et. al., 2020). Additionally, healthcare providers are rejected by the patients and general public amid this pandemic as reported in several news media (The Times of India, 2020; The New York Times, 2020), which may increase psychological stress and lead to burnout symptoms. These challenges provide some glimpses of difficulties experienced by front-liners, whereas the true psychosocial and epidemiological burden of burnout in the era of COVID-19 is largely underreported.

Healthcare providers experiencing burnout may consequently develop symptoms such as anxiety, irritability, mood swings and depression (Aiken, et. al., 1987; Parker and Kulik, 1995; Gundersen, 2001; Shanafelt, et. al., 2002; Trufelli, et. al., 2008). Furthermore, burnout has physical health outcomes including multiple aches and pains, digestive upset and cardiovascular risks (Maslach and Leiter, 2008; Eckleberry, et. al., 2009; Dyrbye, et. al., 2014; Salvagioni, et. al., 2017). Studies further demonstrate that physicians experiencing burnout are more likely to report job dissatisfaction and intention the leave the medical profession (Williams, et. al., 2001).

Burnout is a global occupational hazard among health care workers and other human service professionals (Lasebikan and Oyetunde 2012; Aloulou et.al., 2013). Burnout is conceptualised as comprising emotional exhaustion, distancing oneself from patients and reduced feelings of personal accomplishment (Maslach and Leiter 2016). In studies from high income countries, the prevalence of burnout among health care workers ranges from 12.6% (Abdulla et. al., 2011) to 29.9% (Abdulghafour et.al., 2011).

Coping Strategies

In these unprecedented times, the spread of COVID-19 has put a strain on healthcare systems around the world. The COVID-19 pandemic is raising stress

levels for everyone, but perhaps no group has been hit harder than health care Professionals. Feeling under pressure and burnout are likely experience by them. Health Care Professionals caring for patients with COVID-19 experience significant psychological distress and mental health issues which need to be addressed (Delhi AIIMS, 2020). Medical staff often has a variety of psychological problems under a high-pressure and risk anti-pandemic situation (Kang et al., 2015). With a high rate of infection and deaths, COVID-19 can lead to many psychological problems including stress, anxiety, depression, fear (Arslan, et al., 2020) and possibly burnout. Studies on burnout related to COVID-19 have been mainly conducted on healthcare professionals. A study of healthcare professionals showed a significant positive relationship between stress and burnout (Morgantini et al., 2020). Another study investigating the relationship between burnout, anxiety, and stress disorders during COVID-19 pandemic indicated that doctors and nurses experienced high levels of mental health problems including burnout (Sung et al., 2020). There is a growing need to prepare the Health Care Professionals for the mental health crisis and build up their resilience (Rajhans, 2020). Therefore, it is essential for their welfare to cope effectively with burnout.

In general terms, coping is a strategy that helps people to reduce stress and solve problems (Gholamzadeh, et. al., 2011). The stressors are coped with according to the meaning they have for those involved. Coping with a problem means trying to overcome what is causing stress, redirecting the meaning attributed to the difficulties, guiding the life of the individual, and maintaining stable physical, psychological and social states (Folkman and Lazurus, 1985). The use of different coping strategies helps in reducing psychological distress. The strategies used to cope with trauma may differ among individuals, but they can also vary according to the profession and the features of the traumatic event (Nydegger et al., 2011). However, a coping strategy frequently used by emergency workers is that of avoidance and minimization, and this strategy is associated with higher levels of stress (Brown et al., 2002; Chang et al., 2003; Kerai et al., 2017; Witt et al., 2018; Theleritis et al., 2020).

Justification

Since December 2019, when the first cases of human infection with the novel Coronavirus occurred, the emerging infectious disease has rapidly spread worldwide, affecting people in many countries. This ongoing COVID-19 pandemic has created several dilemmas, especially for healthcare providers. Since the coronavirus is a highly communicable disease for which there is no known effective treatment, it can infect the health care workers very easily. Thus, the healthcare providers can provoke the feelings of anxiety and stress in response to prolonged exposure to occupational stress and more likely to develop burnout. Burnout is conceptualised as comprising emotional exhaustion, distancing oneself from patients and reduced feelings of personal accomplishment. Moreover, the review of literature revealed the prevalence of burnout among Health care professionals are very high and can have serious consequences for them. Therefore, the presents study aims to find out the prevalence of burnout among health care professional during COVID 19 pandemic period.

The wellbeing of healthcare Professionals is important for the effective functioning of health systems. High levels of job-related stress can affect their wellbeing adversely, leading to mental health problems and experience of burnout. These stressors have profound ethical implications including moral distress, autonomy and welfare of the patient, and social justice, which may affect health service delivery and maintenance of a healthy workforce in healthcare organizations during this pandemic. In this regards effective coping strategies for preventing burnout can show effectiveness in various contexts. Hence, an attempt is made to find out the coping strategies adopted by the healthcare professionals to overcome their burnout.

The burnout may vary with the personal characteristics and job-related aspects of the health care professionals. The levels may vary with age, gender, marital status, Number of Children, type of family, Job category, years of practice, Days of working during past months, hours of working per shift. Thus, it was thought necessary to explore the variation in burnout with the personal and family characteristics and work-related aspects of the health care professionals.

Several studies were found through review of literature focusing on areas such as “Burnout and risk factors among Healthcare workers during covid – 19”, “Psychological impact of covid – 19”, “Psychological symptoms and physical symptoms among health care workers during covid – 19”, “Anxiety disorder, depressive symptoms and sleep quality”, “Vicarious traumatization during covid – 19”, “Comparison of Burnout Frequency among Physicians and Nurses”, “Difficulties with PPE Kit”, “Relationship between self-esteem, high stress and burnout” and “impact of lockdown on mental health”. Most of the researches focused on burnout among healthcare workers and public during covid – 19 pandemics. A dearth of researches was found focussing on coping strategies adopted by health care professional to handle their burnout and to explore the variation in burnout l with the personal and family characteristics and job-related aspects of the health care professionals. A related research was found in India focusing on burnout and coping strategies among resident doctors of private medical college of south India.

The information gathered through the present research would widen the data base and will help in strengthening the curriculum of the Department of Family and Community Resource Management, Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda. This study will help the students to gain insight into the causes of physiological and psychological burnout of the healthcare workers. Thus, the study was expected to contribute significantly to the field of Family and Community Resource Management as well as it will contribute for the society at large. The results of the study will contribute in combating the burnout among healthcare professionals by adopting appropriate coping strategies. Health policymakers and practitioners can adopt such strategies and develop context-specific approaches promoting a healthy workplace, addressing ethical issues, and preventing burnout among healthcare professionals especially during the COVID-19 pandemic.

Statement of problem

The present study intends to find out the prevalence of burnout among health care professional during COVID 19 pandemic period, coping strategies adopted by them

to handle their burnout and to explore variation in burnout with the personal and family characteristics and work related aspects of the health care professionals.

Objectives of the study

- To find out the prevalence of burnout among health care professional during COVID 19 pandemic period.
- To find out the coping strategies adopted by health care professional to overcome their burnout.
- To explore the variation in burnout with the personal, family characteristics and work related aspects of the health care professionals

Delimitation

1. The respondents of the study were those healthcare professionals who were actively working during the COVID-19 pandemic period.
2. The present study was limited to healthcare professionals such as Specialists, Nurses, and Physician Assistants.

Hypotheses

- There exists a variation in burnout with the personal, family and work-related characteristics of the health care professionals.

Review of Literature

CHAPTER II

REVIEW OF LITERATURE

The review of literature is a condensed version of an exhaustive literature survey (Kamath & Udipi, 2010). The review of literature provides the basis to understand the importance of undertaking research in the chosen area to obtain knowledge on the methodology used in past researches and to identify the need for future research (Kothari, 2012). Any scientific investigation starts with a review of literature. The main aim of the present research was to find out the prevalence of burnout among health care professional during COVID 19 pandemic period and coping strategies adopted by them to overcome their burnout and to explore the variation in burnout with the selected independent variables. The major areas of related literature, survey, scholarly articles, books and other sources relevant to particular issues, area of research, or theory, providing a description, summary and critical evolution of each work are presented here. In order to make the review clear and understanding, the present chapter is divided into the following section:

2.1 Theoretical Orientation

For the presentation the theoretical literature was divided into following subheads:

- 2.1.1 Covid-19 Pandemic and Health Care Professionals
- 2.1.2 Health Care Professionals and Burnout
- 2.1.3 Maslach Burnout Inventory
- 2.1.4 Physiological and Psychological Health of Healthcare Professionals during COVID-19 Pandemic
- 2.1.5 Problems with Personal Protective Equipment (PPE)
- 2.1.6 Coping Strategies

2.2 Related Researches

- 2.2.1 Researchers conducted Outside India
- 2.2.2 Researchers conducted within India

Conclusion

2.1 Theoretical Orientation

Theoretical Orientation is the section which describes about the theoretical content related to the topic of the study. These are discussed independently in the succeeding description.

2.1.1 Covid-19 Pandemic and Healthcare Professionals

The novel coronavirus disease pandemic originated from Wuhan, China, at the end of 2019 and has rapidly spread over the world. The Corona Virus Disease 2019 (COVID-19) outbreak was declared a public health emergency of international concern on January 30, 2020, by the World Health Organization (WHO). (Talevi et al., 2020). In 2019, the Centres for Disease Control and Prevention (CDC) started monitoring the outbreak of a new coronavirus, SARS-CoV-2, which causes the respiratory illness now known as COVID-19 (Shrikrushna et al., 2020).

Corona viruses are a large group of viruses that are known to infect both humans and animals and in humans cause respiratory illness that range from common colds to much more serious infections. Coronavirus disease is an infectious disease and shares many of its symptoms with the flu or common cold, although there are certain symptoms common to flu and colds that are not usually seen in Covid-19. People with confirmed cases of Covid-19 rarely suffer from a runny nose, for instance. The most common Covid-19 symptoms are fever and dry cough. Other Covid-19 symptoms are less common like fatigue, people coughing up sputum which is thick mucus from within the lungs. Other rarer symptoms include shortness of breath, muscle pain, sore throats, headaches or chills, loss of smell or taste. According to the WHO, symptoms tend to appear between five and six days after infection (Kazmi, et. al., 2020). Symptoms vary from person-to-person with COVID-19. It may produce few or no symptoms. However, it can also lead to severe illness and may be fatal (Shrikrushna et al., 2020).

Healthcare workers (HCWs) are the foundation of an optimally functioning health system (Kim, et al., 2019). A healthcare worker is one who delivers care and services to the sick and ailing either directly as doctors and nurses or indirectly as aides, helpers, laboratory technicians, or even medical waste handlers. (Joseph and Joseph 2016). Healthcare professionals can be evaluated in 5 groups; 1) Doctors, 2) Dentists, pharmacists, biologists, dieticians, physiotherapists, etc., 3) Nurses,

midwives, health officers, etc., 4) Radiology technicians, operating room and anaesthesia technicians, etc., and 5) Secretaries, cleaning staff, drivers, etc. (Saygun, 2012).

Healthcare workers providing treatment or teaching from home must also manage childcare and other family responsibilities. Societies around the world are counting on their healthcare workers to meet the medical challenges presented by COVID-19. The frontline healthcare workers are heroes who are putting themselves at risk for the sake of others. But this puts those healthcare workers at enormous risk of stress-related symptoms and even persisting adjustment-related problems (Krystal and McNeil, 2020).

2.1.2 Healthcare Professionals and Burnout

Healthcare professional have been described as a high-risk population for experiencing burnout and the prevalence of burnout among healthcare providers has been increasing in recent years. Burnout among healthcare professional has profound personal and professional consequences, impacting the quality of patient care and functionality of healthcare systems (Dubale and Friedman 2019). Burnout is a concern, as it not only has costly consequences for the provider, but also for the patients and the entire healthcare system. Provider wellbeing is linked to providing quality care and favourable outcomes for patients. Furthermore, the impact of productivity loss related to burnout could lead to fewer healthcare resources that, in turn, can result in healthcare service waitlists and less than optimal healthcare delivery to the public (Chemali, et. al., 2019). A mismatch between the expectations and the resources of the worker on the one hand and the job demands, job resources, and possibilities in the job on the other may lead to burnout, if coping is dysfunctional and the mismatch prevails (Schaufeli et.al., 1998).

Burnout is a process in which the psychological resources of an employee are gradually depleted as a consequence of prolonged stress at work (Maslach, et. al., 2001). Burnout is a syndrome characterized by emotional exhaustion, increased depersonalization, and a diminished sense of personal accomplishment due to chronic emotional stress at work. Burnout impacts job satisfaction, job performance, vulnerability to illnesses, and interpersonal relationships (Chemali, et. al., 2019).

Healthcare workers, particularly physicians, are exposed to high levels of distress at work. Persistent tension can lead to exhaustion, psychological, and/or physical distress. Emotional Exhaustion, Depersonalization, and a decreased sense of personal accomplishments characterize burnout, which is a growing concern for the healthcare community globally (Imo,2017).

Broadly speaking, burnout is a combination of exhaustion, cynicism, and perceived inefficacy resulting from long-term job stress. It was first described in 1974 by the clinical psychologist Herbert Freudenberger who often volunteered at a free clinic in the then drug-ridden East Village of New York City. Over time, Freudenberger observed emotional depletion and accompanying psychosomatic symptoms among the clinic's volunteer staff. He called the phenomenon "burnout," borrowing the term from drug-addict slang (Freudenberger, 1974).

Over the next decade, the social psychologist Christina Maslach built upon Freudenberger's work. At the University of California, Berkeley, Maslach developed a model of burnout consisting of three dimensions: emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment. In 1981, she proposed the Maslach Burnout Inventory (MBI), which consists of three subscales to measure the extent of an individual's symptoms along each dimension (Maslach and Jackson, 1981). The MBI remains the most commonly used instrument to assess burnout to this day (Rotenstein, 2018).

> "Burnout is defined as a three-dimensional syndrome of exhaustion, cynicism, and diminished professional efficacy"
>
> Maslach,et. al. (1996)

Cumbe et al., (2017) states that

> "Burnout is a multidimensional syndrome and includes symptoms of emotional exhaustion, depersonalization, and reduced personal accomplishment at work"

According to Patel et al., (2018)

> “Burnout is a psychological syndrome characterized by emotional exhaustion, depersonalization, and a sense of reduced accomplishment in day-to-day work”

Freudenberger (1974) defined burnout as

> “Exhaustion resulting from “excessive demands on energy, strength, or resources” in the workplace, characterizing it by a set of symptoms including malaise, fatigue, frustration, cynicism, and inefficacy”

In addition, Freudenberger noted that burnout often occurred in contexts requiring large amounts of personal involvement and empathy, primarily among “the dedicated and the committed.”

World Health Organization classified job burnout as an "occupational phenomenon. "WHO defined burnout as "a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed." The organization sees it as split up into three "dimensions," which it says are: feelings of energy depletion or exhaustion; increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and reduced professional efficacy. It is said that one can't have burnout without stress, but can have stress without burnout. "It's chronic stress that hasn't been managed effectively. Stress can come and go depending on the day. Burnout is constant. Someone experiencing burnout doesn't have days of productivity and joy in between tough days. It's a constant feeling of numbness and frustration." It's so important to be able to recognize it before it leads to health problems and before you feel too powerless or helpless (Yang, 2020).

Professional burnout is a major global health concern among physicians, nurses, and other healthcare providers (Tang, et al., 2020). Healthcare providers often experience high workload, strict organizational regulations, less time to cope with occupational challenges, a rapidly evolving knowledge base, and a lack of interpersonal support in everyday life (De Simone, 2019). These challenges often lead to “emotional exhaustion,” where a person feels fatigued and lack of energy to accomplish a task. Moreover, “depersonalization” may follow emotional exhaustion, where a person may cynically treat others as objects. Also, a diminished sense of

self-efficacy and competence affect the emotional wellbeing of an individual. Thus, emotional exhaustion, depersonalization, and a decreased sense of personal accomplishments characterize burnout, which is a growing concern for the healthcare community globally (Imo, 2017). Such a high burden of burnout increased during the coronavirus disease (COVID-19) pandemic, where healthcare providers in most of the health systems are facing a high workload in providing health services. Recent media reports also highlight this critical challenge (ICSI, 2020; MedCity News, 2020), which may affect fundamental values of medicine and health workforce during this pandemic, necessitating ethical discourses on burnout.

Burnout is a major occupational problem among healthcare professional, especially during the Covid-19 pandemic. Moreover, sleep deprivation and a critical lack of psychosocial support may aggravate such symptoms amidst COVID-19 (Sultana et. al., 2020). For front-line healthcare workers, regular exposure to the illness, protective equipment shortages, and adaptation to rapidly evolving and high-stress work environments are further sources of distress (Joob and Wiwanitkit, 2020; Kang et al., 2020).

The consequences of burnout are not limited to the personal well-being of healthcare workers as many studies have demonstrated that provider burnout is detrimental to patient care. For example, the number of major medical errors committed by a surgeon is correlated with the surgeon's degree of burnout (Shanafelt et. al., 2010) and likelihood of being involved in a malpractice suit (Balch et. al., 2011). Among nurses, higher levels of burnout are associated with higher rates of both patient mortality (Welp et. al., 2015) and dissemination of hospital-transmitted infections (Cimiotti et. al., 2012). In medical students, burnout has been linked to dishonest clinical behaviours, a decreased sense of altruism (Dyrbye et. al., 2010), and alcohol abuse (Jackson et. al., 2016). High rates of physician burnout also correlate with lower patient satisfaction ratings (Halbesleben and Rathert, 2008). At an institutional level, burnout results in greater job turnover and increased thoughts of quitting among physicians (Shanafelt et. al., 2011) and nurses (Leiter and Maslach, 2009). It also results in decreased workforce efficiency. A recent Mayo Clinic study estimated the loss of productivity due to physician burnout as the equivalent of eliminating seven entire medical school graduating classes (Shanafelt et. al., 2016).

Consequently, burnout may contribute to an already impending physician and nursing shortage.

2.1.3 Maslach Burnout Inventory

Burnout is an established phenomenon across cultures and occupations. The most popular instrument in the world for measuring the phenomenon of burnout is the Maslach Burnout Inventory, developed in 1981 by Christina Maslach and Susan Jackson. On account of the very great interest in this issue, this instrument has been translated into many languages. The Maslach Burnout Inventory (MBI) is the most commonly used measure of burnout (Karolina et. al., 2016). Maslach, et. al., (2001) describe burnout as a syndrome consisting of three key dimensions, namely feelings of emotional exhaustion, depersonalisation and reduced personal accomplishment. Emotional exhaustion, representing the individual stress dimension of burnout, refers to feelings of depleted physical and emotional resources and prompts actions in workers to distance themselves emotionally and cognitively from their work, presumably as a way to cope with work overload. Depersonalisation entails negative and cynical attitudes or excessively detached responses towards the recipients of service and care (e.g. patients), reducing the recipient to an impersonal object. These two dimensions are generally considered to comprise the core symptoms of burnout (Demerouti et al., 2000). The third dimension, lack of personal accomplishment, represents the self-evaluation dimension of burnout and refers to feelings of insufficiency (Schaufeli & Buunk, 1996), incompetence, lack of achievement and unproductiveness (Maslach et al., 2001).

Burnt-out workers do not only feel physically and emotionally exhausted, they also become cynical and susceptible to disappointment, they withdraw from contact with others and become increasingly convinced that their work is pointless and has little value. They begin to doubt their skills and competence, and worse, they stop respecting their clients, or simply become adverse to the people whom they are supposed to help. Stating that “burnout is a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that can occur among individuals who do ‘people work’ of some kind” (Maslach et. al., 1986) authors underlined that the essential feature of burnout is working with others, and that it

occurs exclusively among such professionals. In recent years the conception of burnout has been modified, and above all it has begun to be treated as a phenomenon which affects members of many professions, and not only those of the human service professions: burnout is described as a crisis in one's relationship with work in general. For Maslach, burnout is rather a question of the fit or congruence between people and their jobs. It has been observed in people working with others (those who deal directly with patients, students, or clients), the blame for its development has been placed on excessive emotional burdens, and it has been rather well researched among various groups carrying out human service professions. It has thus been somewhat difficult for researchers to accept that burnout as described by Maslach as "a loss of concern for other people" it may also affect representatives of those professions in which there is a lower intensity of contact with people, for example, where the professional works not with people, but with data or things. For Maslach, burnout is rather a question of the fit or congruence between people and their jobs. She has therefore suggested that this phenomenon is not restricted to human service professions. The authors accordingly attempted to develop a more universal concept of burnout (Maslach and Leiter, 2008).

Burnout among healthcare professionals can be evaluated using the Maslach Burnout Inventory. The Maslach Burnout Inventory-Human Services Survey (MBIHSS) (Maslach and Jackson, 1986) was used to measure burnout in this study. The Maslach Burnout Inventory-Human Services Survey consists of 22 items self-report questionnaire phrased as statements about personal feelings and attitudes. The three subscales of the Maslach Burnout Inventory-Human Services Survey include emotional exhaustion (nine items; e.g. 'I feel emotionally drained from my work'), depersonalisation (five items; e.g. 'I feel I treat some recipients as if they were impersonal objects'), and personal accomplishment (eight items; e.g. 'I have accomplished many worthwhile things in this job'). These are self-scored on a seven-point Likert Scale from 0 (never),1 (a few times a year or less), 2 (once a month or less), 3 (a few times a month), 4 (once a week),5 (a few times a week), to 6 (daily). It scores separately for emotional exhaustion, depersonalization, and lack of personal achievement which are then categorized according to severity into low, moderate, or high level of burnout. This questionnaire has been extensively validated across

different countries and professions and is considered the most reliable tool for identifying burnout. The psychometric soundness of the Maslach Burnout Inventory-Human Services Survey is well documented in the literature, with internal consistencies usually well above the 0.70 Cronbach alpha level, except for the depersonalisation scale in some samples (Schaufeli, et. al., 2001). Test- retest reliability ranging from three months to one year has been reported in the range of 0.50 to 0.82 (Leiter and Durup, 1996).

2.1.4 Physiological and Psychological Health of Healthcare Professionals during COVID-19 Pandemic

Amidst the development of this infectious disease in 206 countries throughout the world, health care workers remain the main persons involved in the screening and treatment of this condition throughout. Despite remaining the crisis management personnel, the Healthcare workers are not themselves immune to the psychological consequences due to COVID-19. Among the healthcare workers also, the front-line workers involved directly in handling these patients are at greater risk than others. The reasons for such adverse psychological outcomes in them range from excessive workload/work hours, inadequate personal protective equipment, over-enthusiastic media news, feeling inadequately supported (Tam et al., 2004Styra et al., 2008; ; Lee et al., 2018; Cai et al., 2020). Another important reason for such psychological impact is the infection rate among medical staff. The sudden reversal of role from Healthcare workers to a patient might lead to frustration, helplessness, adjustment issues, stigma, fear of discrimination in the medical staff (Rana et al., 2020). Despite the low mortality rate of 2 %, the COVID-19 virus has a high transmission rate and the mortality is higher than that caused by severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) combined (Mahase, 2020). The literature published during the outbreak of SARS almost more than a decade ago suggested that Healthcare workers are at higher risk of developing anxiety, depression, stress during these periods (Wu et al., 2005).

For front-line healthcare workers, regular exposure to the illness, protective equipment shortages, and adaptation to rapidly evolving and high-stress work

environments are further sources of distress (Joob and Wiwanitkit, 2020; Kang et al., 2020). A physically and mentally healthy and well-equipped healthcare workforce is vital to a country's capability to manage COVID-19 cases effectively and lessons can be learnt from the SARS epidemic to introduce novel working arrangements to help protect healthcare workers from infection (Schwartz, 2020).

Fears of illness, death, and uncertainty of the future are significant psychological stressors for the population, and social isolation threatens to worsen public mental health (De Carvalho et al., 2020). This pandemic is a potential source of direct and vicarious traumatization for everyone (Li et al., 2020), which is only further emphasized by unsettling case reports of suicide deaths related to fears of contracting or spreading COVID-19 (Goyal et al., 2020; Montemurro, 2020).

In the case of COVID-19-related stress, one would expect symptoms that include preoccupation with the risks of COVID-19, compulsive attention to COVID-19-related news, insomnia, healthcare work–related anxiety, guilt, bereavement, avoidance of returning to the healthcare setting, irritability, intrusive thoughts, nightmares and depression. The commonly reported symptoms range from more specific symptoms like pain (Lam et al., 2009) to non-specific ones like fatigue, weakness and lethargy (Leow et al., 2005). In some cases, symptoms not perceived to be directly related to a particular infectious disease may be reported. For instance, some survivors of SARS outbreak developed chronic extra-pulmonary symptoms during outpatient clinical follow-up (Leow et al., 2005). For most people, these symptoms will resolve without intervention. However, if not addressed urgently, these symptoms may contribute to burnout and functional impairment among healthcare workers. Moreover, natural disasters both cause post-traumatic stress disorder and increase the rates of other psychiatric disorders, including mood and anxiety disorders and addictions, which may cause another wave of stress-related difficulties for healthcare workers and others profoundly affected by the pandemic. Some mental-health workers complain of isolation from their colleagues or of feeling detached from their patients. Other clinicians have reported surprise that the high rate of adherence to virtual treatments has robbed them of breaks they used to recoup their emotional equilibrium (Krystal, 2020).

People with pre-existing mental health and substance use disorders will be at increased risk of infection with COVID-19, increased risk of having problems accessing testing and treatment and increased risk of negative physical and psychological effects stemming from the pandemic (Cullen et al., 2020). Widespread outbreaks of infectious disease, such as COVID-19, are associated with psychological distress and symptoms of mental illness (Bao et al., 2020). People may experience fear and anxiety of falling sick or dying, helplessness, or blame of other people who are ill, potentially triggering off a mental breakdown (Hall, et, al., 2008).

Mental health of healthcare workers, the identified common risk factors for developing psychological morbidities include a lack of social support and communication, maladaptive coping, and a lack of training (Naushad, et, al., 2019). Therefore, this pandemic is expected to have substantial psychological impact on healthcare providers (Jianming et. al., 2020).

Physical health relates to the functioning of the physical body. There are many diseases, conditions and disabilities that can impair functioning. physical health was poor in participants with higher mental health problems (Kang et al., 2020). Physical symptoms such as sleep disturbance, headache, hypertension, lower back pain and gastric disturbance (Felton, 1998), chills, coryza, cough, dizziness, myalgia, and sore throat, as well as those with a poor self-rating of health status and with a history of chronic illnesses, correlated with higher levels of psychological impact of the outbreak, stress, anxiety, and depression (Wang et al., 2020).

Burnout has physical health outcomes including multiple aches and pains, digestive upset, and cardiovascular risks (Maslach and Leiter, 2008; Eckleberry-Hunt et. al., 2009; Dyrbye et. al., 2014; Salvagioni et. al., 2017). At a physical level, burnout syndrome is associated with the appearance of certain disorders that often force the affected person to request sick leave from work (Suñer-Soler et. al., 2014; Tremearne et. al., 2020), such as high muscle tension and generalized musculoskeletal pain (fibromyalgia), headaches or backaches, central nervous system dysfunctions, sexual dysfunctions or various cardiovascular and gastrointestinal problems (Mingote Adán et. al., 2003).

2.1.5 Problems with Personal Protective Equipment (PPE)

The first documented occupational transmission of COVID-19 among healthcare workers (HCWs) outside China occurred in California in February 2020. At this early stage, personal protective equipment (PPE)-related precautions were not well known. Consequently, out of the 121 healthcare workers who were exposed to COVID, 43 (36%) became symptomatic (Woolley et. al., 2020). Official reports in India released to the media have claimed that more than 87,000 healthcare workers have already been infected with the disease and more than 573 COVID-related deaths have already occurred among healthcare workers till September 10, 2020. Hence, keeping the COVID-19 workforce safe has presented a daunting challenge (Healthworld, 2020). From being used by beekeepers as reported in ancient literature, to 16th-century plague doctors in Europe to modern times, Personal Protective Equipment kits have come a long way (Personal Protective Equipment: Wikipedia, 2020). They form a very important part of the protective armour for the frontline warriors in this battle against the COVID-19 pandemic (Torjesen, 2020). It is important to carefully select the adequate Personal Protective Equipment to protect the skin, eyes, face, nose, mouth, hands, feet, head, and other parts of the body, so as to provide protection and act as an effective barrier between the healthcare workers and the contaminated materials like blood, body fluids, respiratory secretions, and aerosols. The Personal Protective Equipment usually comprises protective clothing, helmets, goggles, shoe covers, and respiratory protective equipment (RPE) (Mahmood et. al., 2020). Proper instructions, training, and supervision are required to ensure that the PPE is properly used and adequate protection is gained.

With the emergence of this unique challenge faced by modern medicine worldwide, the word Personal Protective Equipment has been trending on Google Search engine (Google Trends, 2020). Globally, the users have often found wearing the Personal Protective Equipment uncomfortable while working, more so in the summer season, when facilities for controlling the environmental temperature like centralised air conditioners are unavailable or are shut down for fear of spreading the infection. In addition to reduced tactile sensitivity and impaired visibility due to the deposition of water vapours on the eye goggles with their use, users have also found verbal

communication difficult while wearing the Personal Protective Equipment. Although the literature has started to address and highlight the problems and issues related to Personal Protective Equipment use on a global scale, there is still a dearth of authentic literature pertaining to the issue from within India. The most common problems associated with using Personal Protective Equipment were excessive sweating, fogging of goggles, spectacles, or face shields, suffocation, breathlessness, fatigue, headache due to prolonged use, and pressure marks on the skin at one or more areas on repeated use (Agarwal et. al., 2020).

India is a tropical country with hot and, at times, both hot and humid conditions. Hence, this problem was even more daunting. Shutting down central air conditioning systems (with common air duct systems) in the hospitals to prevent the spread of droplets and droplet nuclei further aggravated this problem. Features of dehydration like muscle cramps, dizziness, vertigo, and nausea were also reported on continuous use. There was a report of healthcare workers actually collapsing due to symptoms similar to heatstroke and had to be hospitalised (Vidua et. al., 2020). Heat stress and fluid loss have been perceived to be seriously restrictive when working in temperatures of 28 °C or more, which is quite common in India (Loibner et. al., 2019).

Other occasional problems reported were skin allergy/dermatitis caused by synthetic material of the Personal Protective Equipment, face shields impinging onto the neck during intubation, and nasal pain, pain at the root of the pinna, and slipperiness of shoe covers. Contact dermatitis/eczema caused by the material of the PPE components has also been reported from elsewhere, especially in high-friction and perspiration areas such as the chin, jaw, ears, eyelids, and arm-pits (Navarro-Triviño and Ruiz-Villaverde, 2020). Studies have reported dissatisfaction with work, a statistically significant drop in oxygen saturation, and an increase in pulse rate after wearing PPE for four hours as compared to baseline. The healthcare workers have tended to adjust their N95 masks intermittently due to breathing issues, which raises the risk of self-contamination (Yánez Benítez et. al., 2020).

The healthcare workers engaged in war against COVID-19 pandemic, working in ICU and wards for long hours clad in stifling Personal Protective Equipment and N-

95 masks, are losing their hair literally. The life saving face shields, hand gloves and masks have become a source of skin disease and poor hair health as wearing them hours on end is leaving healthcare workers grappling with rashes, acne and skin pigmentation. The healthcare workers also reported that N-95 masks prevents air circulation, resulting in accumulation of oily secretion and moisture from breath (Times of India, 2020)

2.1.6 Coping Strategies

Coping refers to responses that aim to minimize, control or encounter challenges (perceived as stress) from the internal/ external environment (Folkman and Lazarus, 1980). According to Bhagat et al. (2001), the level of stress experienced and the extent to which adverse psychological and physiological effects of stress occur depend on how well the individual utilises coping strategies in the organisational setting.

According to Fleishman (1984)

> "Coping could refer to either strategies or results. As a strategy, coping refers to the different methods that individuals employ to manage their specific circumstances, while coping as a result refers to the eventual outcomes of the chosen strategy for the individual"

Coping may be defined as

> "A series of cognitive and behavioral efforts to manage specific internal or external issues that test or exceed individual resources"
>
> Lazarus and Folkman, (1984)

Coping can be defined as

> "The cognitive and behavioural efforts that individuals make to manage situations appraised as potentially harmful or stressful"
>
> Kleinke, 1991; McElfatrick et al., (2000)

A coping strategy may be defined as

> “Adaptive when the controllability of the stressful event corresponds with the choice of coping strategy: in this case, the subject will experience fewer symptoms related to stress”
>
> Park et al., (2001)

Consequently, coping strategies could be viewed from an active as well as a passive approach, where movement towards a stressor (i.e. active coping) or away from the stressor (i.e. passive coping) is taken as broad strategies. Coping strategies may have a moderating effect on the relationship between the stressor and its consequential strain. Coping styles play an important role in physical and psychological wellbeing. This role is especially evident when individuals are confronted with negative or stressful life events. The way people cope with illness is an important factor in their recovery and subsequent adjustment (Endler and Parker, 1999).

Bradley and Chahar (2020) suggested the importance of taking healthcare professionals’ mental health into account during the pandemic to boost productivity and reduce burnout derived from pandemic related stress and uncertainty. Due to their long, intense exposure to various stressors, it is important to note the nature of the coping strategies used by these healthcare and emergency workers in these situations and their effectiveness in terms of reducing and effectively coping with stress. Indeed, the effective management of stress levels in the acute/emergency phase could reduce the risk of developing long-term disorders or other pathologies, such as anxiety and depression (Fullerton et al., 2004; Slottje et al., 2005; Argentero and Setti, 2011; Sakuma et al., 2015; Birinci and Erden, 2016; Li et al., 2017). To prevent such psychological problems, it is important to understand the factors that are associated with individuals’ experience of stress and burnout during the COVID-19 pandemic.

Individuals differ in their choice of coping strategies (Connor-Smith and Flachsbart, 2007), and factors related to the situation can also have a decisive influence on such choice (Brown et al., 2002). The literature on the relationship between coping strategies and the stress levels of emergency workers has shown that the use of

coping strategies focused on the problem usually tends to correlate with lower stress levels in healthcare workers (Watson et al., 2008; Howlett et al., 2015) and in other emergency workers (Brown et al., 2002). Loo et al. (2016) found that in a group of emergency workers, avoidance as well as coping strategies focused on emotions were associated with the development of post-traumatic symptomatology. Rodríguez-Rey et al. (2019) revealed that among health workers working in a paediatric emergency department, approximately 30% of the variance in post-traumatic symptomatology was explained by the frequent use of coping strategies focused on emotions and the infrequent use of those focused on the problem. In addition, Kucmin et al. (2018), who considered a sample of 440 paramedics, highlighted that the risk of developing post-traumatic symptomatology symptoms was predicted by the use of coping strategies focused on emotions.

A meta-analysis by Shin et al. (2014) highlighted that different coping strategies have different effects on work burnout, in particular, emotional stress and depersonalization are associated with the use of emotion-focused coping strategies, whereas professional ineffectiveness is associated with the use of problem-focused strategies. Further, a few studies have investigated the coping strategies that emergency workers can use during health emergencies similar to COVID-19. Wong et al. (2005) highlighted that during the SARS epidemic, doctors and nurses tended to use different coping strategies. The doctors tended to turn more to action planning, but this strategy did not affect their stress level. Instead, their stress level was positively correlated with their use of coping strategies based on emotional outlets. By contrast, the nursing staff tended to resort more to behavioural disengagement and distraction strategies, which, however, correlated with higher levels of stress among them. In this regard, during the MERS epidemic, hospital staff tended to adopt coping strategies related to the use of Personal Protective Equipment and the adoption of all prevention measures, as well as social support, whereas the coping strategy that they adopted the least was that based on an emotional outlet (Khalid et al., 2016). A recent study on healthcare workers in Hubei, China, during the COVID-19 epidemic (Cai et al., 2020), yielded similar results, to reduce stress, the medical staff tended to rely on active coping strategies, such as using security protocols, practicing social isolation measures, and seeking support from family and friends, but they did not find it necessary to discuss their emotions

with a professional. Huang. et al. (2020) found that a sample of nurses working during the COVID-19 emergency presented greater emotional reactions and turned more to problem-focused coping compared with university nursing students.

Moreover, coping strategies play an important role in determining the resulting levels of burnout. The introduction of the concept of coping in medicine and psychology is strongly related to stress (Lazarus, 1966; Selye, 1976). The normal or pathological reaction to stress depends on the coping capacities of an individual, as a way to adapt to the stressful context. The interest for coping strategies has registered a continuous growth. Due to the many existing attempts to conceptualize coping, there were a lot of coping instruments developed to measure this psychological construct. The COPE Inventory was developed to assess a broad range of coping responses, several of which had an explicit basis in theory. The inventory includes some responses that are expected to be dysfunctional, as well as some that are expected to be functional. It also includes at least 2 pairs of polar-opposite tendencies. These were included because each scale is unipolar (the absence of this response does not imply the presence of its opposite), and because it is thought that people engage in a wide range of coping during a given period, including both of each pair of opposites. This questionnaire asks to indicate what healthcare professionals generally do and feel, when they experience stressful events (Carver et al., 1989).

The COPE, developed by Carver et al. (1989), as a 60-item questionnaire, destined to measure 15 different coping strategies viz. “Positive reinterpretation and growth”, “Mental disengagement”, “Focus on and venting of emotions”, “Use of instrumental social support”, “Active coping”, “Denial”, “Religious coping”, “Humour”, “Behavioral disengagement”, “Restraint”, “Use of emotional social support”, “Substance use”, “Acceptance”, “Suppression of competing activities”, and “Planning”. It is among the most often used coping scales (Hasking and Oei, 2002), and developed by one of the most important authors in the field (Carver and Connor-Smith, 2010). Carver et al. (1989) The Questionnaire has 60 items, each of the 15 coping strategies being evaluated through 4 items. The answer can be measured on a Likert scale from 1 to 4. The COPE has been proven both reliable and valid in different cultural groups (Clark et. al., 1995; Wateren, 1997). Carver et al. (1989) also reported alpha coefficients for the COPE ranging from 0.45 to 0.92. With the exception of mental

disengagement, which measures less than 0.60, all the subscales demonstrate good levels of reliability. Test-retest reliability varies from 0.46 to 0.86 and 0.42 to 0.89 after two weeks (Carver et al., 1989).

2.2. Related Researches

2.2.1 Researchers conducted outside India

Campos et al., (2020) conceptualised a research on "Early Psychological Impact of the COVID-19 Pandemic in Brazil: A National Survey. The objective of the research was to evaluate the mental health of the Brazilian population during the SARs-CoV-2 pandemic and its relationship with demographic and health characteristics. The Adults from all Brazilian States participated (n = 12,196; women: 69.8%, mean age = 35.2 years) in the national survey. The Depression, Anxiety and Stress Scale, and the Impact of Event Scale–revised were used and the data were collected online. The results showed high prevalence of depression (61.3%), anxiety (44.2%), stress (50.8%), and psychological impact (54.9%) were observed due to the isolation experienced from the pandemic. Younger individuals, those that felt unsafe, with a previous diagnosis of mental health and/or had general health problems before the pandemic. They noticed changes in their mental state due to the pandemic context, and excessively exposed to the news were at increased risk of developing symptoms. Women and those with lower economic status were more likely to develop psychological symptoms. Lower educational levels increased the likelihood of depressive and intrusive symptoms. The pandemic and related factors can have a high impact on the mental health of the population. Demographic characteristics can influence the occurrence of psychological symptoms.

Chew, et. al., (2020) carried out a comparative research on "A multinational, multicentre study on the psychological outcomes and associated physical symptoms amongst Healthcare workers during COVID-19 outbreak". The aim of the research was to investigate the association between psychological outcomes and physical symptoms among healthcare workers. Healthcare workers from 5 major hospitals, involved in the care for COVID-19 patients, in Singapore and India were invited to

participate in a study by performing a self-administered questionnaire. Healthcare workers included doctors, nurses, allied healthcare workers, administrators, clerical staff and maintenance workers. This questionnaire collected information on demographics, medical history, and symptom prevalence in the past month, Depression Anxiety Stress Scales (DASS-21) and the Impact of Events Scale-Revised (IES-R) instrument. Out of the 906 healthcare workers who participated in the survey, 48 (5.3%) screened positive for moderate to very-severe depression, 79 (8.7%) for moderate to extremely-severe anxiety, 20 (2.2%) for moderate to extremely-severe stress, and 34 (3.8%) for moderate to severe levels of psychological distress. The commonest reported symptom was headache (32.3%), with a large number of participants (33.4%) reporting more than four symptoms. Participants who had experienced symptoms in the preceding month were more likely to be older, have pre-existing comorbidities and a positive screen for depression, anxiety, stress, and PTSD. After adjusting for age, gender and comorbidities, it was found that depression, anxiety, stress, and PTSD remained significantly associated with the presence of physical symptoms experienced in the preceding month. Linear regression revealed that the presence of physical symptoms was associated with higher mean scores in the IES-R, DASS Anxiety, Stress and Depression subscales.

Huang and Zhao, (2020) undertook a research on “Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: A web-based cross-sectional survey”. The purpose of the research was to assess the mental health burden of Chinese public during the outbreak, and to explore the potential influence factors. Using a web-based cross-sectional survey, the data was collected from 7,236 self-selected volunteers assessed with demographic information, COVID-19 related knowledge, generalized anxiety disorder (GAD), depressive symptoms, and sleep quality. The overall prevalence of GAD, depressive symptoms, and sleep quality of the public were 35.1%, 20.1%, and 18.2%, respectively. Younger people reported a significantly higher prevalence of GAD and depressive symptoms than older people. Compared with other occupational group, healthcare workers were more likely to have poor sleep quality. Multivariate logistic regression showed that age and time spent focusing on the COVID-19 ere

associated with GAD, and healthcare workers were at high risk for poor sleep quality. The study identified a major mental health burden of the public during the COVID-19 outbreak. Younger people, people spending too much time thinking about the outbreak, and healthcare workers were at high risk of mental illness.

A Cross-sectional research was conducted by **Jalili, et al., (2020)** on “Burnout among healthcare professionals during COVID-19 pandemic”. The main aim of the study was to describe the prevalence of burnout among healthcare professionals and the associated factors. A cross sectional survey was conducted among eight university affiliated hospitals in the capital city of Tehran, Iran. All healthcare workers at the study sites who had been taking care of COVID-19 patients were samples of the study where 615 respondents completed questionnaire. It was found that 53.0% of the respondents experienced high levels of burnout. The average score in emotional exhaustion, depersonalization and lack of personal accomplishment was 26.6, 10.2, and 27.3, respectively. The level of burnout in the three subscales varied based on the personal as well as work related factors and gender was the only variable that was associated with high levels of all three domains.

A research was conducted by **Li, et. al., (2020)** on “Vicarious traumatization in the general public, members, and non-members of medical teams aiding in COVID-19 control”. The research aimed to find out the prevalence of vicarious traumatization among general public, members and non-members of medical teams caused by the COVID-19 pandemic prevent and treat vicarious traumatization. The study is descriptive in nature which utilized a mobile phone app-based questionnaire survey, and was carried out during the COVID-19 pandemic. The study employed a total of 214 general public (GP) and 526 nurses to evaluate VT scores via a mobile app-based questionnaire. Results showed that the VT scores slightly increased across periods of aiding COVID-19 control, although no statistical difference was noted. However, the study found lower scores for VT in nurses [median = 69; interquartile than those of the GP. In addition, the VT scores for front-line nurses, including scores for physiological and psychological responses, were significantly lower than those of non-front-line nurses. Interestingly, the VT scores of the GP were significantly higher than those of the FLNs. However, no statistical difference was observed compared with those of nFLNs. Importantly, nFLNs are more likely to

suffer from VT, which might be related to two factors, namely, gender and fertility. Therefore, increased attention should be paid to the psychological problems of the medical staff, especially nFLNs, and GP under the situation of the spread and control of COVID-19.

Solomou, and Constantinidou (2020) undertook a research on “Prevalence and Predictors of Anxiety and Depression Symptoms during the COVID-19 Pandemic and Compliance with Precautionary Measures: Age and Sex Matter”. This study aimed to understand and characterize the psychosocial effects of the COVID-19 pandemic in the general population and to identify risks and protective factors that predict changes in mental health status. In addition, the study investigated compliance with precautionary measures (PM) to halt the spread of the virus. The online anonymous survey collected information on socio demographic data, compliance with PM, quality of life (QOL), and mental health via the Generalized Anxiety Disorder-7 (GAD-7) and Patient Health Questionnaire-9 (PHQ-9). A total of 1642 adult participants (71.6% women, 28.4% men) completed the survey in the European island country, Cyprus. A large percentage (48%) reported significant financial concerns and 66.7% significant changes in their QOL. About 41% reported symptoms associated with mild anxiety; 23.1% reported moderate-severe anxiety symptoms. Concerning depression, 48% reported mild and 9.2% moderate-severe depression symptoms. Women, younger age (18–29), student status, unemployment status, prior psychiatric history, and those reporting greater negative impact on their QOL, were at higher risk for increased anxiety and depression symptoms. The youngest age group and males also reported lower levels of compliance with PM. Higher compliance with PM predicted lower depression scores but higher anxiety for measures related to personal hygiene. The results of this study provide important data on the effects of the COVID-19 outbreak on mental health and QOL and identify a variety of personal and social determinants that serve as risks and protective factors.

A research was conducted by **Wang, et al. (2020)** on "Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China." The aim of this study was to survey the public in China to better understand their levels of

psychological impact, anxiety, depression, and stress during the initial stage of the COVID-19 outbreak. From 31 January to 2 February 2020, an online survey was conducted using snowball sampling techniques. The online survey collected information on demographic data, physical symptoms in the past 14 days, contact history with COVID-19, knowledge and concerns about COVID-19, precautionary measures against COVID-19, and additional information required with respect to COVID-19. Psychological impact was assessed by the Impact of Event Scale-Revised (IES-R), and the Depression, Anxiety and Stress Scale (DASS-21) assessed mental health status. Results: This study included 1210 respondents from 194 cities in China. In total, 53.8% of respondents rated the psychological impact of the outbreak as moderate or severe; 16.5% reported moderate to severe depressive symptoms; 28.8% reported moderate to severe anxiety symptoms; and 8.1% reported moderate to severe stress levels. Most respondents spent 20–24 h per day at home (84.7%); were worried about their family members contracting COVID-19 (75.2%); and were satisfied with the amount of health information available (75.1%). Female gender, student status, specific physical symptoms (e.g., myalgia, dizziness, coryza), and poor self-rated health status were significantly associated with a greater psychological impact of the outbreak and higher levels of stress, anxiety, and depression. Specific up-to-date and accurate health information (e.g., treatment, local outbreak situation) and particular precautionary measures (e.g., hand hygiene, wearing a mask) were associated with a lower psychological impact of the outbreak and lower levels of stress, anxiety, and depression. To conclude, during the initial phase of the COVID-19 outbreak in China, more than half of the respondents rated the psychological impact as moderate-to-severe, and about one-third reported moderate-to-severe anxiety.

Yuan, et al., (2020) undertook a research on “A Comparison of Burnout Frequency Among Oncology Physicians and Nurses Working on the Frontline and Usual Wards During the COVID-19 Epidemic in Wuhan, China. The aim of the study was to compare the frequency of burnout between physicians and nurses on the frontline wards and those working in usual wards. A survey with a total 49 questions was administered to 220 medical staff members from the COVID-19 FL (Frontline) and UWs (Usual Wards), with a ratio of 1:1. General information, such as age, gender, marriage status and the Maslach Burnout Inventory-Medical Personnel were

gathered and compared. It was found that the group working on the FLs had a lower frequency of burnout and were less worried about being infected compared with the UW group.

Zerbini et. al. (2020) carried out a research on “Psychosocial burden of healthcare professionals in times of COVID-19 – a survey conducted at the University Hospital Augsburg”. The aim of the study was to investigate the psychosocial burden of physicians and nurses depending on their degree of contact with COVID-19 patients. Data were collected between March and April 2020 at the University Hospital Augsburg. A total of 75 nurses and 35 physicians, working either in a special COVID-19 ward or in a regular ward, took part in the survey. The participants filled in two standardized questionnaires (the Patient Health Questionnaire, PHQ; and the Maslach Burnout Inventory, MBI), and reported their fear of a COVID-19 infection and stress at work on a 10-point Likert scale. The results indicated that nurses working in the COVID-19 wards reported higher levels of stress, exhaustion, and depressive mood, as well as lower levels of work-related fulfilment compared to their colleagues in the regular wards. Physicians reported similar scores independent of their contact with COVID-19 patients. The most common causes for burden were job strain and uncertainty about the future. Psychosocial support as well as leisure time was listed as important resources, and a better infrastructure adjustment to COVID-19 at the hospital (e.g. sufficient staff, keeping teams and working schedules stable) as suggestion for improvement. The findings indicated that especially nurses working in COVID-19 wards were affected psychologically by the consequences of the pandemic.

Alanazi et. al. (2021) conducted a research on “Prevalence and Risk Factors of Burnout among Healthcare Professionals during COVID-19 Pandemic - Saudi Arabia”. The aim of the study was to find out the impact of COVID-19 pandemic on the prevalence of burnout and the associated factors among health care workers in Saudi Arabia. The study targeted all categories of health care workers (HCWs) in Saudi Arabia. The data were collected through an online questionnaire that included: sociodemographic data, medical history, smoking history, work characteristics, direct care of infected patients, questions of Maslach Burnout inventory (MBI) to assess burnout among health care workers that assess the Emotional Exhaustion (EE),

Depersonalization (DP), and Personal Achievement (PA). The total number of the participants in this study was 3,557. The results showed that 38.5% of the participants scored high for EE, 31.2% for DP, and 33.6% for PA. On analysis, it was found that being younger than the age of 40 years, female, or Saudi nationality tended to be associated with increased all burnout parameters. Shift work, on call duties, changing working hours, direct involvement in management of COVID-19 patients were associated with high burnout scores. High burnout is common among healthcare workers in Saudi Arabia during COVID-19 pandemic due to direct contact with infected cases and changes in the working patterns during the pandemic, etc.

2.2.2 Researchers conducted in India

A research was conducted by **Agarwal et. al., 2020** on “Difficulties Encountered While Using PPE Kits and How to Overcome Them: An Indian Perspective”. The research aimed to assess problems faced by healthcare workers both qualitatively and quantitatively for their timely and effective redressal. An electronic questionnaire survey was conducted among a cohort of Healthcare Workers who had performed COVID-19 duties and used PPE kits. The cohort consisted of different categories of doctors, nursing personnel, and other paramedical staff. The most common problems associated with using PPE kits was excessive sweating (100%), fogging of goggles, spectacles, or face shields (88%), suffocation (83%), breathlessness (61%), fatigue (75%), headache due to prolonged use (28%), and pressure marks on the skin at one or more areas on repeated use (19%). Occasional problems reported were skin allergy/dermatitis caused by the synthetic material of the PPE kit, face shield impinging onto the neck during intubation, and nasal pain, pain at the root of the pinna, and slipperiness of shoe covers. Various ways and means have been employed by the HCWs to actively address and solve these problems.

Johnson et. al., 2020 carried out a research on “Do low self-esteem and high stress lead to burnout among health-care workers? Evidence from a tertiary hospital in Bangalore, India”. The research was conducted to estimate the proportion of health care workers with low self-esteem, high stress and burnout and the factors

associated with these in a private hospital in Bangalore city. This cross-sectional study included a random sample of health care workers of various cadres- doctors, nurses, nursing aides, technicians and workers in ancillary departments like laundry, dietary, CSSD and pharmacy, with probability proportional to size. Rosenberg Scale for Self-esteem, Cohen's Perceived Stress Scale and Shirom-Melamed Burnout Measure were used as study tools. The results indicated that mong the 306 health care workers, there were high levels of low self-esteem (48.4%), stress (38.6%) and burnout (48.7%), with the lowest levels being among doctors. Those below 30 years had significantly lower self-esteem and greater stress. Conclusions: Health care workers with low self-esteem were nearly thrice more likely to suffer high stress, OR=2.84 (1.36- 5.92) and those who were stressed had more than three times higher chance of experiencing burnout, OR=3.6 (2.02-6.55). Path analysis showed that low self-esteem among health care workers had a direct effect on burnout, as well as an indirect effect through stress (mediator variable).

Kazmi, et. al., (2020) carried out a research on "COVID-19 and Lockdown: A study on the Impact on Mental Health". The purpose of the study was to explore the impact of Covid-19 and lockdown on the mental health of individuals. DASS-21 was used to assess Depression, Anxiety and Stress among 1000 respondents distributed online. Results suggested significant difference among Depression, Anxiety and Stress across age, gender and employment. Depression was found t be high among the respondents of age group 15 to 35 years, Anxiety was found to be prevalent among those belonging to 21 to 25 years of age and Stress was found to be high in individuals of 21 to 25 years of age.

Kesarwani et. al. (2020) carried out a systematic review and meta-analysis on Prevalence and Factors Associated with Burnout among Healthcare Professionals in India. The purpose of this study was to systematically review and analyze the prevalence of burnout among HCPs in India and the factors associated with burnout in this population. A systematic search of MEDLINE and EMBASE, from the inception of these databases to October 2019, was conducted using keywords. The search results were screened to identify studies evaluating burnout among HCPs in India using a standard burnout tool. Using a random effect model, the pooled prevalence of burnout was estimated using Maslach Burnout Inventory (MBI) in three

domains: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). Risk factors for burnout were assessed qualitatively. It was found that a total of 15 studies assessing burnout in 3845 Indian HCPs were identified. The pooled prevalence of burnout was 24% in the EE domain, 27% in the DP domain, and 23% in the PA domain. Younger age, female gender, unmarried status, and difficult working conditions were associated with increased risk of burnout. Conclusion: Burnout is highly prevalent among Indian HCPs, with close to one-fourth of them suffering from burnout. A number of personal and professional factors are associated with burnout, and these should be considered while developing solutions to tackle burnout.

Khasne et. al. (2020) piloted a research on "Burnout among Healthcare Workers during COVID-19 Pandemic in India: Results of a Questionnaire-based Survey". The research aimed to find out the prevalence of burnout due to COVID-19 pandemic in India. A questionnaire-based survey using Copenhagen Burnout Inventory was carried out among HCWs looking after COVID-19 patients. Questionnaire was sent to the HCWs, using WhatsApp Messenger, and voluntary participation was sought. We received responses from 2026 HCWs. Burnout was assessed in personal, work, and client-related (COVID-19 pandemic-related) domains. Burnout was defined at a cut-off score of 50 for each domain. The results showed the prevalence of personal burnout was 44.6% (903), work-related burn-out was only 26.9% (544), while greater than half of the respondents (1,069, 52.8%) had pandemic-related burnout. Younger respondents (21–30 years) had higher personal and work-related burnout. The prevalence of personal and work-related burnout was significantly ($p < 0.01$) higher among females. The doctors were 1.64 times, and the support staff was 5 times more likely to experience pandemic-related burnout.

Kumar and Vijai, (2020) carried a research on "Mental stress, and burnout among COVID warriors – A new healthcare crisis". The objectives of the research was to provide data on the prevalence of burnout and the physical and psychological symptoms among healthcare workers employed at COVID centres and to assess the relationship between burnout and the psychological and physical symptoms. An online questionnaire comprising of demographics, physical symptoms, burnout (Copenhagen Burnout inventory), and DASS-21 (Depression Anxiety and Stress

Scale) was sent to 580 healthcare workers. Responses from 512 healthcare workers were received. The results of the study revealed that the mean age of the respondents was 29 years. Among the study population, 84.3% showed physical symptoms with a change in food habits being the commonest symptom (61.5%). On the CBI questionnaire, 34.3% of the participants met the criteria of burnout. On the DASS-21 questions, 48.6% showed evidence of depression, 41.3% showed evidence of stress, and 14.2% showed evidence of stress—a positive correlation between the CBI score and high score in each subscale of DASS-21. A positive correlation between symptoms and CBI score and duration of work in COVID care and symptoms experienced was found. Conclusion: There is significant physical and psychological morbidity and burnout among healthcare workers.

Roy, et. al., (2020) conceptualised a research on “Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic”. The research attempted to assess the knowledge, attitude, anxiety experience, and perceived mental healthcare need among adult Indian population during the COVID-19 pandemic. An online survey was conducted using a semi-structured questionnaire using a non-probability snowball sampling technique. A total of 662 responses were received. The responders had a moderate level of knowledge about the COVID-19 infection and adequate knowledge about its preventive aspects. The attitude towards COVID-19 showed peoples' willingness to follow government guidelines on quarantine and social distancing. The anxiety levels identified in the study were high. More than 80 % of the people were preoccupied with the thoughts of COVID-19 and 72 % reported the need to use gloves, and sanitizers. In this study, sleep difficulties, paranoia about acquiring COVID-19 infection and distress related social media were reported in 12.5 %, 37.8 %, and 36.4 % participants respectively. The perceived mental healthcare need was seen in more than 80 % of participants.

Sreelatha et. al., 2018 conducted a research on “Burnout and coping strategies among residents of a private medical college in South India: A cross-sectional study” aimed to measure the levels of burnout among the residents and to assess the relationship between severity of burnout and coping strategies. It was cross-sectional observational study set in a private medical college with residency program. Online

self-administered questionnaire was sent to all residents, out of these, 100 residents consented and completely filled the questionnaires and were included in the analysis with a response rate of 55.6%. The questionnaire consisted of socio-demographic variables, Maslach Burnout Inventory, and Brief COPE. It was found that the residents who reported burnout as high in two dimensions of emotional exhaustion and depersonalization are 31.82%. The 2nd year residents scored high on burnout measures when compared to 1st and 3rd year residents. It was observed that as the degree of emotional exhaustion and depersonalization increased from low to high, the frequency of the maladaptive coping strategies also increased. Based on these findings it was concluded that burnout is frequent in residents.

A research was carried out by **Wilson et.al. (2020)** on "Prevalence and Predictors of Stress, anxiety, and Depression among Healthcare Workers Managing COVID-19 Pandemic in India: A Nationwide Observational Study". The research aimed to assess the prevalence and predictors of stress, depressive, and anxiety symptoms among HCPs of India. It was a cross-sectional, online survey conducted in April 2020 among HCPs who are directly involved in the triage, screening, diagnosing, and treatment of COVID-19 patients and suspects. Stress was estimated using Cohen's perceived stress scale. Depression and anxiety were assessed using the tools Public Health Questionnaire—9 and Generalized Anxiety Disorder—7. A total of 433 online responses were obtained, and N = 350 were finally included. The prevalence (95% CI) of HCPs with high-level stress was 3.7% (2.2, 6.2), while the prevalence rates of HCPs with depressive symptoms requiring treatment and anxiety symptoms requiring further evaluation were 11.4% (8.3, 15.2) and 17.7% (13.9, 22.1), respectively. Women had approximately two times the increased odds of developing moderate- or high-level stress, depressive symptoms requiring treatment, and anxiety symptoms requiring further evaluation. Similarly, women staying in a hostel/temporary accommodation had two times the increased odds of developing depression or anxiety symptoms.

Conclusion

The review of literature collected focused on Covid-19 Pandemic and Health Care Professionals, Health Care Professionals and Burnout, Maslach Burnout Inventory,

Physiological and Psychological Health of Healthcare Professionals during COVID-19 Pandemic, Problems with Personal Protective Equipment (PPE), Coping Strategies. The related researches conducted outside India focused on Prevalence and risk factors of burnout among healthcare professionals during COVID-19 pandemic, Early psychological impact of the COVID-19 pandemic, Burnout among healthcare professionals during COVID-19 pandemic, psychological outcomes and associated physical symptoms amongst Healthcare workers during COVID-19 outbreak, Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak, Vicarious traumatization in the general public, members, and non-members of medical teams aiding in COVID-19 control, prevalence and predictors of anxiety and depression symptoms during the COVID-19 pandemic and compliance with precautionary measures: age and sex matter, Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population, Burnout frequency among oncology physicians and nurses working on the frontline and usual wards during the COVID-19 epidemic, Psychosocial burden of healthcare professionals in times of COVID-19.

The researches related to the research topic conducted within India focused on Difficulties encountered while using PPE kits and how to overcome them, Low self-esteem and high stress lead to burnout among health-care workers, The impact on mental health, prevalence and factors associated with burnout among healthcare professionals, Burnout among healthcare workers during COVID-19 pandemic, Mental stress, and burnout among COVID warriors, Knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic, Burnout and coping strategies among residents of a private medical college, Prevalence and predictors of stress, anxiety, and depression among healthcare workers managing COVID-19 pandemic. A dearth of researches was found in India related to phenomenon of burnout in health care workers during the COVID 19 pandemic, and well as coping strategies adopted by them.

Methodology

CHAPTER III

METHODOLOGY

Research methodology is a way to systematically solve the problem or it may be understood as a science of studying how research is done scientifically (Kothari and Garg, 2019). The research design, variables under the study, sample size and sampling procedure, tool for data collection and operational definitions of the terms used in the study are explained briefly in this chapter. The present research aims to find out the prevalence of burnout among health care professional during COVID 19 pandemic period, coping strategies adopted by health care professional to overcome their burnout and to explore the variation in burnout with the personal, family and work-related characteristics of the health care professionals. The present chapter focuses the methodological procedures carried in the research which are explicitly described under the following categories:

3.1 Research Design

According to Kothari and Garg (2019), a research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine

relevance to the research purpose with economy in procedure and is the conceptual structure within which research is conducted. It consists of specification of methods for inquiring the information needed. The research design of the present study was descriptive in nature. According to Kothari and Garg (2019), “Descriptive research studies are those studies which are concerned with describing the characteristics of particular individual, or of a group”. Descriptive research design was thought to be most appropriate method to carry out the present research because it gathered the data on demographic details of the respondents, prevalence of burnout among health care professional during COVID 19 pandemic period and coping strategies adopted by them and also explore the variation in burnout with the personal, family and work-related characteristics of the health care professionals.

3.2 Variables

A concept which can take from on different quantitative values is called variables (Kothari, 2008). Three types of variables were identified in the present research. They were independent, intervening and dependent variables.

3.2.1 Independent Variables of the respondents: The variable that is antecedent to the dependent variable it is termed as an independent variable (Kothari and Garg, 2019). For the present study the independent variables were categorized under three sub-heads:

- **Personal Variable of the respondents:** Personal variables of the respondents included Age (in years), Gender, Marital status, Educational Qualification, and Personal monthly Income.
- **Family Variables of the respondents:** Family variables of the respondents included Type of Family, Family Size, and Monthly Income of the Family.
- **Situational variables of the respondents:** Situational variables consisted of work-related characteristics viz. Job category, Number of working days in a week, Years of practice/work, and Hours of working per shift.

3.2.2 Dependent Variables of the respondents: A variable that depends upon or is a consequence of the other variable is termed as dependent variable

(Kothari and Garg, 2019). For the present study dependent variable deliberated were:

- Prevalence of Burnout among Healthcare Professional.

Hypothetical Relationship between Variables: A schematic diagram showing hypothetical relationship between selected variables with its explanation is presented below:

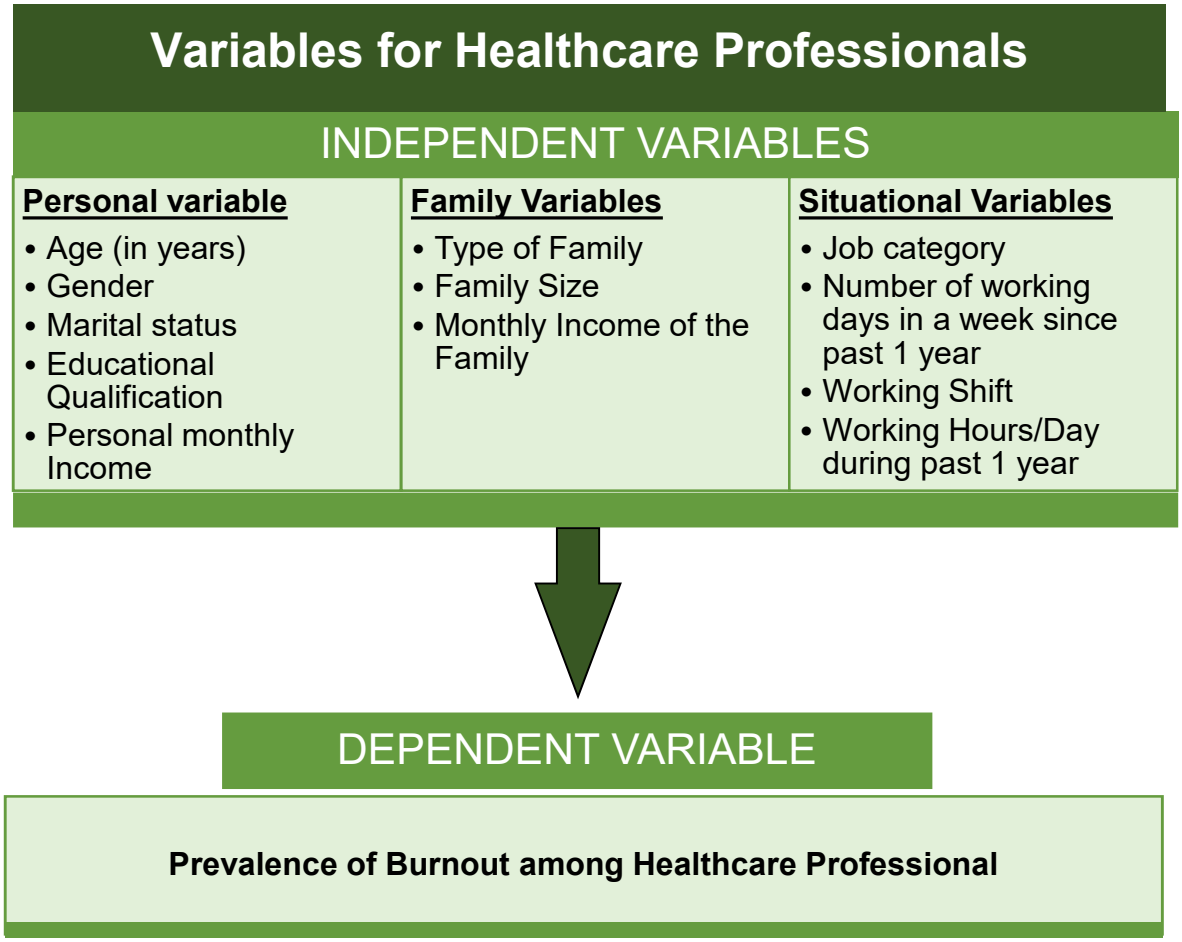

Figure 1: A Schematic Framework to show Hypothetical Relationship among Variables under study

Explanation of Conceptual Framework

It was conceptualized that the prevalence of burnout among healthcare professionals vary with selected independent variables (personal, family and situational personal variables such as age (in years), gender, marital status, educational qualification and personal monthly income and family variables viz. type of family, family size and

monthly income of the family and situational variable viz. Job category, number of working days in a week, years of practice and hours of working per shift. **(Fig. 1).**

3.3 Operational Definitions

According to Ahuja (2011), “Operational definition of a concept or a variable assign measuring to a construct by specifying the activities necessary to measure the construct or variable”. The operational definition considered under study is discussed as below:

3.3.1 Prevalence of Burnout: It was operationally defined as a common syndrome seen in workers particularly who are exposed to a high level of stress at work. It includes emotional exhaustion, depersonalization, and low personal accomplishment. It is caused due to prolonged stress that impairs one's ability to perform their job in demanding situations such as, workload, chronic fatigue, compassion fatigue, balance between family and career, sickness absence, and loss of confidence. For the present study, burnout among health care professionals was measured through Pre validated Maslach Inventory, 1981.

3.3.2 Healthcare Professionals: It was operationally defined as people providing health care treatment and advice based on formal training and experience. The healthcare professional selected for the present study was physician assistants, nurses and specialists who have been actively working during the COVID-19 pandemic period.

3.3.4 Extent of Physiological and Psychological health problems faced by the respondents before covid-19 and during covid-19: For the present study, it was operationally defined as the extent to which the health care professionals experienced physiological and psychological health problems faced before and during covid-19 pandemic period. This was assessed through a summated rating scale where the responses were “Yes” and “No” where scores of 1 through 2 were ascribed respectively.

3.3.5 Extent of problems faced due to PPE Kit: It was operationally defined as extent to which the healthcare professionals have faced problems due to wearing of Personal Protective Equipment (PPE) kit. This was assessed through a summated

rating scale where the responses were “Yes” and “No” where scores of 1 through 2 were ascribed respectively.

3.3.6 Factors Leading to Burnout: For the present study, it was operationally defined as the extent factors that have caused burnout among the healthcare professionals. This was assessed through a summated rating scale where the respondents were asked to state the factors that have led to burnout. The responses where “To high extent”, To moderate extent”, and “To low extent” which were scored 3 through 1 respectively.

3.3.3 Coping Strategies: It was operationally defined as behavioural and cognitive effort that aims to reduce or help an individual to tolerate specific internal or external demands adopted by the selected health care professional. For the present study, COPE inventory developed by Carver (1997) was used to find out the coping strategies adopted by healthcare professionals.

3.4 Locale of the study

The present study was conducted in Vadodara city of Gujarat state. Baroda or Vadodara city of Gujarat is the third-largest city after Ahmedabad and Surat. Vadodara is a developing city in Western Indian State of Gujarat. Vadodara has a well-developed medical sector for its people and the residents of surrounding villages in Gujarat. The health sector in Vadodara comprises of government hospitals, private hospitals and clinics. Hospitals in Vadodara, whether private or public, have the best possible technological support. Hospitals in Vadodara have organ transplant facilities as well. Patients needing replacement for any organ in their body need not go to other big cities as the transplant can be done right there in Vadodara. Vadodara has hospitals dedicated exclusively for a single specialty such as gynaecology, obstetrics and neonatology, orthopaedics, urology, eye-care and heart-care. Many of these hospitals have branches across several cities and towns in Gujarat. [2]

Association of Private Hospitals and Private Practitioners collectively called as “SETU” shared a list of 61 hospitals which have offered to treat Covid-19 patients in Vadodara, the Vadodara Municipal Corporation (VMC) issued a notification

empanelling 31 of them as designated Covid-19 hospitals for the isolation of patients in Vadodara city and the district jurisdiction. The notification for the requisition order under the Epidemic Diseases Act, 1987 was signed by VMC Commissioner. “The ‘SETU’ jointly submitted a proposal for designating beds in Vadodara for the treatment of Covid-19 patients after due consultation and deliberation amongst the association and its members. They have submitted the availability of such hospitals. The VMC and district administration verified the healthcare facilities offered and decided to designate the hospitals for use as Covid-19 hospitals in a phased manner. The phases have been decided in view of the anticipated progression of disease based on scientifically projected estimates.

3.5 Unit of inquiry

The healthcare professionals such as Specialists, Nurses, and Physician Assistants working in government and private hospitals and were actively working during COVID – 19 pandemic period were the unit of inquiry for the present study.

3.6 Sample size and Sampling Procedure

3.6.1 Sample size: All the items under consideration in any field of inquiry constitute a ‘Sample’ or ‘Population’ for the study (Kothari and Garg, 2015). The total sample size constituted of 240 healthcare professionals viz. Specialists, Nurses, and Physician Assistants working in government and private hospitals of Vadodara city and actively working during COVID – 19 pandemic period.

3.6.2 Sampling Technique: Various sampling technique were used to select sample for the present study.

For selection of Hospitals

Convenience Sampling Technique: According to Kothari and Garg (2015), when population elements are selected for inclusion in the sample based on the ease of

access, it is called convenience sampling. The data were collected from healthcare professional's viz. Specialists, Nurses, and Physician Assistants working in government and private hospitals. For this the concerning authorities of the hospitals were contacted, and permission was granted from two government hospitals and three private hospitals of Vadodara city. Hence, convenience sampling technique was used for selection of hospitals.

For selection of respondents

Purposive Sampling Technique: According to Kothari and Garg (2019), Purposive sampling technique is a method of collecting samples involves selection of particular units of the universe for constituting a sample which represents the whole universe. The data were collected from 240 healthcare professional's viz Specialists, Nurses, and Physician Assistants who were actively working during COVID – 19 pandemic period in the selected hospitals of Vadodara city. The consent was taken from the respondents and was asked to co-operate in giving the needed information for the present study Therefore, purposive sampling technique was used for the selection of respondents from the government and private hospital.

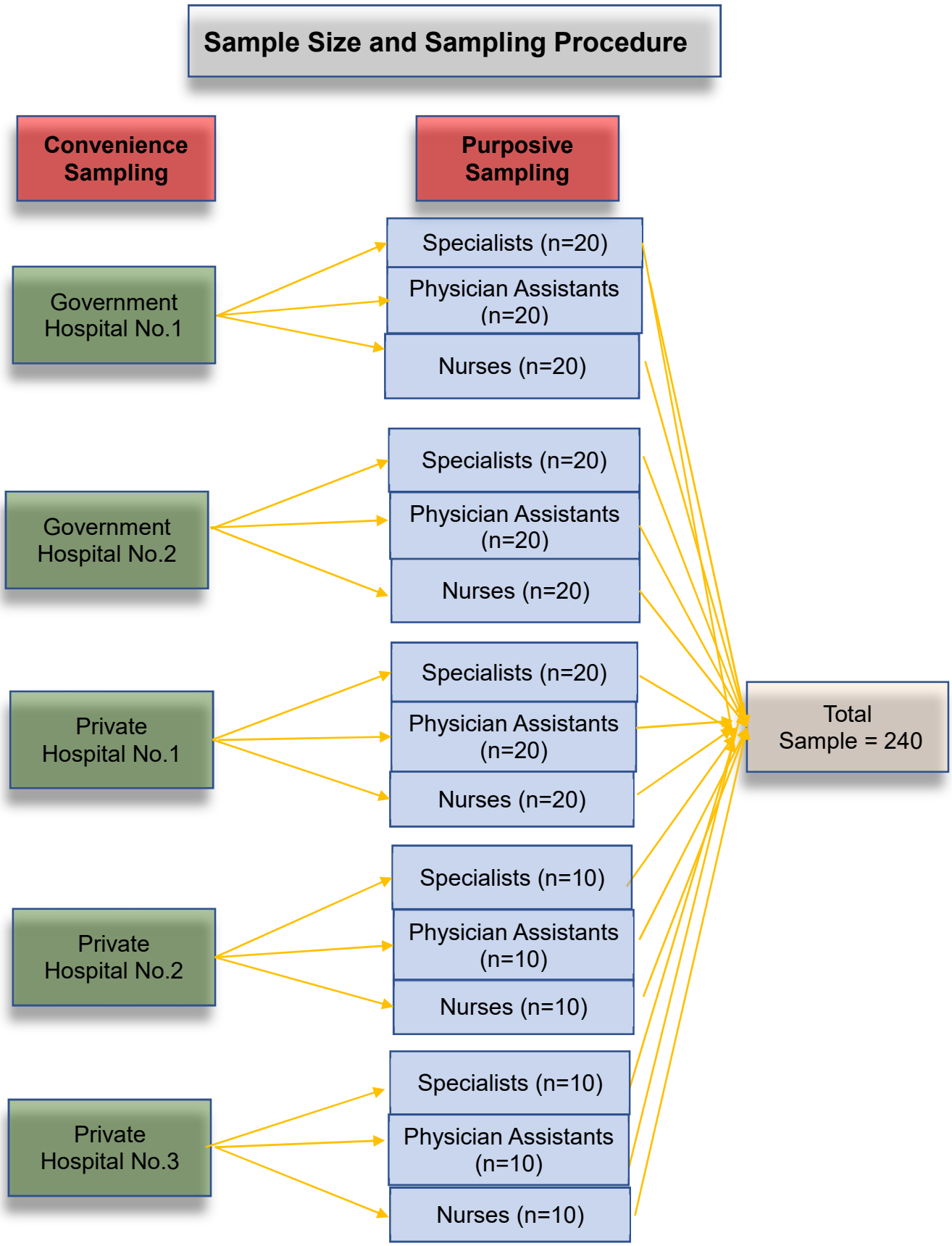

Figure 2: Sampling size and Sampling Procedure

3.7 Selection, Description and Development of the Tool

3.7.1 Selection of the Tool

In the light of objectives framed for the present study, one data collection tools was developed namely questionnaire was prepared where data were collected online through google forms. Questionnaire was developed to find out the prevalence of burnout among health care professional during COVID 19 pandemic period, Physiological and psychological health problems before and during COVID-19 pandemic period, extent of problems faced due to PPE Kit, factors leading to Burnout and coping strategies adopted by health care professional to overcome their burnout.

For the present study the data were collected through a questionnaire as it was considered appropriate for the following reasons stated by (Kothari and Garg, 2019):

- The respondents have adequate time to give well thought answers
- The larger scales can be approached and thus the results can be made more dependable and reliable.

3.7.2 Description of the Tool

Based on the information collected through review of related literature, interaction with experts in the field, guidance of the experts and personal observation, questionnaire was prepared. A care was taken to include all questions that would elicit the information needed to attain the objectives to the study.

3.7.3 Development of the tool

The questionnaire comprised of four sections which are discussed in detailed as below:

Section - I Background Information: This section incorporated the information related to background information of the respondents regarding their personal characteristics viz. age (in year), gender, marital status, educational qualification and personal monthly income, family characteristics viz. type of the family, size of the family and monthly family income and situational characteristics such as their job

category, work experience, number of working days in a week during past months, working hours/day, and working shift.

Section - II Extent of Physiological and psychological health problems: This section comprised of list of physiological and psychological health problems that respondents have faced before Covid –19 pandemic period and developed during Covid –19 pandemic period. The problems faced due to wearing of Personal Protective Equipment (PPE) by the respondents were also probed. This was assessed through a summated rating scale where the responses were “Yes” and “No” where scores of 2 through 1 were ascribed respectively. This section was developed by the researcher.

Section - III Prevalence of Burnout: The burnout of the respondents was measured through Maslach Burnout Inventory (MBI), developed by Maslach and Jackson in 1981. It is one of the most widely used research instrument for assessing burnout. Maslach Burnout Inventory measures three dimensions viz. emotional exhaustion (EE) which measures individual feelings of being emotionally exhausted and depleted by one’s work, depersonalization (DP) which captures the development of negative, cynical attitudes and feelings towards clients and personal accomplishment (PA) which assess the individual sense of ineffectiveness, especially with job performance. The scale validity and reliability were established by Maslach and Jackson (1981). The total scale consisted of 22 items, with nine items measuring the emotional exhaustion (EE) subscale, eight items measuring the personal accomplishment (PA) subscale and five items measuring the depersonalization (DP) subscale. Each item was answered on a five-point Likert scale. The responses to each item were “Never”, “Few times per year”, “Once a month”, “Few times per month”, “Once a week”, “Few times per week” and “Every day” which were scored 0 through 6. A greater degree of burnout is predicted by higher scores.

Section - IV Factors leading to Burnout: This section included the 23 items pertaining factors leading to burnout among healthcare professionals during COVID – 19 pandemic period. The responses were “To High Extent”, “To Moderate Extent” and “To Low Extent”. The score of 3 through 1 were ascribed to the responses. Higher scores reflected more factors leading to burnout.

Section - V Coping Strategies Adopted: This section included the list of coping strategies adopted by the respondents to overcome their burnout. Cope Inventory was undertaken for the present study was developed by Carver. Carver (1989) have elaborated a multidimensional inventory for the coping strategies (the COPE Inventory) that assesses ways in which people handle stress, from a dispositional perspective. The Questionnaire contained Likert scale having 60 items, each of the 15 coping strategies viz. “Positive reinterpretation and growth”, “Mental disengagement”, “Focus on and venting of emotions”, “Use of instrumental social support”, “Active coping”, “Denial”, “Religious coping”, “Humor”, “Behavioral disengagement”, “Restraint”, “Use of emotional social support”, “Substance use”, “Acceptance”, “Suppression of competing activities”, and “Planning” each having 4 items. The responses were “I didn’t do this at all”, “I did this a little bit”, “I did this a medium amount” and “I did this a lot” these were scored 1 through 4.

3.7.3 Establishment of content Validity

Validity indicates the degree to which a tool measures what it is supposed to measure (Kothai, 2012). The scales prepared by researcher for the present study were given to the panel of five judges from the Departments of Psychology, Faculty of Education and Psychology, The Maharaja Sayajirao University of Baroda, Vadodara. They were requested to check the clarity and relevance of the content for each scale. They were also requested to state whether each statement fell in category under which it was listed. A consensus of 80% among the judges was taken as yardstick for the final tool. No changes were required to be made in the tool.

3.8 Data Collection

The data were gathered by the researcher in the month of February, 2021. The questionnaire was developed and online survey method (Google Form) was used for the data collection. The purpose of the research was explained and the consent was taken from the respondents. The data were collected only by those respondents who enthusiastically and willingly gave the needed information for the study.

3.9 Data Analysis

The procedure used to analyse the data were categorization, coding, tabulation and relational and descriptive Statistical was applied viz, ANOVA and t-test.

3.9.1 Categorization: The following Categories were made to enable the researcher to analyse the data further for statistical application. The categories were made as follows:

I. **Age of the Respondents (in years):** It was measured in terms of numbers of years completed by the respondents at the time of data collection. The obtained range of age of the respondents on the basis of equal intervals are as follows:
   1) ≤20 years
   2) 21 Years – 30 Years
   3) 31 Years – 40 Years
   4) 41 Years – 50 Years
   5) ≥ 50 Years

II. **Gender of the Respondents:** It referred to the gender of the respondents and was categorised as below:
   1) Male
   2) Female

III. **Marital Status of the Respondents:** It referred to the marital status of the respondents at the time of data collection and was categorised as:
   1) Married
   2) Unmarried
   3) Divorcee
   4) Widow

IV. **Educational Qualification of the Respondents:** The formal education obtained by the respondents were categorized as follows:
   1) GNM Nursing (General Nursing & Midwifery)
   2) Diploma in Nursing
   3) B.Sc. in Nursing

4) B.H.M.S. (Bachelor of Homeopathic Medicine and Surgery)
5) MBBS (Bachelor of Medicine and Bachelor of Surgery)
6) MD (Doctorate of medicine)
7) DNB (General Surgery, diplomate of the National Board)
8) MS (Master of Surgery)

V. **Personal Monthly Income of the Respondents (in rupees):** It referred to the monthly income of respondents acquired from various sources in duration of a month. It was categorized on the basis of equal intervals as follows:
1) ≤ Rs. 50000
2) Rs. 50001 – Rs. 100000
3) ≥Rs 100001

VI. **Type of Family of the Respondents:** It referred to the type of the Family of the respondents and was categorised as follows:
1) Joint Family
2) Nuclear Family

VII. **Size of Family of the respondents:** The size of the family of the respondents was categorised on the basis of the number of family members staying together in the house at the time of data collection which is as follows:
1) Small (2-4 members)
2) Medium (5-7 members)
3) Large (8 and more members)

VIII. **Monthly Family Income of the Respondents (in rupees):** It referred to the monthly income of the family acquired from various sources in duration of a month. It was categorized as follows:
1) ≤ Rs. 50000
2) Rs. 50001 – Rs. 100000
3) ≥Rs 100001

IX. **Hospital Type:** The hospitals of Vadodara city from where the respondents were identified were categorised as follows:

1) Government

2) Private

X. **Job category:** It referred to the designations of healthcare professionals working in hospitals. For the present study the job category was categorised as follows:

1) Specialists
2) Nurses
3) Physician Assistants

XI. **Work Experience of the respondents (in year):** It referred to the time period since when the respondents were into the profession, which was categorized as follows:

1) 1 – 10 Years
2) 11 – 20 Years
3) 21 – 30 Years
4) 31 – 40 Years

XII. **Number of the working days in a week since past 1 year:** It referred to the number of days the respondents were working in a week during the COVID-19 pandemic period. It was categorized as follows:

1) 2 – 4 Days
2) 5 – 7 Days

XIII. **Working hours per day during past 1 year:** It referred to the numbers of hours respondents were working in a day since last year. It was categorized as follows:

1) 5 – 11 Hours
2) 12 – 17 Hours
3) 18 – 24 Hours

XIV. **Working Shift of the Respondents:** The working shift of the respondents was categorised under four which are as:

1) Morning (8:00am to 2:00pm)
2) Afternoon (2:00pm to 8:00pm)
3) Night (8:00pm to 8:00am)
4) General (9:00am to 6:00pm)

Table 1: Categorization and range of scores for the extent of physiological and psychological health problems faced by the respondents before and during covid-19 pandemic period: It referred to the extent to which the respondents faced physiological and psychological health problems before and during covid-19.

Sr. No.	Extent of the Health problems	Before covid-19	During covid-19
		Range of Scores	
A.	**Physiological Health Problems**		
1.	High Extent	27-32	
2.	Moderate Extent	22-26	
3	Low Extent	16-21	
B.	**Psychological Health Problems**		
1.	High Extent	20-24	
2.	Moderate Extent	16-19	
3	Low Extent	12-15	
	Overall		
1.	High Extent	47-56	
2.	Moderate Extent	38-46	
3	Low Extent	28-37	

The scale consisted of items reflecting extent of health problems faced by the health care professionals of selected Hospitals. The health problems were categorized as physiological and psychological health problems faced by the respondents before and during covid-19 pandemic period. The physiological health problems had 16 items and psychological health problems had 12 items. The responses were “Yes” and “No” where scores of 1 through 2 were ascribed respectively. The scores on each of items of the scale were summated and possible range of minimum and maximum scores were divided into three

categories having equal interval. The total number of items for entire scale was 28 and hence minimum score was 28 and maximum was 56. Minimum and maximum possible scores was divided into three categories on the basis of equal interval which were “High Extent”, “Moderate Extent” and “Low Extent” of problems. It was determined for the entire scale also. Higher scores represented high extent of physiological and psychological health problems.

Table 2: Categorization and range of scores for the extent of problems faced due to PPE Kit: It referred to the extent to which the respondents faced problems with the use of Personal Protective Equipment (PPE) kit during covid-19 period.

Sr. No.	Extent of Problems faced due PPE Kit	Range of Scores
1.	High Extent	29 – 34
2.	Moderate Extent	23 – 28
3	Low Extent	17 – 22

For finding out the extent of problems faced due to wearing of PPE Kit had 17 items. The responses were “Yes” and “No” where scores of 2 through 1 were ascribed respectively. The scores on each of items of the scale were summated and possible range of minimum and maximum scores were divided into three categories having equal interval. Minimum and maximum possible scores were divided into three categories on the basis of equal interval which were “High Extent”, “Moderate Extent” and “Low Extent” of problems. It was determined for the entire scale.

Table 3: Categorization and range of scores for the prevalence of burnout among healthcare professionals: It referred to the prevalence of burnout among healthcare professionals.

Sr. No.	Prevalence of burnout among healthcare professionals	Range of score
A.	**Emotional Exhaustion**	
1.	High Extent	37-54
2.	Moderate Extent	18-36
3	Low Extent	0-17
B.	**Depersonalization**	
1.	High Extent	20-30
2.	Moderate Extent	10-19
3	Low Extent	0-9
C.	**Personal Accomplishment**	
1.	High Extent	0-15
2.	Moderate Extent	16-32
3	Low Extent	33-48
	Overall	
1.	High Extent	89-132
2.	Moderate Extent	44-88
3	Low Extent	0-43

The scale consisted of items reflecting prevalence of burnout among healthcare professionals. The burnout of the respondents was measured through Maslach Burnout Inventory (MBI), developed by Maslach and Jackson in 1981. Maslash Burnout Inventory measures three dimensions viz. emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PE). The total scale consisted of 22 items, with nine items measuring the emotional exhaustion (EE) subscale, eight items measuring the personal accomplishment (PA) subscale and five items measuring the depersonalization (DP) subscale. Each item was answered on a seven-point Likert scale. The responses to each item were “Never”, “Few times per year”, “Once a month”, “Few times per month”, “Once a week”, “Few times per week” and “Every day” which were scored 0 through 6 respectively. Each subscale score was calculated by adding up all scores of all items in that subscale, with a notion that the items on personal accomplishment domain are reversely scored. The scores on each of items of the subscales were summated and possible range of minimum and maximum scores were divided into three categories having equal

interval. The total numbers of items for entire scale were 22 and hence minimum score was 0 and maximum was 132. Minimum and maximum possible scores was divided into three categories on the basis of equal interval which were “High Extent”, “Moderate Extent” and “Low Extent” of problems. It was determined for entire scale also. The higher scores on emotional exhaustion (EE) and depersonalization (DP) subscales and a lower score on the personal accomplishment (PE) subscale are consistent with burnout.

Table 4: Categorization and range of scores for the factors leading to burnout:

It referred to the extent of causes of burnout among healthcare professionals.

Sr. No.	Extent of causes of burnout	Range of score
1.	High Extent	54-69
2.	Moderate Extent	39-53
3	Low Extent	23-38

The scale consisted of 23 items pertaining situations or causes leading to burnout among healthcare professionals during COVID – 19 pandemic period. The responses were “To High Extent”, “To Moderate Extent” and “To Low Extent”. The score of 3 through 1 were ascribed to the responses. Higher scores reflected high extent of factors leading to burnout. The scores on each of items of the scale were summated and possible range of minimum and maximum scores were divided into three categories having equal interval. The total numbers of items for entire scale were 23 and hence minimum score was 23 and maximum was 69. Minimum and maximum possible scores were divided into three categories on the basis of equal interval which were “High Extent”, “Moderate Extent” and “Low Extent” of factors.

Table 5: Categorization and range of scores for the coping strategies adopted:

It referred to the action taken by the respondents for handling burnout during covid-19 pandemic period.

Sr. No.	Coping strategies	Range of score
A.	**Positive reinterpretation and growth**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
B.	**Mental disengagement**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
C.	**Focus on and venting of emotions**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
D.	**Use of instrumental social support**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
E.	**Active coping**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
F.	**Denial**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
G.	**Religious coping**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
H.	**Humor**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
I.	**Behavioural disengagement**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
J.	**Restraint**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
K.	**Use of emotional social support**	
1.	High Extent	13-16
2.	Moderate Extent	8-12

Sr. No.	Coping strategies	Range of score
3.	Low Extent	4-7
L.	**Substance use**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
M.	**Acceptance**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
N.	**Suppression of competing activities**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7
O.	**Planning**	
1.	High Extent	13-16
2.	Moderate Extent	8-12
3.	Low Extent	4-7

The scale consisted of items reflecting coping strategies adopted by the healthcare professionals to overcome their burnout during covid-19 pandemic period. COPE Inventory was undertaken for the present study was developed by Carver. The Questionnaire contained Likert scale having 60 items, each of the 15 coping strategies viz. “Positive reinterpretation and growth”, “Mental disengagement”, “Focus on and venting of emotions”, “Use of instrumental social support”, “Active coping”, “Denial”, “Religious coping”, “Humor”, “Behavioral disengagement”, “Restraint”, “Use of emotional social support”, “Substance use”, “Acceptance”, “Suppression of competing activities”, and “Planning” each having 4 items. The responses were “I didn’t do this at all”, “I did this a little bit”, “I did this a medium amount” and “I did this a lot” these were scored 1 through 4. The scores on each of items of the scale were summated and possible range of minimum and maximum scores were divided into three categories having equal interval. The total numbers of items for entire scale were 60 and hence minimum score was 60 and maximum was 240. Minimum and maximum possible scores was divided into two categories on the basis of equal interval which were “High Extent” and “Low Extent” of problems. It was determined for entire scale also.

3.9.2 Coding: Coding is the process whereby the data are assigned a numerical code and value so that they can be more easily fitted into appropriate categories (Bhattacharya, 2004). Scores were given to each response, and then the information from each scale of the questionnaire was transferred on to the coding sheets.

3.9.3 Tabulation: Tabulation consists of counting the number of cases which fall into the established categories (Bhattacharya, 2004). The data were transferred from coding sheet into tabular from to give a clear picture of findings. The data of the present research were tabulated to arrive at tables that were required for describing the findings.

3.9.4 Statistical Analysis: The data were analysed using descriptive as well relational statistics.

Descriptive statistics: The data were presented through frequencies, percentages, mean and standard deviation which were used to analyse the data.

Relational statistics: Analysis of variance (ANOVA) and t-test were utilized to test the hypothesis formulated for the study.

Table 6: Relational statistics applied to test the hypotheses

Test	Variables
ANOVA	**Independent variables:** Age in years, marital status, educational qualification, personal monthly income, Monthly Family income, Job category, Work experience, Working Hours/Day during past one year, Working Shift of the health care professionals **With** **Dependent Variables:** Prevalence of Burnout among Healthcare Professionals
t-test	**Independent variables:** Gender (Male or Female), Types of Family (Joint and Nuclear). **With** **Dependent Variables**: Prevalence of Burnout among Healthcare Professionals

Findings and Discussion

CHAPTER-IV

FINDINGS AND DISCUSSION

The aim of the present study was to find out the prevalence of burnout among health care professional during COVID 19 pandemic period and coping strategies adopted by them and to explore the variation in burnout with the selected independent variables. The health care professionals working in government and private hospitals of Vadodara city who have been actively working during the COVID-19 pandemic period were the key respondents. The present chapter deals with presenting, interpreting and discussing the findings obtained through analysis of the data collected by the researcher. The results are presented in the following sub sections:

4.1 Background Information

- **4.1.1** Personal Information
- **4.1.2** Family Information
- **4.1.3** Work Related Information

4.2 Physiological and psychological health problems

4.3 Problems faced due to wearing of PPE Kit

4.4 Prevalence of Burnout among health care professionals

4.5 Factors leading to Burnout

4.6 Coping Strategies Adopted

4.7 Testing of Hypothesis

4.1 Background Information of the respondents: This section deals with the personal, family and work-related information of the healthcare professionals who have been actively working during the COVID-19 pandemic period in selected government and private hospitals of Vadodara city.

4.1.1 Personal Information: This section contained information regarding age (in years), gender, marital status, educational qualification and personal monthly income of the respondents.

Table 7: Distribution of the respondents according to their Personal Information

Sr. No.	Personal Information of the respondents	Respondents (n= 240)	
		f	%
i.	**Age (in years)**		
	21 Years – 30 Years	101	42.10
	31 Years – 40 Years	66	27.50
	41 Years – 50 Years	59	24.60
	≥ 50 Years	14	5.80
ii.	**Gender**		
	Male	147	61.30
	Female	93	38.70
iii.	**Marital status**		
	Married	125	52.10
	Unmarried	101	42.10
	Divorcee	8	3.30
	Widow	6	2.50
iv.	**Educational Qualification**		
	GNM Nursing (General Nursing & Midwifery)	45	18.70
	Diploma in Nursing	21	8.70
	B.Sc. in Nursing	13	5.40
	B.H.M.S. (Bachelor of Homeopathic Medicine and Surgery)	4	1.60
	MBBS (Bachelor of Medicine and Bachelor of Surgery)	140	58.33
	MD (Doctorate of medicine)	13	5.40
	DNB (General Surgery, diplomate of the National Board)	2	0.80
	MS (Master of Surgery)	2	0.80
v.	**Personal Monthly Income**		
	≤ Rs. 50000	141	58.75
	Rs. 50001 – Rs. 100000	90	37.50
	≥ Rs.100001	9	3.75
	Mean	**49948.92**	
	Standard Deviation	**57110.736**	

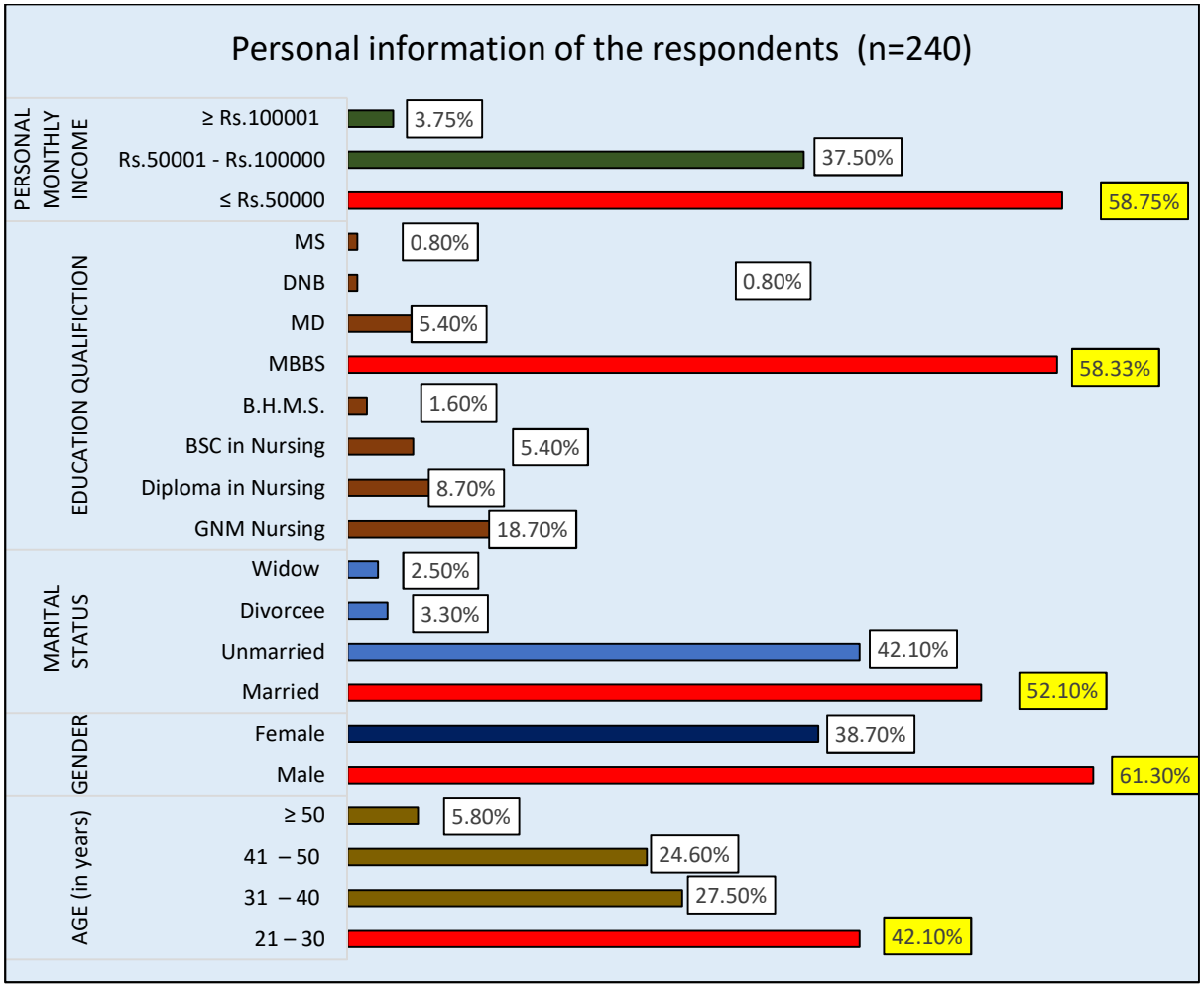

Figure 3: Distribution of the respondents according to their personal information

The minimum age of the respondents was 21 years. It was found that less than one – half (42.10%) of the respondents were in the age group of 21 – 30 years. More than one – fourth (27.5%) of the respondents were in the age group of 31 – 40 years. Almost one – fourth (24.6%) of the respondents were in the age group of 41 – 50 years. Less than two – third (61.3%) of the respondents were males and more than one – third (38.7%) of the respondents were females. It was found that more than one – half (52.1%) of the respondents were married and less than one – half (42.1%) of the respondents were unmarried. Very few percentages of the respondents were divorcee (3.3%) and widow (2.5%). More than one – half (58.33%) of the respondents had MBBS (Bachelor of Medicine and Bachelor of Surgery) degree. Less than one – fifth (18.7%) of the respondents had completed GNM (General Nursing & Midwifery) nursing course. Less than one – tenth (8.7%) of the respondents had completed Diploma in nursing. Very few respondents had done

B.Sc. in Nursing (5.40%), MD (Doctorate of Medicine) (5.40%), B.H.M.S. (Bachelor of Homeopathic Medicine and Surgery) (1.60%), DNB (General Surgery, diplomate of the National Board) (0.80%), and MS (Master of Surgery) (0.80%). The personal monthly income of the respondents ranged between Rs. 8000 to Rs. 7,50,000. The mean of personal monthly income of the respondents was Rs. 49948.92. It was found that more than one – half (58.75%) of the respondent's personal monthly income was ≤ Rs.50000. More than one – third (37.50%) of the respondent's personal monthly income was between Rs. 50001 – Rs.100000. very few (3.75%) of the respondents had personal monthly income ≥ Rs. 100001 **(Table 7 and Figure 3).**

4.1.2 Family Information: This section contained information related to type of family, family size and monthly family income of the respondents.

Table 8: Distribution of the respondents according to their Family Information

Sr. No.	Family Information of the respondents	Respondents (n= 240)	
		f	%
i.	**Type of family**		
	Joint	84	35
	Nuclear	156	65
ii.	**Size of the Family**		
	Small (2-4 members)	174	72.5
	Medium (5-7 members)	55	22.9
	Large (more than 8 members)	11	4.50
iii.	**Monthly Family Income (in Rupees)**		
	≤ Rs. 50000	26	10.83
	Rs. 50001 – Rs. 100000	135	56.25
	≥Rs.100001	79	32.91
	Mean	**136350.83**	
	Standard Deviation	**147779.886**	

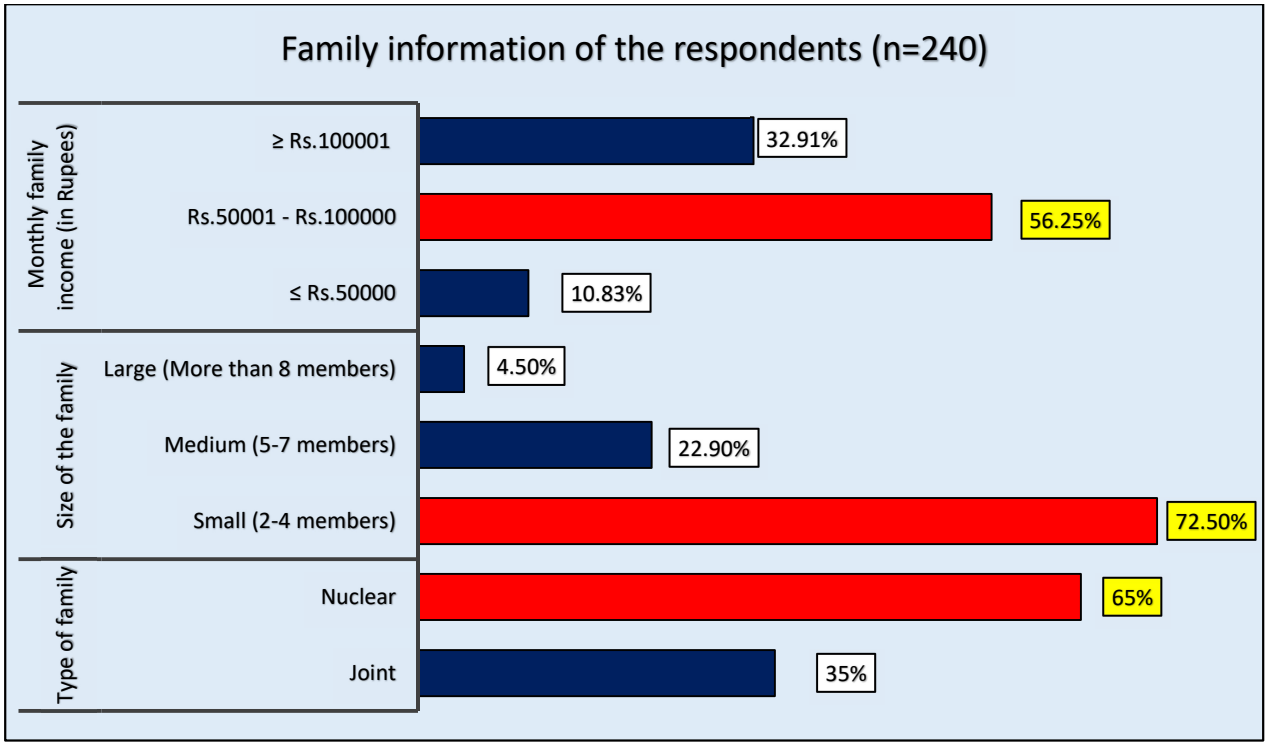

Figure 4: Distribution of the respondents according to their Family Information

Less than two-third (65.00%) of respondents had nuclear family and little more than one – third (35.00%) of the respondents were from joint family. The size of the family was categorized as small, medium and large based on the number of family members. It was found that less than two-third (72.5%) of the respondents had small family with 2 to 4 members. Less than one – fourth (22.9%) of the respondents had medium family size where 5 to 7 family members were residing under one roof. Very few (4.50%) of the respondents had large family comprising of more than 8 members. The monthly family income of the respondents ranged between Rs.30,000 to Rs. 10,00,000 where mean monthly family income of the respondents was Rs. 136350.83. More than one – half (56.25%) of the respondent had monthly family income between Rs. 50001 to 35% 65% 72.50% 22.90% 4.50% 10.83% 56.25% 32.91% Joint Nuclear Small (2-4 members) Medium (5-7 members) Large (More than 8 members) ≤ Rs.50000 Rs.50001 - Rs.100000 ≥ Rs.100001 Type of family Size of the family Monthly family income (in Rupees) Family information of the respondents (n=240) Rs. 100000. Almost one - third (32.91%) of the respondent's monthly family income was ≥ Rs.100001. It was found that one – tenth (10.83%) of the respondent monthly family income was ≤ Rs.50000 **(Table. 8 and Figure. 4).**

4.1.3. Work Related Information: This section deals with the work-related information of the respondents. Information regarding work experience of the respondents (in year), number of working days in a week since past one year, working Shift of the respondents and type of job was probed. The data was collected from 240 healthcare professionals from two government hospitals and three private hospitals of Vadodara city. The respondents comprised of 80 specialist, 80 Nurses and 80 Physician assistance from the selected hospitals.

Table 9: Distribution of the respondents according to their work-related Information

Sr. No.	Work related Information of the respondents	Respondents (n= 240)	
		f	%
i.	**Work Experience of the respondents (in year)**		
	1 – 10	150	62.50
	11 – 20	51	21.20
	21 – 30	20	8.30
	31 – 40	19	7.90
	Mean	**10.177**	
	Standard Deviation	**10.5634**	
ii.	**Number of the working days in a week since past 1 year**		
	2-4 Days	6	2.50
	5-7 Days	234	97.50
	Mean	**6.08**	
	Standard Deviation	**0.494**	
iii.	**Working Hours/Day during past 1 year**		
	5-11 Hours	229	95.41
	12-17 Hours	8	3.30
	18-24 Hours	3	1.25
	Mean	**8.68**	
	Standard Deviation	**1.634**	
iv.	**Working Shift of the Respondents**		
	Morning (8:00am to 2:00pm)	52	21.66
	Afternoon (2:00pm to 8:00pm)	59	24.58
	Night (8:00pm to 8:00am)	32	13.33
	General (9:00am to 6:00pm)	97	40.41
v.	**Type of job**		
	Contract based	110	45.80
	Permanent	130	54.20

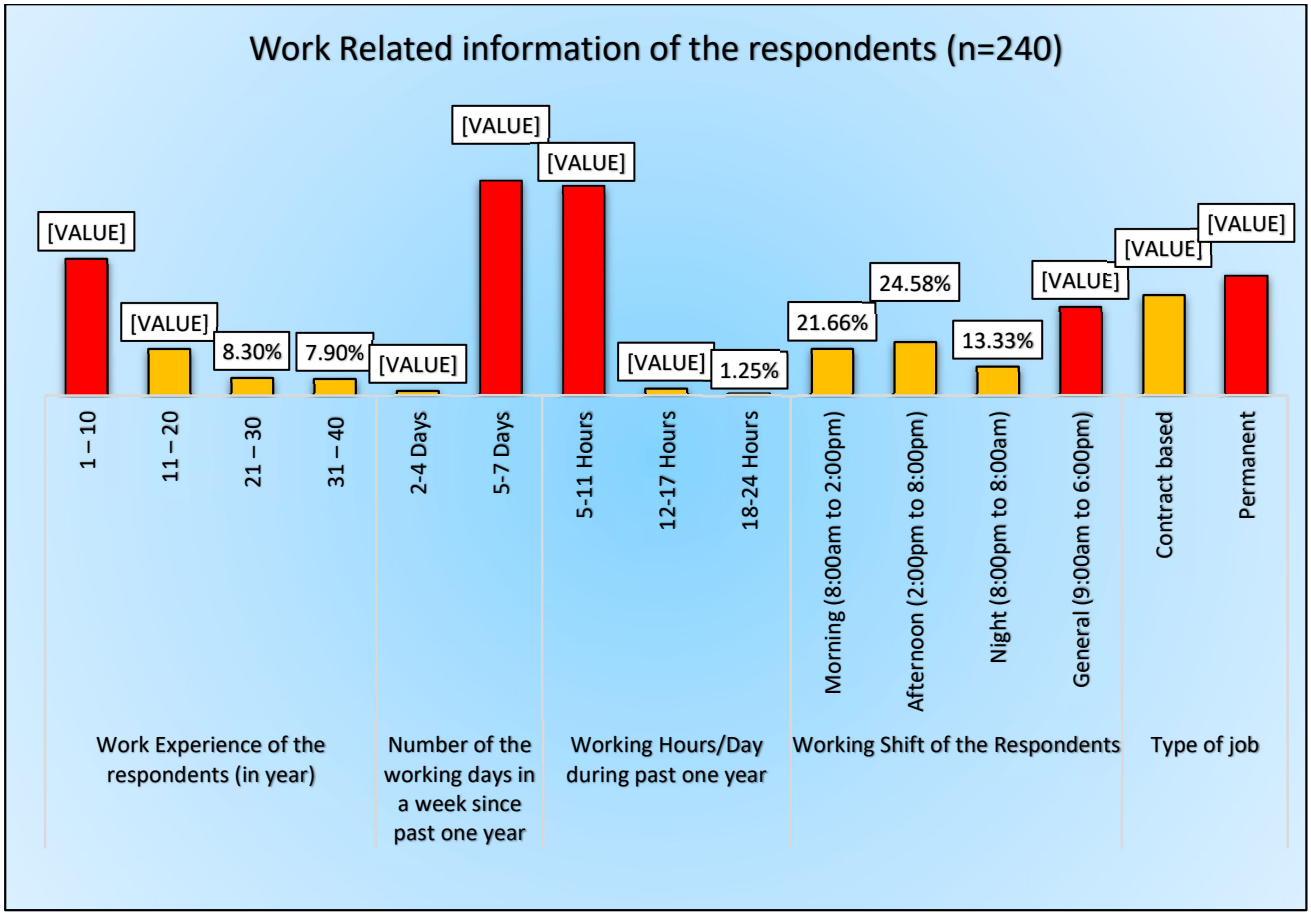

Figure 5: Distribution of the respondents according to their work-related Information

The data in table 9 and figure 5, revealed that less than two – third (62.50%) of the respondents had work experience of 1 to 10 years. Less than one – fourth (21.2%) of the respondents had work experience of 11 to 20 years. Less than one–tenth of the respondents had work experience of 21 to 30 years (8.3%) and 31 to 40 years (7.9%). The mean work experience of the respondents was 10.177**.** Majority (97.5%) of the respondents were working 5 to 7 days in a week since past one year. Very few (2.5%) of the respondents had been working 2 to 4 days in a week since past one year. Majority (95.41%) of the respondents were working for 5 to 11 hours in a day since past one year. Very few percentages of the respondents had worked for 12 to 17 hours (3.3%) and 18 to 24 hours (1.25%) in a day since past one year. The mean working hours in a day since past one year was 8.68 hours. There were four types of shifts in which health care professionals were found working. The working shift were morning beginning from 8:00am to 2:00pm, afternoon shift which starts from 2:00pm to 8:00pm, night shift starting from 8:00pm to 8:00am and

general shift which was from 9:00am to 6:00pm. It was found that two – fifth (40.41%) of the respondents were working in general shift (9:00am to 6:00pm). Almost one –fourth (24.58%) of the respondents were found working in afternoon shift (2:00pm to 8:00pm). Less than one – fourth (21.66%) of the respondents were working in morning shift (8:00am to 2:00pm). More than one – tenth (13.33%) of the respondents were working night shift (8:00pm to 8:00am). The type of job of health care professionals was categorised as contract based and permanent. It was found that more than one – half (54.2%) respondents had permanent job and less than one – half (45.8%) of the respondents had contract-based job in the hospital**.**

4.2 Physiological and psychological health problems: An attempt was made to find out the physiological and psychological health problems experienced by the respondents before Covid –19 and during Covid –19 pandemic period. The health problems were categorized as physiological and psychological health problems that respondents have experienced before Covid –19 pandemic period and these problems developed during Covid –19 pandemic period.

4.2.1 Physiological health problems: Through extensive review of literature, several physiological health problems were listed in this section. The physiological health problems identified were Headache, Strain on eyes due to workload, Loss of appetite, Weakness, Gastric Disturbance due to improper food habits, Backache, Physical fatigue on whole body, Sciatica (Leg/Sciatic Nerve Pain), Hypertension, Diabetes, Asthma, Migraine, Heart Disease, Joint/Muscular pain, Watery eyes and Neck stiffness. The respondents were asked to identify the physiological health problems experienced by them before covid-19 pandemic period and is any developed during covid-19 pandemic period. The responses to these physiological health problems were “Yes” and “No” were scores of 2 through 1 were ascribed respectively.

Table 10: Distribution of the respondents according to Physiological health problems experienced before and during Covid – 19 pandemic period

Sr. No.	Physiological Health Problems	Respondents (n=240)							
		Before COVID-19 Pandemic Period				During COVID-19 Pandemic Period			
		Yes		No		Yes		No	
		f	%	f	%	f	%	f	%
1.	Headache	18	7.50	34	14.16	169	70.41	19	7.91
2.	Strain in eyes due to workload	7	2.91	43	17.91	164	66.66	26	10.83
3.	Loss of appetite	2	0.83	51	21.25	146	60.83	40	16.67
4.	Weakness	7	2.91	44	18.33	159	66.25	30	12.5
5.	Gastric Disturbance due to improper food habits	5	2.08	98	40.83	104	43.33	33	13.75
6.	Backache	7	2.91	68	3.33	134	55.83	31	12.91
7.	Physical fatigue	6	2.50	91	37.91	110	45.83	33	13.75
8.	Sciatica (Leg/Sciatic Nerve Pain)	5	2.08	113	47.08	80	33.33	42	17.5
9.	Hypertension	7	2.91	114	47.5	75	31.25	44	18.33
10.	Diabetes	15	6.25	167	69.58	10	4.16	48	20
11.	Asthma	1	0.41	169	70.41	12	5	58	24.16
12.	Migraine	3	1.25	168	70	14	5.83	55	22.91
13.	Heart Disease	4	1.66	156	65	24	10	56	23.33
14.	Joint/Muscular pain	4	1.66	91	37.91	102	42.5	43	17.91
15.	Watery eyes	3	1.25	50	20.83	148	61.66	39	16.25
16.	Neck stiffness	7	2.91	41	17.03	159	66.25	33	13.75

The lucid examination of data in table 10 and figure 6, revealed that before the covid-19 pandemic period the respondents were suffering from physiological health problems viz. headache (7.5%), diabetes (6.25%), Strain in eyes due to workload (2.91%), weakness (2.91%), backache (2.91%), hypertension (2.91%), and neck stiffness (2.91%). The respondents developed certain physiological health problems during covid-19 pandemic period. It was found that less than three – fourth (70.41%) of the respondents experienced headache. Nearly two – third of the respondents experienced strain in eyes due to workload (66.66%), weakness (66.25%) and

stiffness in neck (66.25%). Less than two – third of the respondents experienced watery eyes (61.66%) and loss of appetite (60.83%). More than one – half (55.83%) of the respondents had backache. Less than one – half of the respondents experienced physical fatigue (45.83%), gastric disturbances due to improper food habits (43.33%) and joint or muscular pain (42.5%).

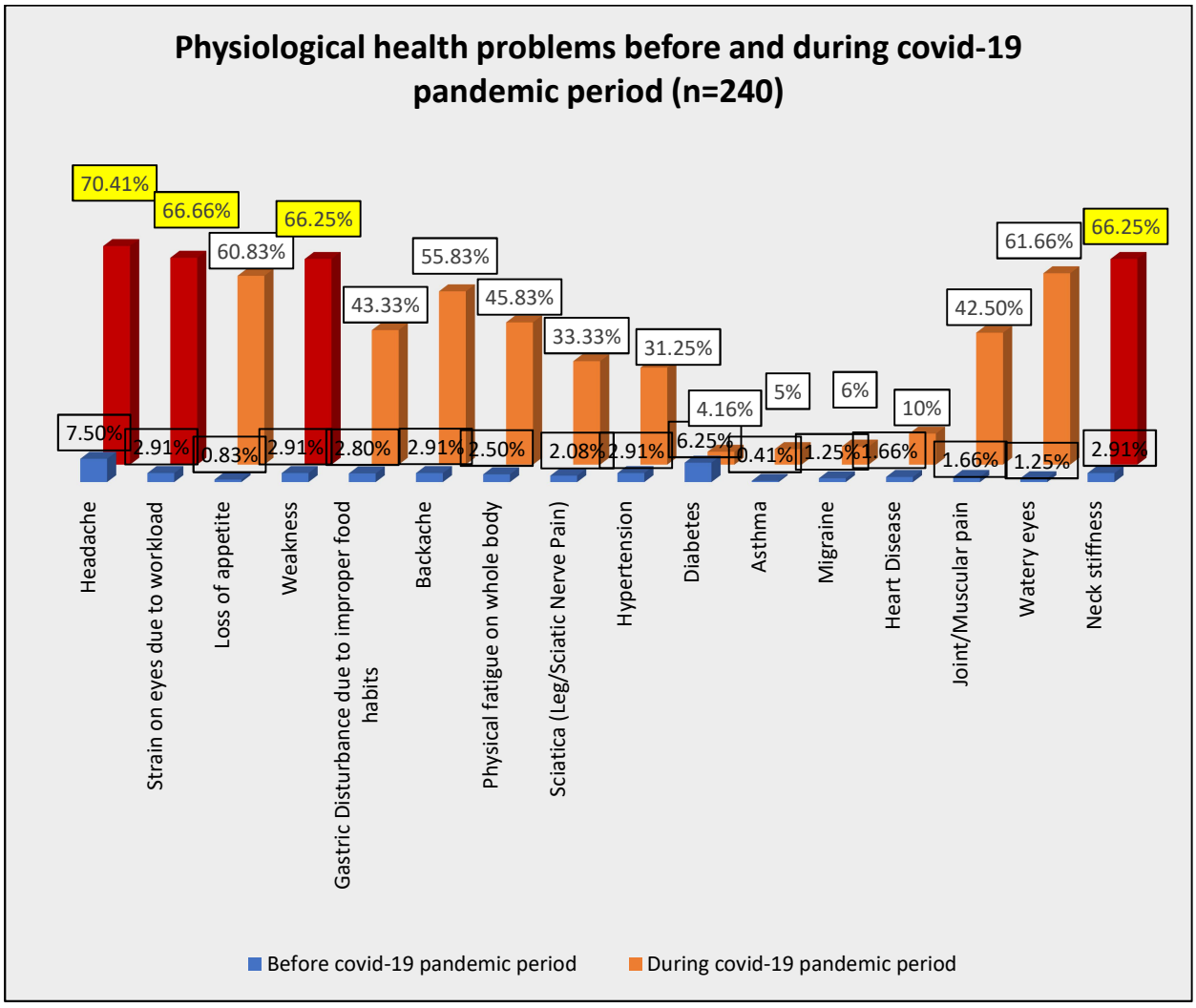

Figure 6: Distribution of the respondents according to Physiological health problems experienced before and during Covid – 19 pandemic period

4.2.2 Psychological health problems: The psychological health problems identify through literature review was enlisted in this section. The psychological health problems included Mental Stress due to heavy work load, Insomnia, Distress, Frustration, Panic attacks, Anxiety, Depression, Post-traumatic stress disorder

symptoms, Delirium, Psychosis, Suicidality, Somatic symptoms. The respondents were asked to identify the psychological health problems experienced by them before covid-19 pandemic period and is any developed during covid-19 pandemic period. The responses to these psychological health problems were “Yes” and “No” were scores of 2 through 1 were ascribed respectively.

Table 11: Distribution of the respondents according to psychological health problems experienced before and during Covid – 19 pandemic period

Sr. No.	Psychological Health Problems	Respondents (n=240)							
		Before COVID-19 Pandemic Period				During COVID-19 Pandemic Period			
		Yes		No		Yes		No	
		f	%	f	%	f	%	f	%
1.	Mental Stress due to heavy work load	7	2.91	96	40	99	41.25	38	15.83
2.	Insomnia	1	0.41	132	55	55	22.91	52	21.66
3.	Distress	1	0.41	139	57.91	50	20.83	50	20.83
4.	Frustration	6	2.50	117	48.75	75	31.25	42	17.5
5.	Panic attacks	1	0.41	131	54.58	57	23.75	51	21.25
6.	Anxiety	4	1.66	103	42.91	92	38.33	41	17.08
7.	Depression	1	0.41	92	38.33	99	41.25	48	20
8.	Post-traumatic stress disorder symptoms	3	1.25	162	67.5	18	7.50	57	23.75
9.	Delirium	3	1.25	164	68.33	14	5.83	59	24.58
10.	Psychosis	2	0.83	158	65.83	13	5.41	60	25
11.	Suicidality	3	1.25	166	69.16	11	4.58	60	25
12.	Somatic symptoms	3	1.25	160	66.66	15	6.25	62	25.83

The data in table 11 and figure 7 depicted that the respondents experienced mental stress due to heavy work load (2.91%), frustration (2.50%), anxiety (1.66%), post-traumatic stress disorder symptoms (1.25%), delirium (1.25%), Suicidality (1.25%) and Somatic symptoms (1.25%) before covid-19 pandemic period. However, it was observed that two – fifth (41.25%) of the respondents experienced mental stress due to heavy workload and depression during covid-19 pandemic period. More than one – third (38.33%) of the respondents had developed anxiety issues. Less than one-third (31.25%) of the respondents were frustrated during covid-19 pandemic period.

Less than one- fourth (23.75%) of the respondents were having complaints regarding panic attacks.

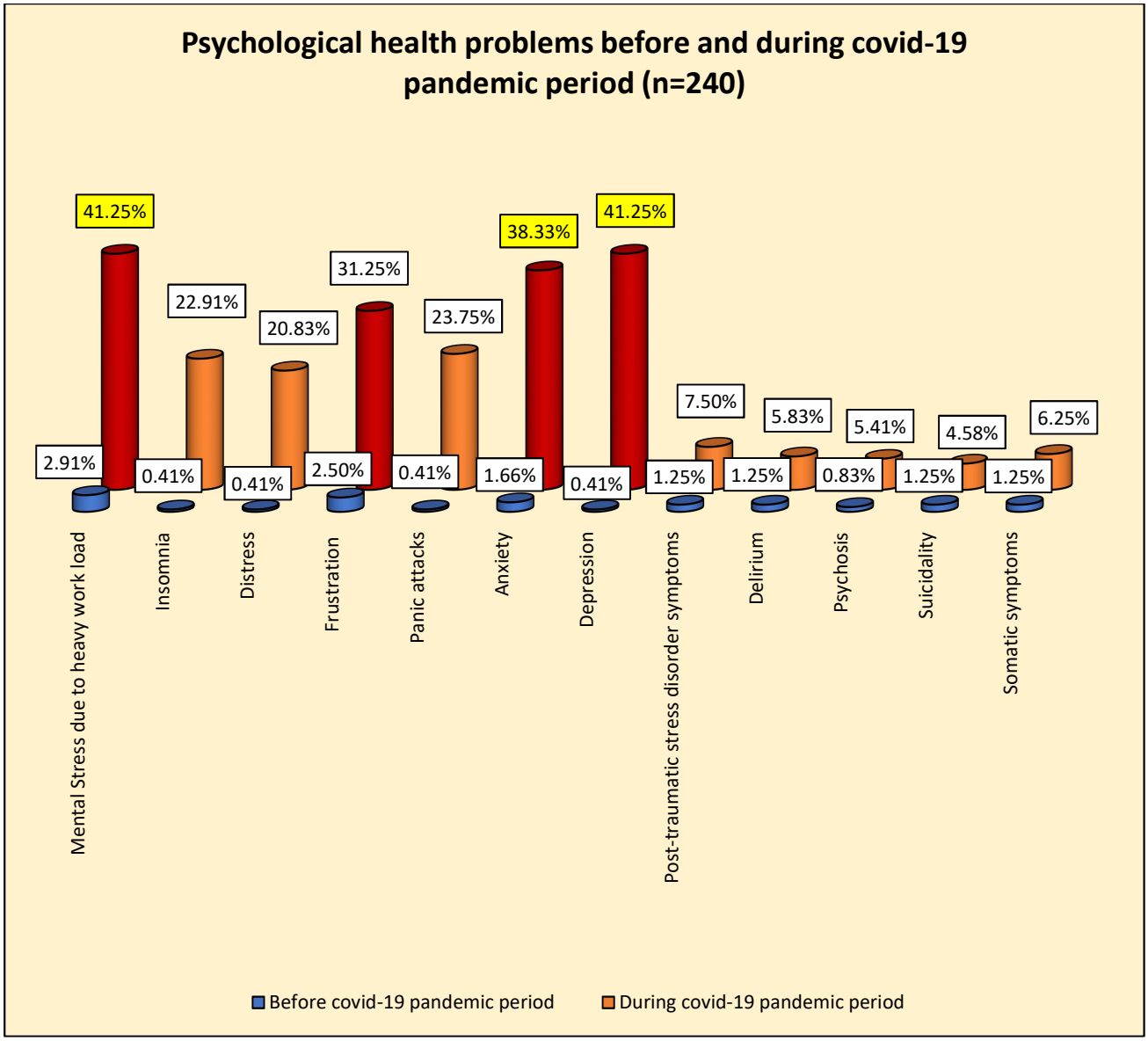

Figure 7: Distribution of the respondents according to psychological health problems experienced before and during Covid – 19 pandemic period

It can be observed from table 10 and figure 6 that there is increase in physiological and psychological health problems of the health care professionals during covid-19 pandemic period. Health problems such as headache, stain in eyes due to work load, weakness, stiffness in neck, watery eyes, loss of appetite, backache, physical fatigue, gastric disturbance due to improper food habits and joint and muscular pain

increased pointedly during covid-19 pandemic period. Psychological health problems such as mental stress due to heavy work load, depression, anxiety, frustration, panic attacks, distress, and insomnia among healthcare significantly increased professionals during covid-19 pandemic period. This increase in physiological and psychological health problems can be due to long working hours and requirement of the prevailing situation of pandemic.

4.2.3 Extent of physiological and psychological health problems experienced by the respondents before and during covid-19 pandemic period.

A probe was made to find out the extent of physiological and psychological health problems faced by the respondents before and during covid-19 pandemic period. The scores on each of the health problems were summated and possible range of minimum and maximum scores were divided into three categories having equal interval. The minimum score for physiological health problems was 16 and maximum score was 32. The minimum score for psychological health problems was 12 and maximum score was 24. The overall minimum score of physiological and psychological health problems was 28 and maximum score was 47.

Table 12: Distribution of respondents according to extent of physiological and psychological health problems faced by the respondents before and during covid-19 pandemic period

Sr. No.	Extent of the Health problems	Respondents (n= 240)				
		Range of Scores	Before COVID-19 Pandemic Period		Developed during COVID-19 Pandemic Period	
			f	%	f	%
A.	**Physiological Health Problems**					
1.	High Extent	27-32	0	0	36	15.0
2.	Moderate Extent	22-26	4	1.7	119	49.6
3	Low Extent	16-21	236	98.3	85	35.4
B.	**Psychological Health Problems**					
1.	High Extent	20-24	1	0.4	8	3.3
2.	Moderate Extent	16-19	2	0.8	60	25.0
3	Low Extent	12-15	237	98.8	172	71.7
Overall						
1.	High Extent	47-56	0	0	6	2.5
2.	Moderate Extent	38-46	2	0.8	116	48.3
3	Low Extent	28-37	238	99.2	118	49.2

Data from table 12 and figure 8 revealed that majority (98.30%) of the respondents experienced low extent of physiological health problems before covid-19 pandemic period. Little less than one - half (49.6%) of the respondents faced moderate extent of physiological health problems during covid-19 pandemic period. Majority (98.8%) of the respondents experienced low extent of psychological health problems before covid-19 pandemic period. It can be observed that less than two – third (71.7%) of the respondents experienced low extent of psychological health problems. It was found that the respondents experienced low extent of health problems before (99.2%) and during (49.2%) covid-19 pandemic period.

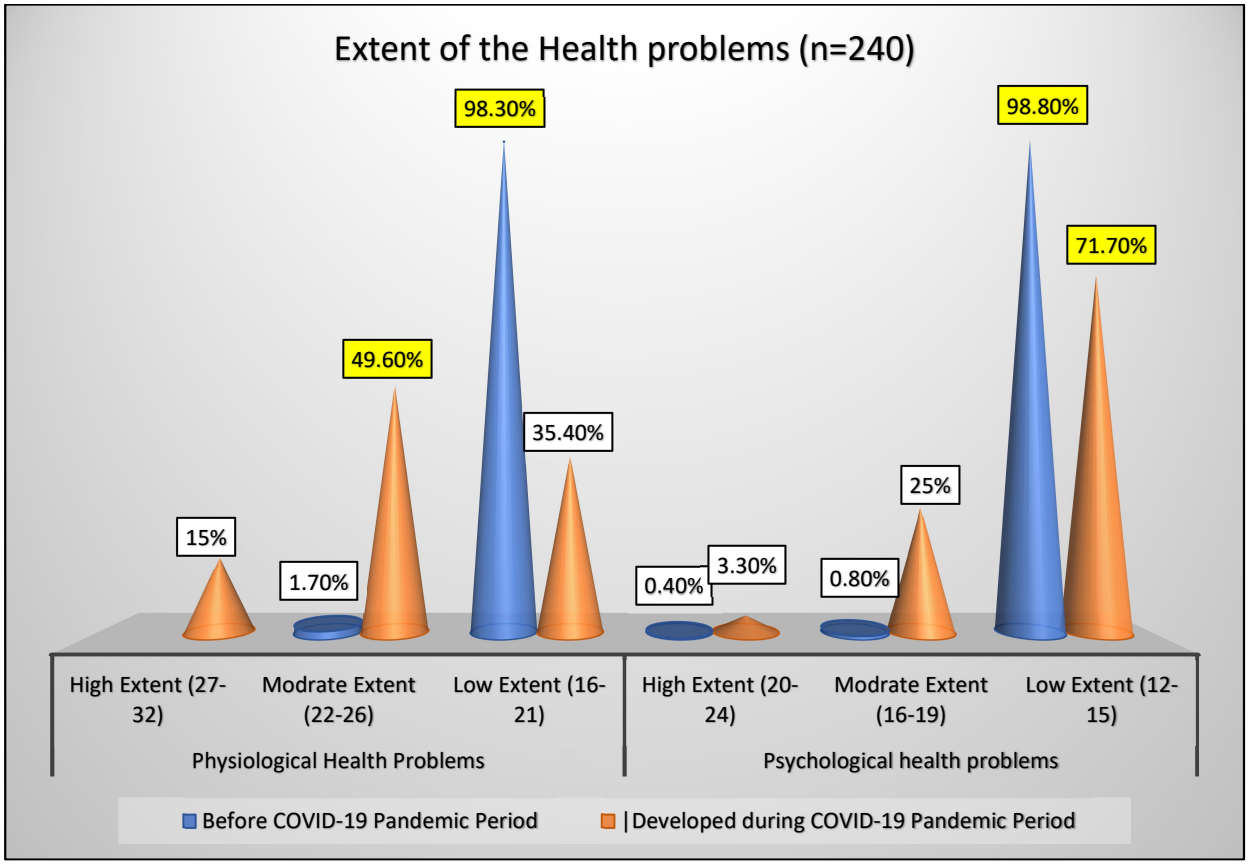

Figure 8: Distribution of respondents according to extent of physiological and psychological health problems faced by the respondents before and during covid-19 pandemic period

4.3 Problems faced due to Wearing of PPE Kit: Personal protective equipment (PPE) to protect healthcare workers from infections such as COVID-19

(coronavirus). PPE Kit Includes gloves, gowns, shoe covers, head covers, masks, respirators (N95 or FFP2 standard, or equivalent), eye protection, face shields, and goggles. Pointing to intubation (the process of inserting a tube through a patient's mouth and into their airway) and nebulizer treatments (a machine that delivers medicated mist to the lungs). These procedures create a large amount of virus in the air so anyone around would need to wear PPE. The problems faced due to wearing of Personal Protective Equipment (PPE) by the respondents was also probed. The healthcare professionals faced several problems due to wearing of Personal Protective Equipment (PPE) kit. The problems faced due to wearing of PPE Kit were Sweating, Fogging of goggles or Face shields, Suffocation, Breathlessness, Increase in pulse rate, Headache due to its prolonged use, Pressure marks on the skin at one or more areas due to repeated use, Skin allergy/dermatitis caused by the synthetic materials of the PPE kit, Dermatitis/Eczema caused by the material of the PPE kit in chin, jaw, ears, eyelids and arm pits, Skin pigmentation, Skin rashes/acne, Face shield impinging onto neck during intubation, Acne due to prolonged use of masks, Nasal pain, Poor hair health due to prolonged use of hair cap, Pain at the root of the pinna, Slipping of shoe covers. It had 2-point continuum for the responses were “Yes” and “No” where scores of 2 through 1 were ascribed respectively.

From the scrutiny of the data from the table 13 and figure 9 revealed that majority of the respondents faced PPE kit related problems sweating (97.9%), fogging of goggles or face shields (95%), suffocation (91.25%), slipperiness of shoe covers (81.66%), breathlessness (81.60%) and pain at the root of the pinna (80.83%) due to wearing of PPE Kit. Other problems faced by the respondents due to wearing of PPE Kit were headache (79.58%), acne (79.16%), pressure mask on the skin (77.08%), skin rashes (77.08%), poor hair health (76.66%), face shield impinging into neck during intubation (76.60%), increase in pulse rate (75.41%), nasal pain (73.75%), skin pigmentation (72.91%) and dermatitis or eczema (70.41%).

Table 13: Distribution of the respondents according to problems faced due to wearing of PPE Kit

Sr. No.	Problems Faced Due to PPE Kit	Respondents (n= 240)			
		Yes		No	
		f	%	f	%
1.	Sweating	235	97.9	5	2.0
2.	Fogging of goggles or Face shields	228	95	12	5
3.	Suffocation	219	91.25	21	8.75
4.	Breathlessness	196	81.60	44	18.33
5.	Increase in pulse rate	181	75.41	59	24.58
6.	Headache due to its prolonged use	191	79.58	49	20.41
7.	Pressure marks on the skin at one or more areas due to repeated use	185	77.08	55	22.91
8.	Skin allergy/dermatitis caused by the synthetic materials of the PPE kit	158	65.83	82	34.16
9.	Dermatitis/Eczema caused by the material of the PPE kit in chin, jaw, ears, eyelids and arm pits	169	70.41	71	29.58
10.	Skin pigmentation	175	72.91	65	27.08
11.	Skin rashes/acne	185	77.08	55	22.91
12.	Face shield impinging onto neck during intubation	184	76.60	56	23.33
13.	Acne due to prolonged use of masks	190	79.16	50	20.83
14.	Nasal pain	177	73.75	63	26.25
15.	Poor hair health due to prolonged use of hair cap	184	76.66	56	23.33
16.	Pain at the root of the pinna	194	80.83	46	19.16
17.	Slipperiness of shoe covers	196	81.66	44	18.33

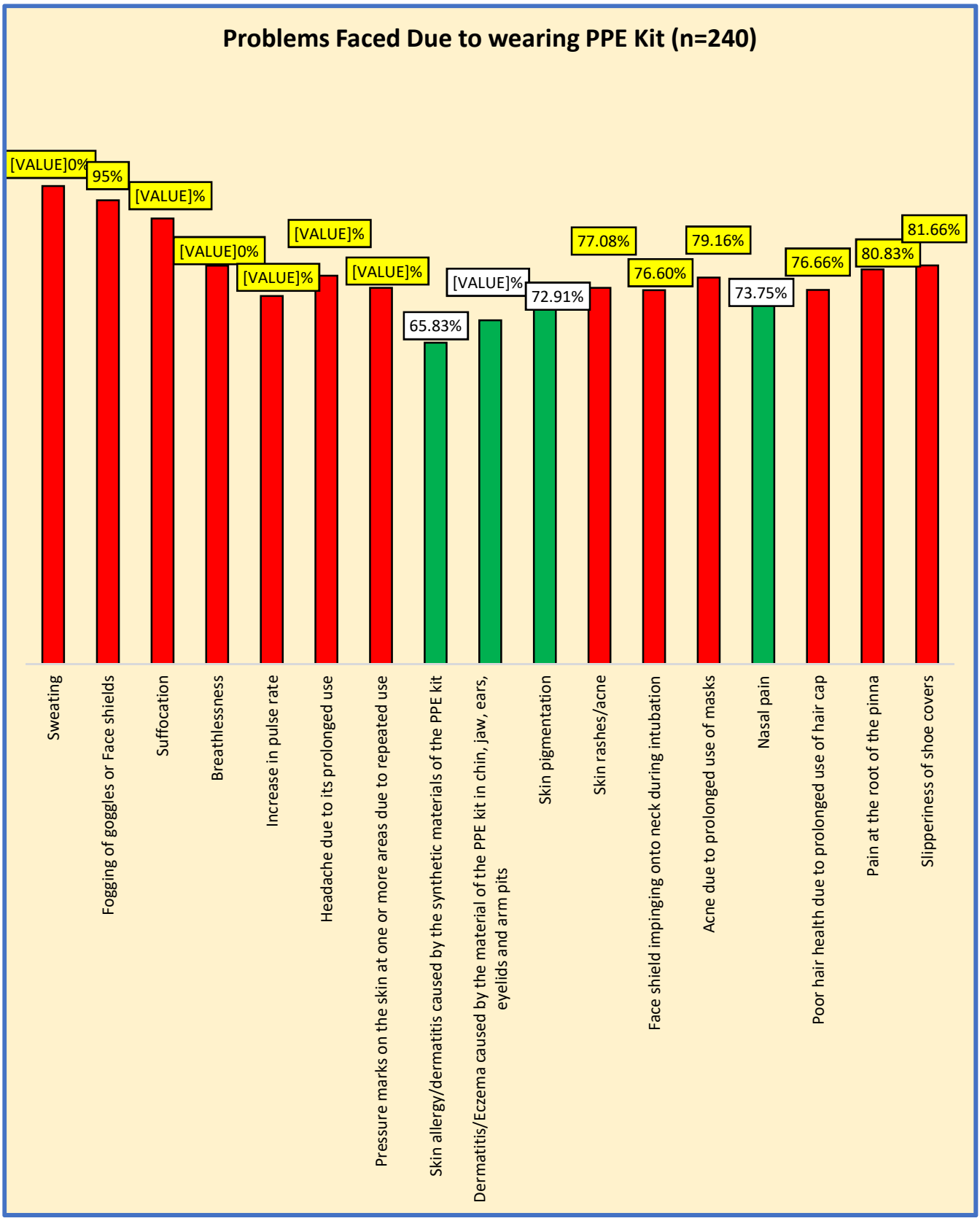

Figure 9: Distribution of the respondents according to problems faced due to wearing of PPE Kit

4.3.1 Extent of problems faced due to wearing of PPE Kit: A probe was made out to find out the extent of problems faced due to wearing of PPE Kit. The scores on each of items of the scale were summated and possible range of minimum and maximum scores were divided into three categories having equal interval. Minimum score was 17 and maximum score was 34.

Table 14: Distribution of respondents according to extent of problems faced due to wearing of PPE Kit

Sr. No.	Extent of Problems faced wearing due PPE Kit	Respondents (n=240)		
		Range of Scores	f	%
1.	High Extent	29-34	194	80.8
2.	Moderate Extent	23-28	35	14.6
3	Low Extent	17-22	11	4.6

From table 14 figure 10**,** it can be observed majority (80.80%) of the respondents faced high extent of problems due to wearing a PPE Kit. More than one – tenth (14.60%) of the respondents faced problems due to wearing of PPE Kit to moderate extent. Very few (4.60%) of the respondents faced low extent of problems due to wearing of PPE Kit.

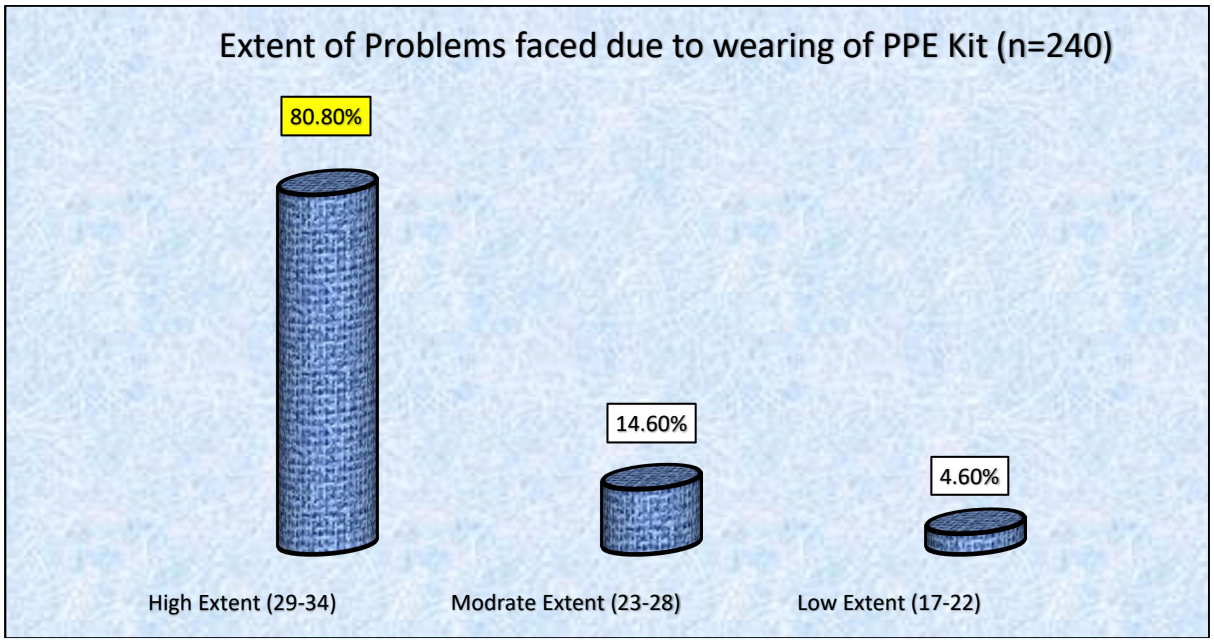

Figure 10: Distribution of respondents according to extent of problems faced due to wearing of PPE Kit

4.4 Prevalence of Burnout among health care professionals: An attempt was made to find out the burnout of the respondents. It was measured through a pre validated questionnaire i.e., Maslach Burnout Inventory (MBI). Maslach Burnout Inventory measures three dimensions viz. emotional exhaustion (EE) which measures individual feelings of being emotionally exhausted and depleted by one's work, depersonalization (DP) which captures the development of negative, cynical attitudes and feelings towards clients and personal accomplishment (PA) which assess the individual sense ineffectiveness, especially with job performance. The total scale consisted of 22 items, with nine items measuring the emotional exhaustion (EE) subscale, eight items measuring the personal accomplishment (PA) subscale and five items measuring the depersonalization (DP) subscale. Each item was answered on a five-point Likert scale. The responses to each item were "Never", "Few times per year", "Once a month", "Few times per month", "Once a week", "Few times per week" and "Every day" which were scored 0 through 6. Each subscale score was calculated by adding up all scores of all items in that subscale, with a notion that the items on personal accomplishment domain are reversely scored. The scores on each of items of the subscales were summated and possible range of minimum and maximum scores were divided into three categories having equal interval. The total numbers of items for entire scale were 22 and hence minimum score was 0 and maximum was 132. Minimum and maximum possible scores was divided into three categories on the basis of equal interval which were "High Extent", "Moderate Extent" and "Low Extent" of problems. It was determined for entire scale also. The higher scores on emotional exhaustion (EE) and depersonalization (DP) subscales and a lower score on the personal accomplishment (PE) subscale are consistent with burnout.

Table 15: Distribution of respondents according to prevalence of burnout

Sr. no.	Feelings stating the burnout among healthcare professionals	Respondents (n= 240)														
		Never (0)		Few times per year (1)		Once a month (2)		Few times per month (3)		Once a week (4)		Few times per week (5)		Every day (6)		Weighted Mean score (0-6)
		f	%	f	%	f	%	f	%	f	%	f	%	f	%	
A.	**Emotional Exhaustion (EE)**															
1.	Felt emotionally drained from work	34	14.16	32	13.33	28	11.66	128	53.33	9	3.7	5	2.08	4	1.66	**2.3**
2.	Felt used up at then of the work day	22	9.16	38	15.83	29	12.08	143	59.58	5	2.08	4	1.66	1	0.4	**2.4**
3.	Felt fatigue when getting up in the morning	17	7.08	25	10.41	97	40.41	45	18.75	46	19.16	5	2.08	6	2.5	**2.5**
4.	Felt like at the end of the rope	131	54.58	25	10.41	31	12.91	42	17.5	10	4.16	0	0	1	0.4	**1.1**
5.	Felt burned out from work	22	9.16	26	10.83	101	42.08	68	28.33	17	7.08	3	1.25	3	1.25	**2.2**
6.	Felt l frustrated by job	101	42.08	38	15.83	60	25	27	11.25	10	4.16	2	0.83	3	1.25	**2.2**
7.	Felt working too hard on the job	14	5.83	58	24.16	104	43.33	45	18.75	11	4.58	5	2.08	5	2.08	**2.1**
8.	Working with patients suffering from COVID – 19 puts too much stress	24	10	19	7.91	91	37.91	57	23.75	39	16.25	5	2.08	6	2.5	**2.4**
9.	Working with patient suffering from COVID – 19 was a strain	24	10	26	10.83	78	32.5	55	22.91	45	18.75	1	0.4	12	5	**2.5**
	Total weighted mean															**2.18**
B.	**Depersonalization (DP)**															
10.	Treated patient as impersonal “objects”	123	51.25	13	5.41	49	20.41	28	11.66	9	3.25	4	1.66	14	5.83	**1.4**
11.	Became more callous toward	115	47.91	21	8.75	42	17.5	36	15	7	2.91	7	2.91	12	5	**1.5**

	patients															
12.	Worried that job is hardening emotionally	119	49.58	20	8.33	39	16.25	37	15.41	10	4.16	7	2.91	8	3.33	**1.4**
13.	Don't really cared what happens to patients	136	56.66	25	10.41	38	15.83	25	10.41	8	3.33	3	1.25	6	2.5	**1.1**
14.	Felt patients blame me for their problems	69	28.75	80	33.33	46	19.16	29	12.08	8	3.33	4	1.66	4	1.66	**1.4**
	Total weighted mean															**1.36**
C.	**Personal Accomplishment (PA)**	**Never (6)**		**Few times per year (5)**		**Once a month (4)**		**Few times per month (3)**		**Once a week (2)**		**Few times per week (1)**		**Every day (0)**		**Wt. Mean score (0-6)**
		f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	
15.	Can easily understand patients' feelings	8	3.3	22	9.16	39	16.25	65	27.08	67	27.91	12	5	28	11.66	**2.7**
16.	Dealt effectively with the patients' feeling	6	2.5	19	7.91	29	12.08	44	18.33	86	35.83	25	10.41	31	12.91	**2.4**
17.	Felt positively influencing peoples' lives	8	3.3	16	6.66	29	12.08	29	12.08	38	15.83	85	35.41	35	14.58	**2.1**
18.	Felt very energetic	8	3.3	22	9.16	25	10.41	26	10.83	20	8.33	23	9.58	116	48.33	**1.7**
19.	Easily created a relaxed atmosphere	8	3.3	17	7.08	33	13.75	35	14.58	13	5.41	13	5.41	121	50.41	**1.7**
20.	Felt exhilarated after working with the patients	13	5.41	17	7.08	45	18.75	111	46.25	19	7.91	11	4.58	26	10.83	**3.0**
21.	Have accomplished worthwhile things in job	11	4.5	19	7.91	27	11.25	77	32.08	73	30.41	11	4.58	22	9.16	**2.7**
22.	Dealt with emotional problems calmly	20	8.33	12	5	30	12.5	63	26.25	80	33.33	9	3.75	26	10.83	**2.7**
	Total weighted mean															**2.37**

Emotional exhaustion (EE): Emotional Exhaustion measures individual feelings of being emotionally exhausted and depleted by one's work. Data from table 15, It was found that almost three – fifth (59.58%) of the respondents felt used up at the work few times per month. More than one – half of the respondents never felt like that they are at the end of the rope (54.58%), and felt emotionally drained from work few times per month (53.33%). More than two – fifth (43.33%) of the respondents once in a month felt that they are working too hard on their job. More than two – fifth (42.08%) of the respondents never felt frustrated by their job while same percentage of the respondents felt burned out from their work once in a month.

Depersonalization (DP): Depersonalization captures the development of negative, cynical attitudes and feelings towards clients. Data from table 15, It was found that more than one – half (56.66%) of the respondents never thought that they don't really care what happens to patients. Little more than one – half (51.25%) of the respondents never treated patient as impersonal "objects". Almost one – half (49.58%) of the respondents never worried about their job was hardening emotionally. Less than one – half (47.91%) of the respondents never became more callous towards patients.

Personal Accomplishment (PA): It measures Personal Accomplishment (PA) which assess the individual sense ineffectiveness, especially with job performance. Data from table 15, It was found that a more than one – half (50.41%) of the respondents easily created a relaxed atmosphere every day. Less than one – half (48.33%) of the respondents felt very energetic every day, felt exhilarated after working with the patients (46.25%). Once in a week more than one – third (35.83%) of the respondents dealt effectively with the patients' feeling. More than one – third (35.41%) of the respondents felt positively influencing peoples' lives few times per week. Almost one – third (33.33%) of the respondents dealt with emotional problems calmly once a week.

4.4.1 Extent of burnout among healthcare professionals: A probe was made to find out the extent of burnout among healthcare professionals. The scores on each of items of the subscales were summated and possible range of minimum and maximum scores were divided into three categories having equal interval. The total

numbers of items for entire scale were 22 and hence minimum score was 0 and maximum was 132.

Table 16: Distribution of respondents according to extent of burnout

Sr. No.	Extent of burnout among healthcare professionals	Respondents (n=240)			Total weighted mean (0-6)
		Range of score	f	%	
A.	**Emotional Exhaustion**				
1.	High Extent	37-54	6	2.5	**2.18**
2.	Moderate Extent	18-36	117	48.8	
3	Low Extent	0-17	117	48.8	
B.	**Depersonalization**				
1.	High Extent	20-30	230	95.8	**1.36**
2.	Moderate Extent	10-19	0	0	
3	Low Extent	0-9	10	4.2	
B.	**Personal Accomplishment**				
1.	High Extent	0-15	0	0	**2.37**
2.	Moderate Extent	16-32	173	72.1	
3	Low Extent	33-48	67	27.9	
Overall					
1.	High Extent	89-132	54	22.5	**1.97**
2.	Moderate Extent	44-88	180	75.0	
3	Low Extent	0-43	6	2.5	

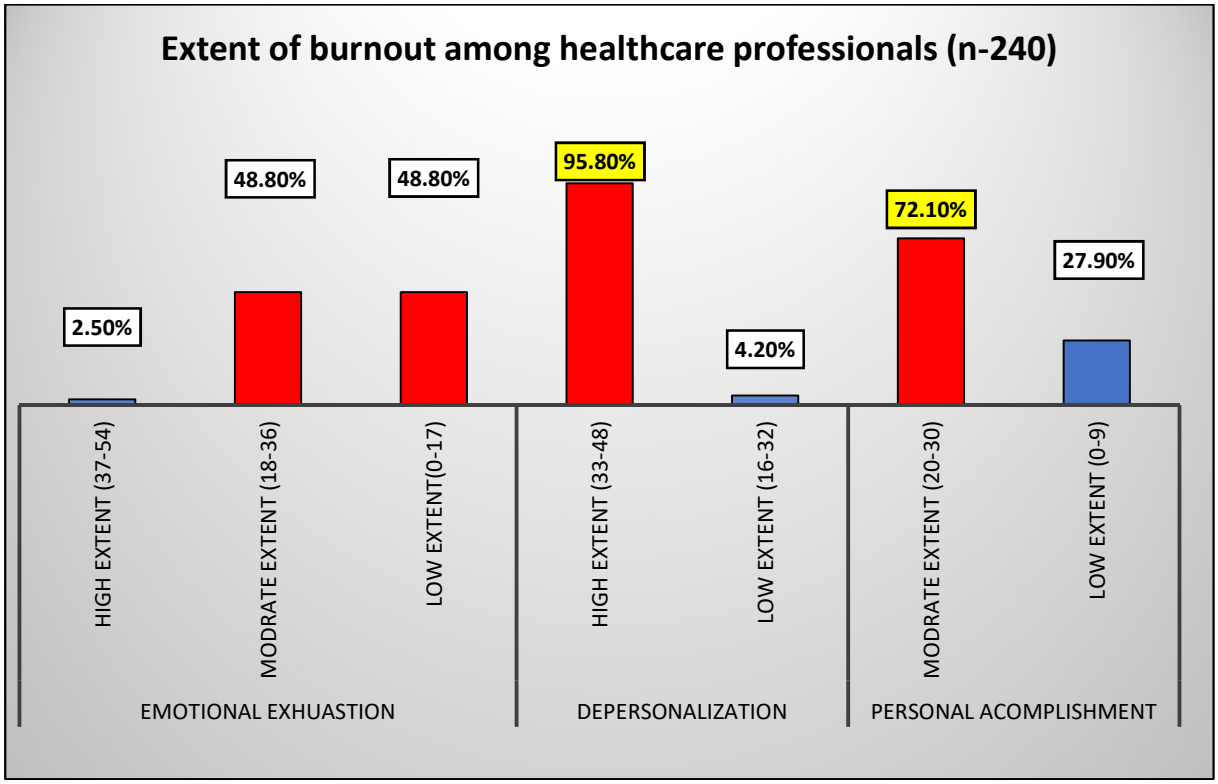

Figure 11: Distribution of the respondents according to their extent of burnout

The data in table 16 and figure 11 revealed that less than one – half (48.80%) of the respondents had feeling of emotional exhaustion to moderate and low extent. Majority (95.80%) of the respondents had feeling of depersonalization to a high extent. Less than three – fourth (72.10%) of the respondents had feeling of personal accomplishment to a moderate extent. The overall analysis of the scale showed that three – fourth (75.00%) of the respondents had moderate extent of burnout.

4.5 Factors leading to Burnout: It was thought necessary to find out the factors that leads to burnout among healthcare professionals during COVID – 19 pandemic period. The scale consisted of 23 situation that can lead to burnout. The responses were “To High Extent”, “To Moderate Extent” and “To Low Extent”. The score of 3 through 1 were ascribed to the responses respectively.

Table 17: Distribution of respondents according to factors leading to Burnout

Sr. No.	Factors leading to Burnout	Respondents(n=240)						
		To High Extent (3)		To Moderate Extent (2)		To Low Extent (1)		Weighted Mean score (1-3)
		f	%	f	%	f	%	
1.	Being isolated/quarantined	140	58.33	82	34.16	18	7.5	**2.5**
2.	Concern for personal safety	142	59.16	90	37.5	8	3.33	**2.6**
3.	Putting family members at risk	151	62.91	76	31.66	13	5.41	**2.6**
4.	Putting other staff members at risk	151	62.91	76	31.66	13	5.41	**2.6**
5.	Concern for patient mortality	156	65	70	29.16	14	5.83	**2.6**
6.	Fear of infection	149	62.08	78	32.5	13	5.41	**2.6**
7.	Continuing work during the outbreak	143	59.58	82	34.16	15	6.25	**2.5**
8.	Lack of recognition from hospital authorities	116	48.33	99	41.25	25	10.41	**2.4**
9.	No additional financial compensation	119	49.58	87	36.25	34	14.16	**2.4**
10.	Fear of improper use of personal protective equipment	151	62.91	69	28.75	20	8.83	**2.5**
11.	Lack of personal protective equipment	143	59.58	70	29.16	27	11.25	**2.5**

Table 17. contd…

Sr. No.	Factors leading to Burnout	Respondents(n=240)						
		To High Extent (3)		To Moderate Extent (2)		To Low Extent (1)		Weighted Mean score (1-3)
		f	%	f	%	f	%	
12.	Fear of household problems due to lockdown	145	60.41	68	28.33	27	11.25	**2.5**
13.	Degree of contact with confirmed or suspected cases	144	60	72	30	24	10	**2.5**
14.	Multiple needs of the patients	143	59.58	77	32.08	20	8.33	**2.5**
15.	Speculations about its mode of transmission	134	55.83	82	34.16	24	10	**2.5**
16.	Rapidity of spread	146	60.83	72	30	22	9.16	**2.5**
17.	Lack of definitive treatment protocols or vaccine	132	55	82	34.16	26	10.83	**2.4**
18.	Widespread global connectivity	100	41.66	104	43.33	36	15	**2.3**
19.	Extensive media coverage	59	24.58	121	50.41	60	25	**2.0**
20.	Lack of social support	40	16.66	132	55	68	28.33	**1.9**
21.	Lack of communication	47	19.58	127	52.91	66	27.5	**1.9**
22.	Lack of training	50	20.83	118	49.16	72	30	**1.9**
23.	Maladaptive coping	43	17.91	126	52.50	71	29.58	**1.9**

The data in table 17 represented the factors leading to burnout among health care professionals. A little less than three – fourth (65%) of the respondents were concerned to a high extent for patient mortality. Factors such as putting their family members at risk, putting other staff members at risk and fear of improper use of personal protective equipment were the high extent of factors leading to burnout among less than two – third (62.91%) of the respondent. More than three – fifth (62.08%) of the respondents had high extent of fear of infection. Almost three – fifth of the respondents had high extent of fear of household problems due to lockdown (60.41%) and rapidity of spread of disease (60.83%). More than one – half of the respondents had moderate extent of feeling of burnout due to lack of social support (55%), lack of communication (52.91%) and maladaptive coping (52.50%). Almost one – half of the respondents had moderate extent of burnout due to extensive media coverage (50.41%) and lack of training (49.16%). More than two – fifth of the respondents had moderate extent of burnout due to wide spread global connectivity (43.33%) and lack of recognition from hospital authorities (41.25%). The weighted mean scores for the statements "Concern for personal safety", "Putting family

members at risk", "Putting other staff members at risk", "Concern for patient mortality", "fear of infection" were highest (2.6).

4.5.1 Extent of factors leading to Burnout: A probe was made to find out the extent of factors leading to burnout. The scores on each of items of the scale were summated and possible range of minimum and maximum scores were divided into three categories having equal interval. The total numbers of items for entire scale were 23 and hence minimum score was 23 and maximum was 69. High score represented high extent of factors leading to burnout.

Table 18: Distribution of respondents according to extent of factors leading to burnout

Sr. No.	Extent of factors leading to Burnout	Respondents (n= 240)		
		Range of score	f	%
1.	High Extent	54-69	148	61.70
2.	Moderate Extent	39-53	82	34.2
3	Low Extent	23-38	10	4.2

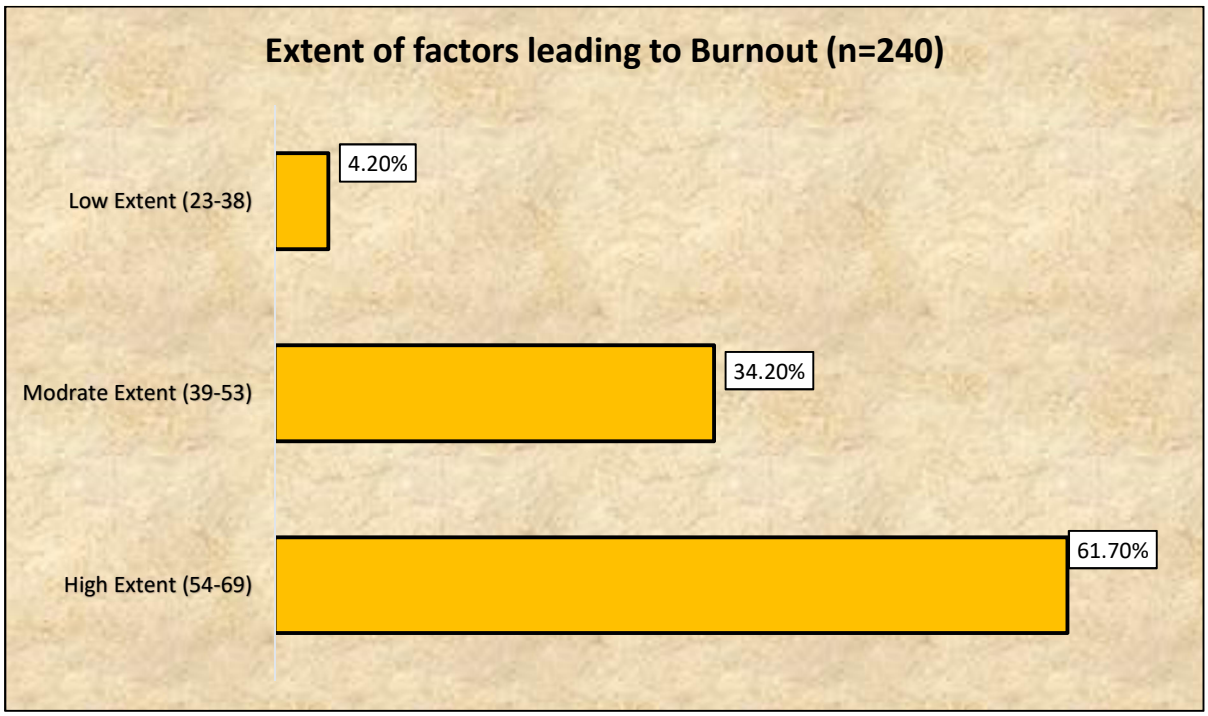

Figure 12: Distribution of the respondents according to extent of factors leading to burnout

The data in table 18 and figure 12 showed that high extent of factors were leading to feeling of burnout among less than two – third (61.70%) of the respondents. There were moderate extent of factors which led to burnout condition among more than one – third (34.20%) of the respondents.

4.6 Coping Strategies Adopted: The coping strategies adopted by the respondents to overcome their burnout during covid-19 pandemic period were probed. Cope Inventory developed by Carver in the year 1989 was selected for the purpose of finding out the coping strategies adopted by the respondents to overcome their burnout. It contained Likert scale having 60 items, under 15 coping strategies viz. “Positive reinterpretation and growth”, “Mental disengagement”, “Focus on and venting of emotions”, “Use of instrumental social support”, “Active coping”, “Denial”, “Religious coping”, “Humour”, “Behavioral disengagement”, “Restraint”, “Use of emotional social support”, “Substance use”, “Acceptance”, “Suppression of competing activities”, and “Planning” each having 4 items. The responses were “I didn’t do this at all”, “I did this a little bit”, “I did this a medium amount” and “I did this a lot” these were scored 1 through 4.

Positive reinterpretation and growth: The data from table 19, revealed that, more than one – half (55%) of the respondents learnt a lot from the experience. It was found that more than one – half (53.75%) of the respondents tried to grow as a person as a result of the experience to a medium amount. Almost one – half (50.41%) of the respondents looked for something good in what is happening to a medium amount. Less than one – half (46.66%) of the respondents little bit tried to see the situation in a different light, to make it seen more positive.

Mental disengagement: The data from table 19, revealed that, less than two – third (61.66%) of the respondents little bit turned to work or other substitute activities to take their minds off things. More than one – half (57.91%) of the respondents did not slept at all more than usual. More than one – half of the respondents did little bit go to movies or watch television, to think about it less (57.08%) and little bit daydreamed about things other than this (54.16%).

Focus on and venting of emotions: The data from table 19, revealed that, less than two – third of the respondents little bit let their feelings out (64.16%) and got upset and were really aware of it (61.66%). More than one – half (53.75%) of the respondents little bit got upset and let their emotions out. More than one – third (37.08%) of the respondents to a medium amount felt a lot of emotional distress and found themselves expressing those feelings a lot.

Use of instrumental social support: The data from table 19, revealed that, more than one – half of the respondents little bit tried to get advice from someone about what to do (54.58%) and asked people who have had similar experiences what they did (54.16%). One – half (50%) of the respondents talked to someone who could do something concrete about the problem to a medium amount. More than two – fifth (43.75%) of the respondents little bit talked to someone to find out more about the situation while 42.08 per cent of the respondents did this to a medium amount.

Active coping: The data from table 19, revealed that, almost three – fifth (60.83%) of the respondents did a lot to what has to be done, one step at a time. More than one – half (54.58%) of the respondents little bit concentrated their efforts on doing something about it. Less than one – half of the respondents little bit took direct action to get around the problem (47.91%) and took additional action to try to get rid of the problem (46.25%).

Denial: The data from table 19, revealed that, more than three – fifth (63.75%) of respondents little bit said to themselves, "This isn't real,". Almost three – fifth (60.83%) of the respondents little bit refused to believe it has happened. More than a three – fifth (60.41%) of the respondents acted a lot as through it hasn’t even happened.

Table 19: Distribution of respondents according to coping strategies adopted by them to overcome their burnout

Sr. no.	Statement reflecting coping strategies adopted	Respondents(n=240)								
		I didn't do this at all (1)		I did this a little bit (2)		I did this a medium amount (3)		I did this a lot (4)		Weighted Mean score (1-4)
		f	%	f	%	f	%	f	%	
A.	**Positive reinterpretation and growth**									
1.	I try to grow as a person as a result of the experience.	13	5.41	78	32.5	129	53.75	20	8.33	**2.7**
2.	I try to see it in a different light, to make it seem more positive.	13	5.41	112	46.66	102	42.5	13	5.41	**2.5**
3.	I look for something good in what is happening.	11	4.58	88	36.66	121	50.41	20	8.33	**2.6**
4.	I learn something from the experience.	6	2.5	27	11.25	75	31.25	132	55	**3.4**
	Total weighted mean									**2.8**
B.	**Mental disengagement**									
1.	I turn to work or other substitute activities to take my mind off things.	5	2.08	148	61.66	69	28.75	18	7.5	**2.4**
2.	I daydream about things other than this.	60	25	130	54.16	39	16.25	11	4.58	**2.0**
3.	I sleep more than usual.	139	57.91	63	26.25	31	12.91	7	2.91	**1.6**
4.	I go to movies or watch TV, to think about it less.	18	7.5	137	57.08	68	28.33	17	7.08	**2.4**
	Total weighted mean									**2.1**
C.	**Focus on and venting of emotions**									

Table 19. contd…

Sr. no.	Statement reflecting coping strategies adopted	Respondents(n=240)								
		I didn't do this at all (1)		I did this a little bit (2)		I did this a medium amount (3)		I did this a lot (4)		Weighted Mean score (1-4)
		f	%	f	%	f	%	f	%	
1.	I get upset and let my emotions out.	36	15	129	53.75	69	28.75	6	2.5	**2.2**
2.	I get upset, and am really aware of it.	30	12.5	148	61.66	54	22.5	8	3.33	**2.2**
3.	I let my feelings out.	24	10	154	64.16	54	22.5	8	3.33	**2.2**
4.	I feel a lot of emotional distress and I find myself expressing those feelings a lot.	26	10.83	113	47.08	89	37.08	12	5	**2.4**
	Total weighted mean									**2.2**
D.	**Use of instrumental social support**									
1.	I try to get advice from someone about what to do.	7	2.91	131	54.58	97	40.41	5	2.08	**2.4**
2.	I talk to someone to find out more about the situation.	24	10	105	43.75	101	42.08	10	4.16	**2.4**
3.	I talk to someone who could do something concrete about the problem.	10	4.16	91	37.91	120	50	19	7.91	**2.6**
4.	I ask people who have had similar experiences what they did.	12	5	130	54.16	83	34.58	15	6.25	**2.4**
	Total weighted mean									**2.4**
E.	**Active coping**									
1.	I concentrate my efforts on doing something about it.	11	4.58	131	54.58	78	32.5	20	8.33	**2.4**
2.	I take additional action to try to get rid of the problem.	75	31.25	111	46.25	39	16.25	15	6.25	**2.0**

Table 19. contd…

Sr. no.	Statement reflecting coping strategies adopted	Respondents(n=240)								
		I didn't do this at all (1)		I did this a little bit (2)		I did this a medium amount (3)		I did this a lot (4)		Weighted Mean score (1-4)
		f	%	f	%	f	%	f	%	
3.	I take direct action to get around the problem.	17	7.08	115	47.91	84	35	24	10	**2.5**
4.	I do what has to be done, one step at a time.	8	3.33	33	13.75	53	22.08	146	60.83	**3.4**
	Total weighted mean									**2.5**
F.	**Denial**									
1.	I say to myself "this isn't real."	42	17.5	153	63.75	38	15.83	7	2.91	**2.0**
2.	I refuse to believe that it has happened.	40	16.66	146	60.83	43	17.31	11	4.58	**2.1**
3.	I pretend that it hasn't really happened.	42	17.5	95	39.58	95	39.58	8	3.33	**2.3**
4.	I act as though it hasn't even happened.	19	7.91	35	14.58	41	17.08	145	60.41	**3.3**
	Total weighted mean									**2.4**
G.	**Religious coping**									
1.	I put my trust in God.	16	6.66	155	64.58	42	17.5	27	11.25	**2.3**
2.	I seek God's help.	42	17.5	91	37.91	93	38.75	14	5.83	**2.3**
3.	I try to find comfort in my religion.	102	42.5	56	23.33	61	25.41	21	8.75	**2.0**
4.	I pray more than usual.	16	6.66	120	50	46	19.16	58	24.16	**2.6**

Table 19. contd…

Sr. no.	Statement reflecting coping strategies adopted	Respondents(n=240)								
		I didn't do this at all (1)		I did this a little bit (2)		I did this a medium amount (3)		I did this a lot (4)		Weighted Mean score (1-4)
		f	%	f	%	f	%	f	%	
	Total weighted mean									**2.3**
H.	**Humour**									
1.	I laugh about the situation.	90	37.5	100	41.66	37	15.41	13	5.41	**1.9**
2.	I make jokes about it.	111	46.25	69	28.75	47	19.58	13	5.41	**1.8**
3.	I kid around about it.	59	24.58	149	62.08	27	11.25	5	2.08	**1.9**
4.	I make fun of the situation.	66	27.5	62	25.83	98	40.83	14	5.83	**2.3**
	Total weighted mean									**1.9**
I.	**Behavioural disengagement**									
1.	I admit to myself that I can't deal with it, and quit trying.	114	47.5	90	37.5	32	13.33	4	1.66	**1.7**
2.	I just give up trying to reach my goal.	114	47.5	68	28.33	42	17.5	16	6.66	**1.8**
3.	I give up the attempt to get what I want.	66	27.5	117	48.75	48	20	9	3.75	**2.0**
4.	I reduce the amount of effort I'm putting into solving the problem.	52	21.66	130	54.16	42	17.5	16	6.66	**2.1**
	Total weighted mean									**1.9**
J.	**Restraint**									
1.	I restrain myself from doing anything too quickly.	24	10	168	70	40	16.6	8	3.33	**2.1**

Table 19. contd…

Sr. no.	Statement reflecting coping strategies adopted	Respondents(n=240)								
		I didn't do this at all (1)		I did this a little bit (2)		I did this a medium amount (3)		I did this a lot (4)		Weighted Mean score (1-4)
		f	%	f	%	f	%	f	%	
2.	I hold off doing anything about it until the situation permits.	21	8.75	155	64.58	51	21.25	13	5.41	**2.2**
3.	I make sure not to make matters worse by acting too soon.	37	15.41	134	55.83	50	20.83	19	7.91	**2.2**
4.	I force myself to wait for the right time to do something.	28	11.66	130	54.16	57	23.75	25	10.41	**2.3**
	Total weighted mean									**2.2**
K.	**Use of emotional social support**									
1.	I discuss my feelings with someone.	21	8.75	120	50	83	34.58	16	6.66	**2.4**
2.	I try to get emotional support from friends or relatives.	19	7.91	113	47.08	92	38.33	16	6.66	**2.4**
3.	I get sympathy and understanding from someone.	38	15.83	139	57.91	54	22.5	9	3.75	**2.1**
4.	I talk to someone about how I feel.	50	20.83	72	30	100	41.66	18	7.5	**2.4**
	Total weighted mean									**2.3**
L.	**Substance use**									
1.	I use alcohol or drugs to make myself feel better.	188	78.33	34	14.16	14	5.83	4	1.66	**1.3**
2.	I try to lose myself for a while by drinking alcohol or taking drugs.	167	69.58	40	16.66	27	11.25	6	2.5	**1.5**
3.	I drink alcohol or take drugs, in order to think about it less.	191	79.58	34	14.16	13	5.41	2	0.83	**1.3**

Table 19. contd…

Sr. no.	Statement reflecting coping strategies adopted	Respondents(n=240)								
		I didn't do this at all (1)		I did this a little bit (2)		I did this a medium amount (3)		I did this a lot (4)		Weighted Mean score (1-4)
		f	%	f	%	f	%	f	%	
4.	I use alcohol or drugs to help me get through it.	144	60	38	15.83	35	14.58	23	9.58	**1.7**
	Total weighted mean									**1.4**
M.	**Acceptance**									
1.	I get used to the idea that it happened.	18	7.5	181	75.41	34	14.16	7	2.91	**2.1**
2.	I accept that this has happened and that it can't be changed.	16	6.66	157	65.41	53	22.08	14	5.83	**2.3**
3.	I accept the reality of the fact that it happened.	6	2.5	118	49.16	98	40.83	18	7.5	**2.5**
4.	I learn to live with it.	31	12.51	41	17.08	59	24.58	109	45.41	**3.0**
	Total weighted mean									**2.4**
N.	**Suppression of competing activities**									
1.	I keep myself from getting distracted by other thoughts or activities.	68	28.33	115	47.91	47	19.58	10	4.16	**2.0**
2.	I focus on dealing with this problem, and if necessary, let other things slide a little.	14	5.83	69	28.75	147	61.25	10	4.16	**2.6**
3.	I try hard to prevent other things from interfering with my efforts at dealing with this.	20	8.33	116	48.33	84	35	20	8.33	**2.4**
4.	I put aside other activities in order to concentrate on this.	20	8.33	57	23.75	33	13.75	130	54.16	**3.1**
	Total weighted mean									**2.5**

Table 19. contd…

Sr. no.	Statement reflecting coping strategies adopted	Respondents(n=240)								
		I didn't do this at all (1)		I did this a little bit (2)		I did this a medium amount (3)		I did this a lot (4)		Weighted Mean score (1-4)
		f	%	f	%	f	%	f	%	
O.	**Planning**									
1.	I make a plan of action.	18	7.5	64	26.66	107	44.58	51	21.25	**2.8**
2.	I try to come up with a strategy about what to do.	17	7.08	90	37.5	34	14.16	99	41.25	**2.9**
3.	I think about how I might best handle the problem.	11	4.58	119	49.58	86	35.83	24	10	**2.5**
4.	I think hard about what steps to take.	10	4.16	42	17.5	40	16.66	148	61.66	**3.4**
	Total weighted mean									**2.9**

Religious coping: The data from table 19, revealed that, less than two – third (64.58%) of the respondents little bit put their trust in God. One – half (50%) of the respondents prayed little bit more than usual. More than two – fifth (42.50%) of the respondents did not tried at all to find comfort in their religion. More than one – third (38.75%) of the respondents seeked gods help to a medium amount.

Humor: The data from table 19, revealed that, more than three – fifth (62.08%) of the respondents little bit kid around about it. Less than one – half (46.25%) of the respondents did not made joked about it at all. A little more than two – fifth (41.66%) of the respondents little bit laughed about the situation.

Behavioural disengagement: The data from table 19, revealed that, more than one-half (54.16%) of the respondents little bit reduced the amount of effort they put into solving the problem. Less than one – half (48.75%) of the respondents little bit given up trying to get what they want. Less than one – half (47.5%) of the respondents did not admit at all to themselves that they couldn't deal with it and quit trying and didn't give up trying to achieve their goal.

Restraint: The data from table 19, revealed that, less than two – third (64.58%) of the respondents little bit holded off doing anything about it until the situation permit. More Than one – half of the respondents little bit make sure not to make matters worse by acting to soon (55.83%) and forced themselves to wait for the right time to do something.

Use of emotional social support: The data from table 19, revealed that, less than three – fifth (57.91%) of the respondents little bit got sympathy and understanding from someone. One – half (50%) of the respondents little bit discussed their feelings with someone. Less than one – half (47.08%) of the respondents tried little they done this a little bit to get emotional support from friends or relatives. More than two – fifth (41.66%) of the respondents talked to someone about how they feel to a medium amount.

Substance use: The data from table 19, revealed that, more than three – fourth of the respondents did not drink alcohol or took drugs in order to think about it less (79.58%) and use alcohol or drugs to make themselves feel better. More than two – third (69.58%) of the respondents did not tried at all to loose themselves for a while

by drinking alcohol and or taking drugs. Three – fifth (60%) of the respondents did not used at all alcohol or drugs to help them get through it.

Acceptance: The data from table 19, revealed that, almost three – fourth (75.41%) of the respondents little bit got used to the idea that it happened. Almost two – third (65.41%) of the respondents accepted little bit that this has happened and it can't be changed. Almost one – half (49.16%) of the respondents accepted little bit the reality of the fact that it happened while 40.83 per cent of the respondents accepted this to a medium amount. Less than one – half (45.41%) of the respondents did learn to live with it.

Suppression of competing activities: The data from table 19, revealed that, more than three – fifth (61.25%) of the respondents focused on dealing with the present problem to a medium amount. More than one – half (54.16%) of the respondents did put aside a lot of other activities in order to concentrate this. Less than one – half of the respondents little bit tried hard to prevent other things from interfering with their efforts at dealing with this (48.33%) and kept themselves from getting distracted by other thoughts or activities.

Planning: The data from table 19, revealed that, more than three – fifth (61.66%) of the respondents did thought a lot about what steps to be taken. Almost one – half (49.58%) of the respondents little bit thought about how they might best they handle the problem. Less than one – half (44.58%) of the respondents made a plan of action to a medium amount. More than two – fifth (41.25%) of the respondents did tried a lot to come up with a strategy about what to do.

4.6.1. Extent of coping strategies adopted: It referred to the action taken by the respondents for handling their burnout during covid-19 pandemic period. A probe was made to find out the extent of coping strategies adopted by the respondents for handling burnout. The scores on each of items of the scale were summated and possible range of minimum and maximum scores were divided into three categories having equal interval. The total numbers of items for entire scale were 60 and hence minimum score was 60 and maximum was 240.

Table 20: Distribution of respondents according to extent of coping strategies adopted by them to overcome their burnout

Sr. No.	Extent of coping strategies adopted	Respondents (n= 240)			Total weighted mean (1-4)
		Range of score	f	%	
A.	**Positive reinterpretation and growth**				
1.	High Extent	13-16	34	14.2	2.8
2.	Moderate Extent	8-12	198	82.5	
3.	Low Extent	4-7	8	3.3	
B.	**Mental disengagement**				
1.	High Extent	13-16	5	2.1	2.1
2.	Moderate Extent	8-12	162	67.5	
3.	Low Extent	4-7	73	30.4	
C.	**Focus on and venting of emotions**				
1.	High Extent	13-16	5	2.1	2.2
2.	Moderate Extent	8-12	190	79.2	
3.	Low Extent	4-7	45	18.8	
D.	**Use of instrumental social support**				
1.	High Extent	13-16	11	4.6	2.4
2.	Moderate Extent	8-12	210	87.5	
3.	Low Extent	4-7	19	7.9	
E.	**Active coping**				
1.	High Extent	13-16	16	6.7	2.5
2.	Moderate Extent	8-12	213	88.8	
3.	Low Extent	4-7	11	4.6	
F.	**Denial**				
1.	High Extent	13-16	9	3.8	2.4
2.	Moderate Extent	8-12	204	85.0	
3.	Low Extent	4-7	27	11.3	
G.	**Religious coping**				
1.	High Extent	13-16	22	9.2	2.3
2.	Moderate Extent	8-12	171	71.3	
3.	Low Extent	4-7	47	19.6	
H.	**Humour**				
1.	High Extent	13-16	3	1.3	1.9
2.	Moderate Extent	8-12	122	50.8	
3.	Low Extent	4-7	115	47.9	
I.	**Behavioral disengagement**				
1.	High Extent	13-16	6	2.5	1.9
2.	Moderate Extent	8-12	112	46.7	
3.	Low Extent	4-7	122	50.8	
J.	**Restraint**				
1.	High Extent	13-16	7	2.9	2.2
2.	Moderate Extent	8-12	188	78.3	
3.	Low Extent	4-7	45	18.8	
K.	**Use of emotional social support**				
1.	High Extent	13-16	12	5.0	2.3
2.	Moderate Extent	8-12	192	80	
3.	Low Extent	4-7	36	15	
L.	**Substance use**				
1.	High Extent	13-16	3	1.3	1.4

Sr. No.	Extent of coping strategies adopted	Respondents (n= 240)			Total weighted mean (1-4)
		Range of score	f	%	
2.	Moderate Extent	8-12	51	21.3	
3.	Low Extent	4-7	186	77.5	
M.	**Acceptance**				
1.	High Extent	13-16	12	5.0	2.4
2.	Moderate Extent	8-12	206	85.8	
3.	Low Extent	4-7	22	9.2	
N.	**Suppression of competing activities**				
1.	High Extent	13-16	42	17.5	2.5
2.	Moderate Extent	8-12	182	75.8	
3.	Low Extent	4-7	16	6.7	
O.	**Planning**				
1.	High Extent	13-16	162	67.5	2.9
2.	Moderate Extent	8-12	76	31.7	
3.	Low Extent	4-7	2	.8	

The data in table 20 and figure 13 illustrated that more than two – third (67.50%) of the respondents were adopting planning method to a high extent to overcome their burnout. Coping strategies such as “Positive reinterpretation and growth”, “Mental disengagement”, “Focus on venting on emotion”, “Use of instrumental social support”, “Active coping”, “Denial”, “Religious coping”, “Humor”, “Restrain”, “Use of emotional social support”, “Acceptance” and “Suppression of competing activities” were used to a moderate extent by the respondents to overcome their burnout. Respondents were found using strategies with “Behavioural disengagement”, and “Substance use” to a low extent for overcoming their burnout. It was found that the respondents were adopting the coping strategies to a moderate extent for overcoming their burnout caused due to prevailing covid-19 pandemic. The mean weighted scores were found high for coping strategies viz. “Planning” and “Positive reinterpretation and growth”. The mean weighted scores were found low for the coping strategies viz. “Humor”, “Behavioural disengagement” and “Substance use”.

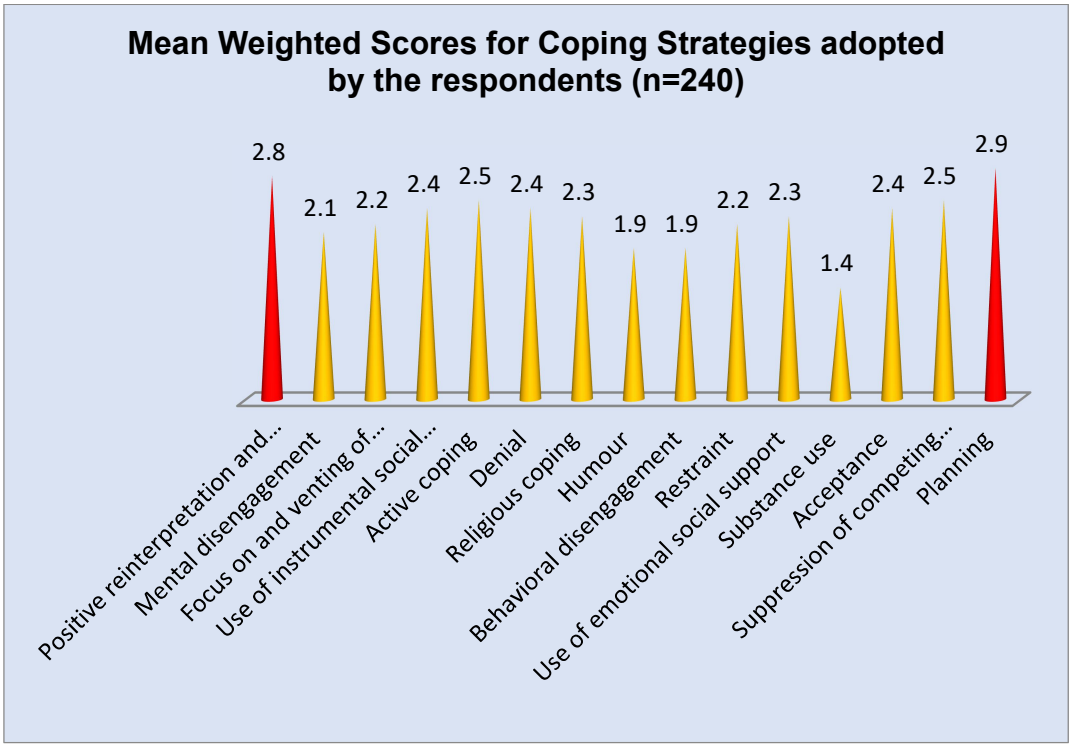

Figure 13: Mean weighted scores for coping strategies adopted by the respondents to overcome their burnout

4.7 Testing of Hypothesis

Several hypotheses were formulated to find out the relationship between selected variables of the present study. In the present investigation, as per the nature of variables Analysis of the variance (ANOVA) and t-test were computed. For the purpose of statistical analysis, the hypotheses were formulated in null form. The results are presented in this section:

Ho_1: There exists no variation in burnout among healthcare professionals with their personal, family and work-related variables

This broad hypothesis was made into several specific hypotheses.

$Ho_{1.1}$: There exists no variation in burnout among healthcare professionals with their age (in years), marital status, monthly family income, job category, working hours/day during past one year and working shift

Analysis of Variance (ANOVA) was computed to test the hypothesis.

The computation of F – value showed significant variation in burnout with the age (in years), marital status, monthly family income, job category, working hours/day during past one year and working shift of the respondents. The F – value was not found significant for educational qualification, personal monthly income and work experience of the respondents. Thus, the null hypothesis was partially accepted. Hence, it was inferred that burnout among the respondents varied with their age, marital status, monthly family income, job category, working hours/day during past one year and working shift **(Table 21).**

Table 21: Analysis of Variance showing variation in burnout among healthcare professionals with their selected personal, family and work-related variables

Sr. No.	Selected Variables	Sum of Squares	Mean Squares	df	F-Value	Level of Significance
A	**Age (in years)**					
1.	Between Groups	1302.838	434.279	3	2.704	0.05
2.	Within Groups	37909.625	160.634	236		
B	**Marital Status**					
1.	Between Groups	1308.204	436.068	3	2.715	0.05
2.	Within Groups	37904.258	160.611	236		
C	**Educational Qualification**					
1.	Between Groups	2394.043	342.006	9	2.155	N.S*
2.	Within Groups	36818.419	158.700	230		
D	**Personal Monthly Income**					
1.	Between Groups	177.280	88.640	2	0.538	N.S*
2.	Within Groups	39035.183	164.705	237		
E	**Monthly Family Income**					
1.	Between Groups	1708.315	854.157	2	5.398	0.01
2.	Within Groups	37504.148	158.245	237		
F	**Job Category**					
1.	Between Groups	1275.700	637.850	2	3.985	0.01
2.	Within Groups	37936.763	160.071	237		
G	**Work Experience (in year)**					
1.	Between Groups	242.872	80.957	3	0.490	N.S*
2.	Within Groups	38969.590	165.125	236		
H	**Working Hours/Day during past 1 year**					
1.	Between Groups	2279.853	1139.927	2	7.315	0.01
2.	Within Groups	36932.609	155.834	237		

Sr. No.	Selected Variables	Sum of Squares	Mean Squares	df	F-Value	Level of Significance
I	**Working shift**					
1.	Between Groups	3328.640	1109.547	3	7.297	0.01
2.	Within Groups	35883.822	152.050	236		

Notes: df = Degree of Freedom N.S = Not Significant

Table 22: Scheffe's test showing the mean significant in burnout among healthcare professionals with their age (in years), Marital status, Monthly Family Income, Monthly Family Income, Working Hours/Day during past 1 year and Working shift

Sr. No.	Selected Variables	Mean	df	Level of significance
A	**Age (in years)**			
1.	21 Years – 30 Years	65.59	236	0.05
2.	31 Years – 40 Years	70.89		
3.	41 Years – 50 Years	69.63		
4.	≥ 50 Years	69.36		
B	**Marital Status**			
1.	Married	69.50	236	0.05
2.	Unmarried	65.89		
3.	Divorcee	75.63		
4.	Widow	72.67		
D.	**Monthly Family Income**			
1.	≤ Rs. 50000	64.00	237	0.01
2.	Rs. 50001 – Rs. 100000	66.99		
3.	≥Rs 100001	71.85		
E.	**Monthly Family Income**			
1.	Specialists	70.69	236	0.01
2.	Nurses	68.94		
3.	Physician Assistants	65.16		
F.	**Working Hours/Day during past 1 year**			
1.	5-11 Hours/Day	68.83	237	0.01
2.	12-17 Hours/Day	57.56		
3.	18-24 Hours/Day	34.00		
G.	**Working shift**			
1.	Morning (8:00am to 2:00pm)	62.06	236	0.01
2.	Afternoon (2:00pm to 8:00pm)	68.25		
3.	Night (8:00pm to 8:00am)	67.28		
4.	General (9:00am to 6:00pm)	71.92		

Notes: df = Degree of Freedom

The statistical analysis in Scheffe's test on various categories of age of the respondents stated that respondents between age group 21 to 30 years significantly

differed in their burnout with those respondents who were in the age group of 31 to 40 years. The respondents with age 41 years and above significantly differed in their burnout with respondents in the age group of 21 to 30 years. It was indicated from various categories of marital status of the respondents that respondents who were unmarried significantly differed in their burnout with those respondents who were married. The respondents who were divorcee significantly differed in their burnout with respondents who were widow. The scheffe's test on various categories of monthly family income of the respondents revealed that respondent who had monthly family income ≤ Rs. 50000 significantly differed in their burnout with those who had monthly family income ≥Rs 100001 and the respondents. The respondents who had monthly family income between Rs. 50001 to Rs. 100000 significantly differed in their burnout with those who had monthly family income ≥Rs 100001. It was observed from various job categories of the respondents that Physician Assistants significantly differed in their burnout with Specialists. The nurses significantly differed in their burnout with Physician Assistant. The various categories of working hours/day during past one year of the respondents revealed stated that respondents who worked for 18 to 24 hours/day significantly differed in their burnout with those who worked 5 to 11 hours/day. The respondents who were working for 12 to 17 hours/day significantly differed in their burnout with respondents who were working for 12 to 17 hours/day. From various categories of working shift during past one year of the respondents indicated that respondents who worked in a morning shift (8:00am to 2:00pm) significantly differed in their burnout with those who was worked in afternoon shift (2:00pm to 8:00pm). The respondents working in night shifts (8:00pm to 8:00am) significantly differed in their burnout with respondents working in general shift (9:00am to 6:00pm). Hence, it can be conjectured that prevalence of burnout was more among respondents who were above 31 years of age, divorcee, who had monthly family income ≥Rs 100001, Specialists, working for 5 to 11 hours/day and working in General shift (9:00am to 6:00pm) **(Table. 22).**

$Ho_{1.2}$: There exists no relationship between burnout among healthcare professionals with their gender and type of family

To study the relationship between burnout among healthcare professionals with their gender and types of family, t - test were computed.

Table 23: t- test showing relationship between in the burnout among healthcare professionals with their gender and types of family

Sr. No.	Selected Variables	Mean score	t-value	df	Level of significance
A	**Gender**				
1.	Male	67.58	5.835	238	N.S*
2.	Female	69.34			
B	**Types of Family**				
1.	Joint	67.62	0.017	238	N.S*
2.	Nuclear	68.61			

*Notes: df = Degree of Freedom * N.S = Not Significant*

The computation of t – value exhibited no significant difference in burnout among healthcare professionals with their gender and types of family. Thus, the null hypothesis was accepted **(Table 23).**

Conclusion

The data were gathered from health care professionals to find out the prevalence of burnout among health care professional during COVID 19 pandemic period, to find out the coping strategies adopted by health care professional to overcome their burnout and to explore the variation in burnout with the biographic (personal) characteristics and work-related aspects of the health care professionals. It was found that less than one – half (42.1%) of the respondents were in the age group of 21 – 30 years. Less than two – third (61.3%) of the respondents were males and more than one – third (38.7%) of the respondents were females. It was found that more than one – half (52.1%) of the respondents were married. More than one – half (58.33%) of the respondents had MBBS (Bachelor of Medicine and Bachelor of Surgery) degree. The mean of personal monthly income of the respondents was 49948.92. It was found that more than one – half (58.75%) of the respondent's personal monthly income was ≤ Rs.50000. Less than two-third (65.00%) of respondents had nuclear family and little more than one – third (35.00%) of the respondents were from joint family. Less than two-third (72.5%) of the respondents had small family with 2 to 4 members. The mean of monthly family income of the respondents was Rs. 136350.83. More than one – half (56.25%) of the respondent had monthly family income between Rs. 50001 to Rs. 100000**.** It was found that less

than two – third (62.5%) of the respondents had work experience of 1 to 10 years. Majority (97.5%) of the respondents were working 5 to 7 days in a week since past one year. The mean working hours of the respondents in a day since past one year was 8.68 hours. Majority (95.41%) of the respondents were working for 5 to 11 hours in a day since past one year. It was found that two – fifth (40.41%) of the respondents were working in general shift (9:00am to 6:00pm). It was found that more than one – half (54.2%) respondents had permanent job and less than one – half (45.8%) of the respondents had contract-based job in the hospital. It was observed that before the covid-19 pandemic period the respondents were suffering from physiological health problems viz. headache (7.5%), diabetes (6.25%), Strain in eyes due to workload, weakness, backache, hypertension, and neck stiffness (2.91%). It was found that less than three – fourth (70.41%) of the respondents experienced headache, two – third of the respondents experienced strain in eyes due to workload (66.66%), weakness and stiffness in neck (66.25%). Less than two – third of the respondents experienced watery eyes (61.66%) and loss of appetite (60.83%) during covid-19 pandemic period. It was found that the respondents experienced mental stress due to heavy work load (2.91%) and frustration (2.50%) before covid-19 pandemic period. It was observed that two – fifth (41.25%) of the respondents experienced mental stress due to heavy workload and depression during covid-19 pandemic period. It was found that the respondents experienced low extent of health problems before (99.2%) and during (49.2%) covid-19 pandemic period. It was found that majority of the respondents faced problems related to sweating (97.9%), fogging of goggles or face shields (95%) and suffocation (91.25%) due to wearing of PPE Kit. It can be observed majority (80.80%) of the respondents faced high extent of problems due to wearing a PPE Kit.

The burnout among health care professionals was found using Maslach Burnout Inventory which measures three dimensions viz. emotional exhaustion (EE), personal accomplishment (PA) and depersonalization (DP). The overall analysis of the scale showed that three – fourth (75.00%) of the respondents had moderate extent of burnout. It was found that high extents of factors were leading to feeling of burnout among less than two – third (61.70%) of the respondent. Cope Inventory developed by Carver was selected for the purpose of finding out the coping

strategies adopted by the respondents to overcome their burnout. more than two – third (67.50%) of the respondents were adopting planning method to a high extent to overcome their burnout. Coping strategies such as “Positive reinterpretation and growth”, “Mental disengagement”, “Focus on venting on emotion”, “Use of instrumental social support”, “Active coping”, “Denial”, “Religious coping”, “Humor”, “Restrain”, “Use of emotional social support”, “Acceptance” and “Suppression of competing activities” were used to a moderate extent by the respondents to overcome their burnout. The mean weighted scores were found high for coping strategies viz. “Planning” and “Positive reinterpretation and growth”.

A significant relationship was found between burnout and age (in years), marital status, monthly family income, job category, working hours/day during past one year and working shift of the respondents. It was inferred that prevalence of burnout was more among respondents who were of 31 years and above, divorcee, having monthly family income ≥Rs 100001, working as Specialists, working 5 to 11 hours/day and working in General shift (9:00am to 6:00pm). The healthcare professionals who were in middle and older aged had more burnout issues during this pandemic period. The healthcare professionals who were divorcee encountered more burnout. The healthcare professionals who were earning more money confronted more burnout. The Specialists faced more burnout which might be due to their increased responsibilities during this pandemic period. The healthcare professionals who were working for 5 to 11 hours and in general shift admitted more burnout owing to maximum workload during their shift

Summary and Conclusion

CHAPTER – V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

At the end of 2019, a novel coronavirus was identified as the cause of a cluster of pneumonia cases in Wuhan, a city in the Hubei Province of China. It rapidly spread, resulting in an epidemic throughout China, followed by a global pandemic. Direct person-to-person respiratory transmission is the primary means of the virus. It is thought to occur mainly through close-range contact (i.e. within approximately six feet or two meters) via respiratory particles, virus released in the respiratory secretions when a person with infection coughs, sneezes, or talks can infect another person if it is inhaled or makes direct contact with these molecules. Infection could occur if a person's hands are contaminated by these secretions or by touching contaminated surfaces and then touch their eyes, nose, or mouth. Nonetheless, India is in a disaster as the number of positive cases continues to rise. Even though overall cases and deaths have been tracked and recorded on a daily basis around the world, what is less well understood is how different types of employees contribute to these figures by essential occupational exposure. In terms of disease and death risk, healthcare workers are unquestionably on the front lines. Frontline healthcare employees are unsung heroes who sacrifice their lives for the sake of others. However, this puts some healthcare professionals at a high risk for stress-related conditions and even long-term transition issues like burnout. At work, healthcare workers, particularly specialists, physician assistants, and nurses, encounter high levels of burnout.

Burnout is the state of mind that comes with long-term, unresolved stress that can negatively affect work and life. It is characterized by emotional exhaustion, depersonalization, and a diminished sense of personal achievement. Greater number of confirmed cases arrives in hospitals, causes significant occupational stress for healthcare workers, especially emergency care givers. Working hard throughout such crises or traumatic situations frequently comes at the detriment of sleep deprivation, ultimately increasing the risk of burnout during COVID-19.Healthcare workers facing the burnout may subsequently develop symptoms such as anxiety, irritability, mood swings and depression. There is an increasing

urgency to prepare health-care professionals for mental-health challenges and to reinforce their resilience. Therefore, it is essential for their welfare to muddle through effectively with burnout. Coping with a dilemma requires seeking to eliminate the source of friction, offloading the significance attributed to the challenges, directing one's life, and establishing stable physical, psychological, and social states.

An analysis of the literature indicated that burnout is a critical concern. Burnout is indeed very widespread among healthcare workers during COVID-19 pandemic period and could have serious consequences. Hence, the presents study was undertaken to assess the prevalence of burnout among health care professional during COVID 19 pandemic period and coping strategies adopted by them to overcome their burnout. An exhaustive review of related literature indicated that various researches have been carried out after COVID-19 outbreak on areas such Prevalence and risk factors of burnout among healthcare professionals during COVID-19 pandemic, Early psychological impact of the COVID-19 pandemic, Burnout among healthcare professionals during COVID-19 pandemic, Vicarious traumatization in the general public, members, and non-members of medical teams aiding in COVID-19 control, prevalence and predictors of anxiety and depression symptoms during the COVID-19 pandemic and compliance with precautionary measures: age and sex matter, Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population, Burnout frequency among oncology physicians and nurses working on the frontline and usual wards during the COVID-19 epidemic, Psychosocial burden of healthcare professionals in times of COVID-19 outside India. Whereas the researches undertaken in India related to present topic were focused on Difficulties encountered while using PPE kits and how to overcome them, Low self-esteem and high stress lead to burnout among health-care workers, The impact on mental health, prevalence and factors associated with burnout among healthcare professionals, Burnout among healthcare workers during COVID-19 pandemic, Mental stress, and burnout among COVID warriors, Knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic, Burnout and coping strategies among residents of a private medical college, Prevalence and predictors of stress, anxiety, and depression among healthcare workers managing COVID-19 pandemic. A dearth of researches was found in India

related to prevalence of burnout in health care professionals during the COVID 19 pandemic, as well as coping strategies adopted by them. The data base will be expanded as a result of the knowledge gained in this research study. The findings may assist in determining the causes of physiological and psychological burnout within healthcare workers, especially during the COVID-19 pandemic and necessary intervention required to moderate burnout and increase efficacy.

The present research would widen the data base and was help in strengthening the curriculum of the Department of Family and Community Resource Management and it was expected to contribute significantly to the field of Family and Community Resource Management as well as it will contribute for the society at large. The results of the study were contributed in combating the burnout among healthcare professionals by adopting appropriate coping strategies. Health policymakers and practitioners can adopt such strategies and develop context-specific approaches promoting a healthy workplace, addressing ethical issues, and preventing burnout among healthcare professionals especially during the COVID-19 pandemic. This study will help the students to gain insight into the causes of physiological and psychological burnout of the healthcare workers.

Statement of problem

The present study intends to find out the prevalence of burnout among health care professional during COVID 19 pandemic period, coping strategies adopted by them to handle their burnout and to explore variation in burnout with the personal and family characteristics and work related aspects of the health care professionals.

Objectives of the study

- To find out the prevalence of burnout among health care professional during COVID 19 pandemic period.
- To find out the coping strategies adopted by health care professional to overcome their burnout.
- To explore the variation in burnout with the personal, family characteristics and work related aspects of the health care professionals

Delimitation

3. The respondents of the study were those healthcare professionals who were actively working during the COVID-19 pandemic period.
4. The present study was limited to healthcare professionals such as Specialists, Nurses, and Physician Assistants.

Hypotheses

- There exists a variation in burnout with the personal, family and work-related characteristics of the health care professionals.

Methodology

The research design for the present investigation was descriptive in nature. For the present study, two government hospitals and three private hospitals of Vadodara city were selected through convenience sampling technique for data collection. The data were gathered from 240 healthcare professionals viz Specialists, Nurses, and Physician Assistants who were actively working during COVID – 19 pandemic periods in the selected hospitals of Vadodara city selected through purposive sampling technique. The consent was taken from the respondents and was asked to co-operate in giving the needed information for the present study. For the present study questionnaire was prepared and data were unruffled online via google form. Apart from background information, questionnaire comprised four sections viz. “Physiological and psychological Health Problems”, “Prevalence of Burnout”, “Factors leading to Burnout” and “Coping Strategies Adopted” by the healthcare professionals. The section “Physiological and psychological Health Problems” comprised of information related to health problems from which the healthcare professionals suffering before the pandemic period and health problems developed during covid-19 pandemic period. It included lists of psychological, physiological health problems and health problems faced due to wearing of Personal Protective Equipment (PPE). It had 2-point continuum for the responses “Yes” and “No” which were scored 1 through 2 respectively. This scale was developed by the researcher. “Prevalence of Burnout” among health care professionals was measured through a pre-validated questionnaire namely “Maslach Burnout Inventory”. Which measures

three dimensions viz. emotional exhaustion (EE), personal accomplishment (PA) and depersonalization (DP) comprised of a summated five-point Likert scale. The responses to each item were “Never”, “Few times per year”, “Once a month”, “Few times per month”, “Once a week”, “Few times per week” and “Every day” which were scored 0 through 6 respectively. A greater degree of burnout is predicted by higher scores. The section “Factors leading to Burnout” included 23 statements pertaining situations leading to burnout among healthcare professionals during COVID – 19 pandemic periods. It had 3 points continuums for the responses “To High Extent”, “To Moderate Extent” and “To Low Extent” which were scored 3 through 1 respectively. High scores reflected high extent of factors leading to burnout. This scale was developed by the researcher. The pre-validated inventory namely “COPE Inventory” was used to find out coping strategies adopted by healthcare professionals to overcome their burnout. It contained Likert type scale having 60 items, each of the 15 coping strategies adopted by the respondents to overcome their burnout. The responses were “I didn’t do this at all”, “I did this a little bit”, “I did this a medium amount” and “I did this a lot” these were scored 1 through 4 respectively. The content validity of the scales was established by giving to the experts from Departments of Psychology, Faculty of Education and Psychology, The Maharaja Sayajirao University of Baroda, Vadodara. A consensus of 80% among the experts was taken as yardstick for the final tool. No changes were required to be made in the tool. The data were gathered by the researcher in the month of February, 2021.

Major Findings

The major findings of the study are presented here.

Section I Background Information: The findings related to personal, family and work-related information are reported here.

- **Personal Information:** It was found that less than one – half (42.1%) of the respondents were in the age group of 21 – 30 years. Less than two – third (61.3%) of the respondents were males and more than one – third (38.7%) of the respondents were females. It was found that more than one – half (52.1%) of the

respondents were married. More than one – half (57.5%) of the respondents had MBBS (Bachelor of Medicine and Bachelor of Surgery) degree. The mean of personal monthly income of the respondents was 49948.92. It was found that more than one – half (58.75%) of the respondent's personal monthly income was ≤ Rs.50000.

- **Family Information:** A less than two-third (65.00%) of respondents had nuclear family and little more than one – third (35.00%) of the respondents were from joint family. Less than two-third (72.5%) of the respondents had small family with 2 to 4 members. The mean of monthly family income of the respondents was Rs. 136350.83. More than one – half (56.25%) of the respondent had monthly family income between Rs. 50001 to Rs. 100000**.**
- **Work Related Information:** It was found that less than two – third (62.5%) of the respondents had work experience of 1 to 10 years. Majority (97.5%) of the respondents were working 5 to 7 days in a week since past one year. The mean working hours of the respondents in a day since past one year was 8.68 hours. Majority (95.41%) of the respondents were working for 5 to 11 hours in a day since past one year. It was found that two – fifth (40.41%) of the respondents were working in general shift (9:00am to 6:00pm). It was found that more than one – half (54.2%) respondents had permanent job and less than one – half (45.8%) of the respondents had contract-based job in the hospital.

Section II Health Problems: It was observed that before the covid-19 pandemic period the respondents were suffering from physiological health problems viz. headache (7.5%) and diabetes (6.25%). It was found that less than three – fourth (70.41%) of the respondents experienced headache during covid-19 pandemic period. It was found that the respondents experienced mental stress due to heavy work load (2.91%) and frustration (2.50%) before covid-19 pandemic period. it was observed that two – fifth (41.25%) of the respondents experienced mental stress due to heavy workload and depression during covid-19 pandemic period. It can be observed that majority (98.30%) of the respondents experienced low extent of physiological health problems before covid-19 pandemic period. Less than two – third (71.7%) of the respondents experienced low extent of psychological health problems during covid-19 pandemic period. It was found that majority of the respondents faced problems related to sweating (97.9%), fogging of goggles or face

shields (95%) and suffocation (91.25%) due to wearing of PPE Kit. It can be observed majority (80.80%) of the respondents faced high extent of problems due to wearing a PPE Kit.

Section III Prevalence of Burnout: Emotional Exhaustion measures individual feelings of being emotionally exhausted and depleted by one's work. It was found that almost three – fifth (59.58%) of the respondents felt used up at the work few times per month. It measures Personal Accomplishment (PA) which assess the individual sense ineffectiveness, especially with job performance. It was found that a more than one – half (50.41%) of the respondents easily created a relaxed atmosphere every day. Depersonalization captures the development of negative, cynical attitudes and feelings towards clients. It was found that more than one – half (56.66%) of the respondents never though that they don't really care what happens to patients. The mean weighted score was found high were "Personal Accomplishment".

Section IV Factors leading to Burnout: The factors leading to burnout among health care professionals It can be observed little less than three – fourth (65%) of the respondents were concerned to a high extent for patient mortality. It was found that high extent of factors was leading to feeling of burnout among less than two – third (61.70%) of the respondent.

Section V Coping Strategies Adopted: The action taken by the respondents for handling their burnout during covid-19 pandemic period. Cope Inventory developed by Carver was selected for the purpose of finding out the coping strategies adopted by the respondents to overcome their burnout. It was found that more than one – half (55%) of the respondents learnt a lot from the experience. It was found that less than two – third (61.66%) of the respondents little bit turned to work or other substitute activities to take their minds off things. It was found that less than two – third of the respondents little bit let their feelings out (64.16%) and got upset and were really aware of it (61.66%). It was found that more than one – half of the respondents little bit tried to get advice from someone about what to do (54.58%) and asked people who have had similar experiences what they did (54.16%). It was found that almost three – fifth (60.83%) of the respondents did a lot to what has to be done, one step at a time. It was found that more than three – fifth (63.75%) of respondents little bit said

to themselves, "This isn't real,". It was found that less than two – third (64.58%) of the respondents little bit put their trust in God. It was found that less than two – third (64.58%) of the respondents little bit put their trust in God. It was found that more than three – fifth (62.08%) of the respondents little bit kid around about it. It was found that more than one-half (54.16%) of the respondents little bit reduced the amount of effort they put into solving the problem. It was found that less than two – third (64.58%) of the respondents little bit holded off doing anything about it until the situation permit. It was found that less than three – fifth (57.91%) of the respondents little bit got sympathy and understanding from someone. It was found that more than three – fourth of the respondents did not drink alcohol or took drugs in order to think about it less (79.58%) and use alcohol or drugs to make themselves feel better. It was found that almost three – fourth (75.41%) of the respondents little bit got used to the idea that it happened. It was found that more than three – fifth (61.25%) of the respondents focused on dealing with the present problem to a medium amount. It was found that more than three – fifth (61.66%) of the respondents did thought a lot about what steps to be taken.

Testing of Hypotheses

- A significant relationship was found between burnout and age (in years), marital status, monthly family income, job category, working hours/day during past one year and working shift of the respondents.
- The results of Scheffe's test revealed that prevalence of burnout was more among respondents who were of age 31 years and above, divorcee, having monthly family income ≥Rs 100001, working as Specialists, working 5 to 11 hours/day and working in General shift (9:00am to 6:00pm).

Conclusion

The present research was undertaken with objectives to find out the prevalence of burnout among healthcare professional during COVID 19 pandemic period, coping strategies adopted by them to overcome their burnout and to explore the variation in burnout with the personal and work-related aspects of the health care professionals. It was found that less than one – half (42.1%) of the respondents were in the age group of 21 – 30 years. Less than two – third (61.3%) of the respondents were

males. More than one – half (52.1%) of the respondents were married. More than one – half (57.5%) of the respondents had MBBS (Bachelor of Medicine and Bachelor of Surgery) degree. The mean personal monthly income of the respondents was Rs. 49948.92. It was found that more than one – half (58.75%) of the respondent's personal monthly income was ≤ Rs.50000. Less than two-third (65.00%) of respondents had nuclear family. It was found that less than two-third (72.5%) of the respondents had small family with 2 to 4 members. The mean of monthly family income of the respondents was Rs. 136350.83. More than one – half (56.25%) of the respondent had monthly family income between Rs. 50001 to Rs. 100000. It was found that less than two – third (62.5%) of the respondents had work experience of 1 to 10 years. Majority (97.5%) of the respondents were working 5 to 7 days in a week since past one year. The mean working hours of the respondents in a day since past one year was 8.68 hours. Majority (95.41%) of the respondents were working for 5 to 11 hours in a day since past one year. It was found that two – fifth (40.41%) of the respondents were working in general shift (9:00am to 6:00pm). It was found that more than one – half (54.2%) respondents had permanent job.

The findings also revealed that before the covid-19 pandemic period, few respondents were suffering from physiological health problems viz. headache, diabetes, Strain in eyes due to workload, weakness, backache, and hypertension and neck stiffness. The respondents revealed that their physiological health problems increased during pandemic period and few of them developed some new physiological health related problems. Similarly the respondents were having psychological health problems viz. mental stress due to heavy work load and frustration before the covid-19 pandemic period which exaggerated during pandemic period. It was found that the respondents experienced low extent of health problems before covid-19 pandemic period and these health problems amplified during this period. Majority of the respondents confronted high extent of problems of sweating, fogging of goggles or face shields and suffocation due to wearing of PPE Kit.

The results divulged that the healthcare professionals experienced moderated extent of burnout during COVID-19 pandemic period. The overall analysis of the scale showed that three – fourth (75.00%) of the respondents had moderate extent of

burnout. There were certain factors viz. concern for patient mortality, putting family members and other staff members at risk, fear of improper use of personal protective equipment, and Fear of infection which led to feeling of burnout among the respondents. The respondents were found adopting planning method to a high extent to overcome their burnout. The mean weighted scores were found high for coping strategies viz. “Planning” and “Positive reinterpretation and growth”. Further, a significant relationship was found between burnout and age (in years), marital status, monthly family income, job category, working hours/day during past one year and working shift of the respondents. It was inferred that prevalence of burnout was more among respondents who were of age 31 years and above, divorcee, having monthly family income ≥Rs 100001, working as Specialists, working 5 to 11 hours/day and working in General shift (9:00am to 6:00pm).

Implications of the Study

The findings of the present study had the following implications:

For the Field of Family and Community Resource Management

The field of Family and Community Resource Management offers subject related to “Ergonomics” at undergraduate, Post Graduate and Doctoral levels of study. The findings of the study will help the students to become aware about the physiological and psychological health problems caused due to burnout during emergency situations among professionals. It will also make students aware about various coping strategies which can be adopted to overcome burnout situations and increase work efficiencies.

For the Government

The findings revealed that the health care professionals experienced physiological and psychological health problems and burnout during covid-19 pandemic. Therefore, the government can increase the number of healthcare workers where retired professionals, resident staff, non-practicing staff and volunteers can be called during this emergency situation. The government can contribute by enhancing the healthcare infrastructure. The government should formulate policies emphasizing on providing interventions focusing on creating awareness, developing stress

management programs, multipronged evidence-based approaches addressing burnout during this pandemic. Health policymakers and practitioners should adopt such interventions and develop context-specific approaches promoting a healthy workplace, addressing ethical issues, and preventing burnout among healthcare professionals during the COVID-19 pandemic.

For Healthcare Providers

The healthcare providers need to ensure that work-related stressors are adequately managed like ensuring availability of Personal Protective Equipment, providing transport and resolving accommodation difficulties faced by staff, equitable distribution of resources, and being available to address the concerns of staff and boost their morale during this pandemic situation. They should stay updated about the concerns of staff and focus should not only be on providing help for mental health problems as they emerge, but also on preventing their occurrence. Making counselling available for job-related, as well as personal problems, may help prevent serious stress-related problems leading to burnout situations. Early actions in slowing down the spread and preventive measures for tackling stress and burnout in healthcare professionals will act as booster to flatten the curve. A plethora of strategies, developed from previous experience of crisis management, need to be made available to healthcare professionals through accessible mediums of delivery. The information obtained is also valuable for the development of future prevention protocols and training of health personnel to face pandemics of these characteristics or emergency scenarios. Having the necessary physical means for their protection, as well to updated regular and accurate information, is essential to avoid feelings of fear and uncertainty. This would promote the health of these professionals.

For Healthcare Professionals

Healthcare professionals involved in the treatment of COVID-19 are exposed to a large degree of stress and could experience burnout hence, it is essential for them to adopt coping strategies. Moreover, individual efficacy in stopping negative emotions and thoughts could be a protective strategy against stress and burnout. Those healthcare professionals who know how to cope with personal and professional stress have the best chance of enjoying a long and healthy career in this demanding

profession and during times of global crisis. It is imperative that the importance of mental health is championed during the COVID-19 pandemic, therefore, early recognition of stress and feeling of burnout calls for adoption of coping strategies or undergoing interventions from friends, family and the organization.

Recommendations for the Future Studies

1. An investigation in other cities of Gujarat or different states in India can be undertaken to find burnout among health care professionals and coping strategies adopted by them.
2. A comparative research can be undertaken on various health care professionals of the hospitals.
3. A similar research can be conducted on a larger sample size and other professionals who were actively working during this pandemic period.
4. A research can be carried out to investigate the other risk and challenges encountered during this pandemic situation.
5. An experimental research can be conducted to find out the impact of need based intervention on stress and burnout among various professionals.
6. A research can be piloted to find out the challenges with the Personal Protective Equipment and strategies to combat the issues.

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Appendix

APPENDIX – I

Estd. 1949
NAAC Accredited "A" Grade

DEPARTMENT OF FAMILY AND COMMUNITY RESOURCE MANAGEMENT
FACULTY OF FAMILY & COMMUNITY SCIENCES
THE MAHARAJ SAYAJIRAO UNIVERSITY OF BARODA
VADODARA

INFORMED CONSENT FORM

The Department of Family and Community Resource Management, Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda, Vadodara, supports the practice of protection of human participants in research. The following will provide you with information about the research survey that will help you decide whether or not you wish to participate. If you agree to participate, please be aware that you are free to withdraw at any point throughout the duration of the research without any penalty. In this study, you will be asked about your background information (Name, Age, Gender, Educational qualification etc.), prevalence of burnout during COVID 19 pandemic period and coping strategies adopted by you. All information you provide will remain confidential and will not be associated with your name. If for any reason during this study you do not feel comfortable, you may leave the study. Your participation in this study will require approximately 15-20 minutes. If you have any further questions concerning this research, please feel free to contact Ms. Dixita Rana through Phone +91 8320878494, email id: dixirana24@gmail.com.

Please indicate with your signature on the space below that you understand what participation in the study involves and agree to participate. Your participation is strictly voluntary. All information will be kept confidential and your name will not be associated with any research findings.

_____

Name & Signature of Participant

Date:

Dixita Rana
M.Sc. (F.C.Sc.) Student
Department of FCRM
FFCSc, MSU

Dr. Shilpi Saraswat
Supervisor & Assistant Professor
Department of FCRM
FFCSc, MSU

APPENDIX – II

Questionnaire

Section I: Background information of the respondents

A) Personal Information

1. Email: _____

2. Name: _____

3. Contact Number: _____

4. Age (in years):
   - ≤20 years ☐
   - 21 Years – 30 Years ☐
   - 31 Years – 40 Years ☐
   - 41 Years – 50 Years ☐
   - ≥ 50 Years ☐

5. Gender:
   - Male ☐
   - Female ☐

6. Marital Status:
   - Married ☐
   - Unmarried ☐
   - Divorcee ☐
   - Widow ☐

7. Educational Qualification: _____

8. Personal Monthly Income (in Rupees): _____

B) Family Information

9. Type of family:

- Joint ☐
- Nuclear ☐

10. Size of the Family:
    - 2-4 members ☐
    - 4-6 members ☐
    - 6-8 members ☐
    - 8 and more members ☐

11. Monthly Family Income (in Rupees): _____

C) Work Related Information

12. Hospital Type:
    - Government ☐
    - Private sector ☐

13. Job category:
    - Specialists ☐
    - Nurses ☐
    - Physician Assistants ☐

14. Work Experience (in year): _____

15. Number of working days in a week since past 1 year: _____

16. Working Hours/Day during past 1 year: _____

17. Working shift:
    - Morning (8:00am to 2:00pm) ☐
    - Afternoon (2:00pm to 8:00pm) ☐
    - Night (8:00pm to 8:00am) ☐
    - General (9:00am to 6:00pm) ☐

18. Type of job:
    - Contract based ☐
    - Permanent ☐

Questionnaire

Section II: Health Problems

Here is a list of physiological and psychological health problems. You are requested to put a tick mark (√) against the health problems that you were suffering from before Covid – 19 pandemic period and the health problems that you developed during Covid – 19 pandemic period.

Sr. No.	Health Problems	Before COVID-19 Pandemic Period		During COVID-19 Pandemic Period	
		Yes	No	Yes	No
A.	**Physiological Health Problems**				
1.	Headache				
2.	Strain on eyes due to workload				
3.	Loss of appetite				
4.	Weakness				
5.	Gastric Disturbance due to improper food habits				
6.	Backache				
7.	Physical fatigue on whole body				
8.	Sciatica (Leg/Sciatic Nerve Pain)				
9.	Hypertension				
10.	Diabetes				
11.	Asthma				
12.	Migraine				
13.	Heart Disease				
14.	Joint/Muscular pain				
15.	Watery eyes				
16.	Neck stiffness				
17.	Any other, please specify				
B.	**Psychological Health Problems**				
1.	Mental Stress due to heavy work load				
2.	Insomnia				
3.	Distress				
4.	Frustration				
5.	Panic attacks				
6.	Anxiety				
7.	Depression				
8.	Post-traumatic stress disorder symptoms				
9.	Delirium				

10.	Psychosis				
11.	Suicidality				
12.	Somatic symptoms				
13.	Any other, please specify				

Here is a list of problems faced while wearing PPE kit. You are requested to put a tick mark (√) against the problems faced by you.

C.	Problems Faced due to Wearing of PPE Kit	Yes	No
1.	Sweating		
2.	Fogging of goggles or Face shields		
3.	Suffocation		
4.	Breathlessness		
5.	Increase in pulse rate		
6.	Headache due to its prolonged use		
7.	Pressure marks on the skin at one or more areas due to repeated use		
8.	Skin allergy/dermatitis caused by the synthetic materials of the PPE kit		
9.	Dermatitis/Eczema caused by the material of the PPE kit in chin, jaw, ears, eyelids and arm pits		
10.	Skin pigmentation		
11.	Skin rashes/acne		
12.	Face shield impinging onto neck during intubation		
13.	Acne due to prolonged use of masks		
14.	Nasal pain		
15.	Poor hair health due to prolonged use of hair cap		
16.	Pain at the root of the pinna		
17.	Slipperiness of shoe covers		

Questionnaire

Section III: Prevalence of Burnout

Please go through the following statements reflecting Burnout among healthcare professionals. State to what frequency you felt this way while treating patients suffering from COVID – 19. Put a tick (√) mark under appropriate column.

Sr. no.	Feelings stating the burnout among Healthcare professionals	Never	Few times per year	Once a month	Few times per month	Once a week	Few times per week	Every day
1.	Felt emotionally drained from work							
2.	Felt used up at then of the work day							
3.	Felt fatigue when getting up in the morning							
4.	Felt like at the end of the rope							
5.	Felt burned out from work							
6.	Felt l frustrated by job							
7.	Felt working too hard on the job							
8.	Working with patients suffering from COVID – 19 puts too much stress							
9.	Working with patient suffering from COVID – 19 was a strain							
10.	Can easily understand patients' feelings							
11.	Dealt effectively with the patients' feeling							
12.	Felt positively influencing peoples' lives							
13.	Felt very energetic							
14.	Easily created a relaxed atmosphere							
15.	Felt exhilarated after working with the patients							
16.	Have accomplished worthwhile things in job							
17.	Dealt with emotional problems calmly							
18.	Treated patient as							

Sr. no.	Feelings stating the burnout among Healthcare professionals	Never	Few times per year	Once a month	Few times per month	Once a week	Few times per week	Every day
	impersonal “objects”							
19.	Became more callous toward patients							
20.	Worried that job is hardening emotionally							
21.	Don’t really cared what happens to patients							
22.	Felt patients blame me for their problems							

Questionnaire

Section IV: Factors leading to Burnout

Below are the situations or causes leading to burnout among healthcare professionals. Please specify to which extent following situation or causes were the reason of your burnout.

Sr. No.	Factors leading to Burnout	To High Extent	To Moderate Extent	To Low Extent
1.	Being isolated/quarantined			
2.	Concern for personal safety			
3.	Putting family members at risk			
4.	Putting other staff members at risk			
5.	Concern for patient mortality			
6.	Fear of infection			
7.	Continuing work during the outbreak			
8.	Lack of recognition from hospital authorities			
9.	No additional financial compensation			
10.	Fear of improper use of personal protective equipment			
11.	Lack of personal protective equipment			
12.	Fear of household problems due to lockdown			
13.	Degree of contact with confirmed or suspected cases			
14.	Multiple needs of the patients			
15.	Speculations about its mode of transmission			
16.	Rapidity of spread			
17.	Lack of definitive treatment protocols or vaccine			
18.	Widespread global connectivity			
19.	Extensive media coverage			
20.	Lack of social support			
21.	Lack of communication			
22.	Lack of training			
23.	Maladaptive coping			
24.	Any other, please specify			

Questionnaire

Section V: Coping Strategies Adopted

Following are the statements stating the action taken by you for handling burnout during this pandemic period. State your response by putting a tick (√) mark under appropriate column.

Sr. no.	Statement reflecting coping strategies adopted	I didn't do this at all	I did this a little bit	I did this a medium amount	I did this a lot
1.	I try to grow as a person as a result of the experience.				
2.	I turn to work or other substitute activities to take my mind off things.				
3.	I get upset and let my emotions out.				
4.	I try to get advice from someone about what to do.				
5.	I concentrate my efforts on doing something about it.				
6.	I say to myself "this isn't real."				
7.	I put my trust in God.				
8.	I laugh about the situation.				
9.	I admit to myself that I can't deal with it, and quit trying.				
10.	I restrain myself from doing anything too quickly.				
11.	I discuss my feelings with someone.				
12.	I use alcohol or drugs to make myself feel better.				
13.	I get used to the idea that it happened.				
14.	I talk to someone to find out more about the situation.				
15.	I keep myself from getting distracted by other thoughts or activities.				
16.	I daydream about things other than this.				
17.	I get upset, and am really aware of it.				
18.	I seek God's help.				
19.	I make a plan of action.				
20.	I make jokes about it.				
21.	I accept that this has happened and that it can't be changed.				
22.	I hold off doing anything about it until the situation permits.				
23.	I try to get emotional support from				

Sr. no.	Statement reflecting coping strategies adopted	I didn't do this at all	I did this a little bit	I did this a medium amount	I did this a lot
	friends or relatives.				
24.	I just give up trying to reach my goal.				
25.	I take additional action to try to get rid of the problem.				
26.	I try to lose myself for a while by drinking alcohol or taking drugs.				
27.	I refuse to believe that it has happened.				
28.	I let my feelings out.				
29.	I try to see it in a different light, to make it seem more positive.				
30.	I talk to someone who could do something concrete about the problem.				
31.	I sleep more than usual.				
32.	I try to come up with a strategy about what to do.				
33.	I focus on dealing with this problem, and if necessary, let other things slide a little.				
34.	I get sympathy and understanding from someone.				
35.	I drink alcohol or take drugs, in order to think about it less.				
36.	I kid around about it.				
37.	I give up the attempt to get what I want.				
38.	I look for something good in what is happening.				
39.	I think about how I might best handle the problem.				
40.	I pretend that it hasn't really happened.				
41.	I make sure not to make matters worse by acting too soon.				
42.	I try hard to prevent other things from interfering with my efforts at dealing with this.				
43.	I go to movies or watch TV, to think about it less.				
44.	I accept the reality of the fact that it happened.				
45.	I ask people who have had similar experiences what they did.				
46.	I feel a lot of emotional distress and I find myself expressing those feelings a lot.				

Sr. no.	Statement reflecting coping strategies adopted	I didn't do this at all	I did this a little bit	I did this a medium amount	I did this a lot
47.	I take direct action to get around the problem.				
48.	I try to find comfort in my religion.				
49.	I force myself to wait for the right time to do something.				
50.	I make fun of the situation.				
51.	I reduce the amount of effort I'm putting into solving the problem.				
52.	I talk to someone about how I feel.				
53.	I use alcohol or drugs to help me get through it.				
54.	I learn to live with it.				
55.	I put aside other activities in order to concentrate on this.				
56.	I think hard about what steps to take.				
57.	I act as though it hasn't even happened.				
58.	I do what has to be done, one step at a time.				
59.	I learn something from the experience.				
60.	I pray more than usual.				

Abstract

ABSTRACT

The present times of pandemic, firstly came into existence Wuhan province in China and rapidly spread throughout the world and by the mid of the 2020 it became a pandemic. During such times, frontlines workers played an important role in curbing the situation which led to high levels of burnout among health care professionals. The burnout may be due to change in the working environment like wearing of PPE kits, emergency situations, patients suffering, increased number of patients, nature of disease, risk of infection and isolation. The present study focuses to find out the prevalence of burnout among health care professionals during COVID-19 pandemic period, coping strategies adopted to overcome burnout and variation in burnout with personal, family and work related information. Descriptive research design was adopted for the present research. Convenience sampling was used to select hospitals from Vadodara city. For the selection of samples two government hospitals and three private hospitals were contacted. The data were collected from 240 healthcare professionals' viz. specialists, nurses and physician assistants who were actively working during COVID – 19 pandemic periods in the selected hospitals of Vadodara city selected through purposive sampling technique. Questionnaire was selected as tool to collect data online via google forms. It consisted of five sections; Background information, Perceived Health Problems, Maslach Burnout Inventory (for measuring burnout), factors leading to burnout and coping strategies adopted (COPE Inventory).

The findings divulged that less than one – half of the respondents were in the age group of 21 – 30 years. Less than two – third of the respondents were males. More than one – half of the respondents were married. More than one – half of the respondents had MBBS (Bachelor of Medicine and Bachelor of Surgery) degree. The mean personal monthly income of the respondents was Rs. 49948.92. Less than two-third of respondents had nuclear family. Less than two-third of the respondents had small family with 2 to 4 members. The mean of monthly family income of the respondents was Rs. 136350.83. Less than two – third of the respondents had work experience of 1 to 10 years. The mean working hours of the respondents in a day since past one year was 8.68 hours. Majority of the respondents were working for 5 to 11 hours in a day since past one year. Two – fifth of the respondents were

working in general shift (9:00am to 6:00pm). It was found that more than one – half (54.2%) respondents had permanent job. The respondent's experienced low extent of health problems before covid-19 pandemic period and their health problems amplified during this period. Majority of the respondents faced high extent of problems due to wearing a PPE Kit. The healthcare professionals experienced moderate extent of burnout. The mean weighted score was found high were "Personal Accomplishment". It was found that high extent of factors was leading to feeling of burnout among the respondents. The respondents adopted planning method to a high extent to overcome their burnout. The mean weighted scores were found high for coping strategies viz. "Planning" and "Positive reinterpretation and growth". A significant relationship was found between burnout and age (in years), marital status, monthly family income, job category, working hours/day during past one year and working shift of the respondents. Further in-depth analysis revealed that prevalence of burnout was more among respondents who were middle and older aged, divorcee, having monthly family income ≥Rs 100001, working as Specialists, working 5 to 11 hours/day and working in General shift (9:00am to 6:00pm).