ROLE OF PSYCHOSOCIAL FACTORS IN RELATIONSHIP BETWEEN COVID-19 STRESS AND BURNOUT AMONG SERVICE HEALTH PROVIDERS: A PANEL STUDY

BY

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THESIS AND DEFENSE APPROVAL FORM

The undersigned certify that they have read the following thesis, examined the defense, are satisfied with the overall exam performance, and recommend the thesis to the Faculty of Social Sciences for acceptance.

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Candidate of **Master of Philosophy** at the National University of Modern Languages do hereby declare that the thesis "**Role of Psychosocial factors in Relationship between COVID-19 Stress and Burnout among Service Health Providers: A Panel study"** submitted by me in partial fulfillment of MPhil degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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ABSTRACT

Title: Role of Psychosocial Factors in Relationship between COVID-19 Stress and Burnout among Service Health Providers: A Panel study

The current study purported to examine the Role of Psychosocial factors in relationship between COVID-19 Stress and Burnout among Service Health Providers. The study was a panel study conducted at two stages i.e. (i) accelerated stage when COVID 19 was at peak and there were more infected cases and the death ratio was high too (ii) decelerated stage when there was decrease in number of diagnosed cases and few infected were getting healthy and had started spending normal life. A convenient sample of 305 service health providers were administered with COVID stress scale (Taylor et al., 2020), Maslach Burnout Inventory (Maslach & Jackson, 1996), Brief Resilience scale (Smith et al., 2008), Coping strategy indicator (Khan, 1990) and Measure of COVID-19 Organizational Support (2020) at accelerated stage of pandemic. With attrition rate of 4.2%, sample of 292 were administered with same set of scales at decelerated stage. The results revealed that COVID stress is having significant positive correlation with avoidance, emotional exhaustion and depersonalization whereas, it is having significant negative correlation with resilience, organizational support, healthy coping strategies and with personal accomplishment as a dimension of burnout. Regression analysis showed that COVID-19 stress resulted in more emotional exhaustion & depersonalization however it decreased personal accomplishment among Service Health Providers at both stages of pandemic. Similarly, increased level of COVID-19 stress lowered the healthy coping strategies of problem solving and social support seeking and has also decreased the level of resilience among service health providers at both stages of pandemic. The moderation analysis shows that resilience, healthy coping strategies and organizational support buffers the effect of COVID stress on burnout whereas, avoidance increases the effects of COVID stress on burnout. The paired sample t-test was used which depicted that the higher level of COVID stress, resilience, organizational support, coping strategies and burnout at accelerated stage of pandemic as compared to decelerated stage of pandemic.

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WHO	World Health Organization
HIV	Human Immunodeficiency Virus
SARS	severe acute respiratory syndrome
APS	American Psychological Association
MERS	Middle East Respiratory Syndrome

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DEDICATION

This thesis is dedicated to my husband Nauman Khalid and to my daughters Fatima Nuaman, Zainab Nauman and especially to youngest Anabyah Nauman. My this achievement is all because of their patience and support

CHAPTER 1

INTRODUCTION

The Severe Acute Respiratory Syndrome, also abbreviated as SARS was a relatively rare disease until June 2003 outbreak (CFR 11%). The mutated (SARS-CoV) strain was identified by the end of 2019 in Wuhan, China with unclear etiology (Huang et. al., 2020). Numerous researches done locally in China and the standardized studies conducted by World Health Organization (WHO) confirmed coronavirus (SARS-CoV-2) as the causing pathogen of the novel pneumonia outbreak named coronavirus disease 2019 or COVID-19 (Catton, 2020). The endemic breached the national borders of China and eventually hit severalcountries within a short duration. Because of its worldwide scope and rapid transfusions, WHOdeclared the novel coronavirus as one of the chief risks to the public's health (Pan et al., 2020).

In Pakistan, on February 26, 2020, the first case of COVID-19 was reported in Karachi. According to the Ministry of National Health Services Regulations & Coordination department of Government of Pakistan, the virus steadily spread to other regions of the country and within a span of few days, the confirmed cases due to COVID-19 rose day by day. Thus spreading more stress & fear among medical practitioners combating the virus (Munawar & Choudhry, 2021).

Instead of targeting specific organs or body systems, COVID-19 equally taints the entire body. Among all, the "Human immunity system" and "human respiratory system" are the ones that are most affected by COVID-19. The imbalanced blood cells count has also been identified in COVID-19 patients. The people with a higher level of leukocytes, i.e., between

>10 × 10^9/L, or those with a higher neutrophil count, i.e., >7 × 10^9/L, are more vulnerable to the virus. The patients with blood cell count disturbance can have composite endpoint conditions, i.e., they may require intensive care unit, good mechanical ventilation, and have more possibility of death (Qiang et. al., 2020).

After a phylogenetic analysis on the available complete genome sequences, it was postulated that the reservoir of COVID-19 are the bats, but still, the primary host has not been detected yet (Fong et al., 2020). The modes of transmission, as reported (Hui et. al., 2020) comprise the air particles and an unsafe touch between the infected individual and the potential recipient of the virus.

COVID-19 can also enter through the respiratory precipitations or via various organs including the eyes, nose, and mouth. The period within which the symptoms of this disease appear is 1-14 days. The common symptoms are high fever, consistent cough, and shortness of breath, severe sore throat, cold chills, and prolonged weaknesses with body aches, tightness of chest, nasal blocking, muscular aches, dyspnea, and body (Shi et. al., 2019).

As per the WHO guidelines, the preventive measures considerably minimize the risks that includes maintaining adequate social distancing, frequent hand washes, recurring usage of hand sanitizers, to avoid touching one's mouth with dirty hands, and keeping good respiratory hygiene. These personal restraints can significantly minimize the risks of infections amid a pandemic (WHO, 2020).

The pandemic briskly clawed itself onto the world within a few weeks. No nation was spared from COVID-19 outbreak, disrupting social and economic lives of everyone and everywhere. The statistical analysis showed 18,142,000 confirmed cases, 691,000 deaths, and an increasing number of novel virus strains worldwide (WHO, 2020).

The resulting clinical effects in wake of the pandemic are grim and bleak presently and in the long-term. The post-pandemic picture is gloomy with respect to its negative social consequences, including the harmful economic effects and the destructive psychological state of the people (Badahdah et. al., 2020).

In context of Pakistan, For instance, participants shared that media was a principal source of elevating COVID stress and anxiety among the public. Additionally, it was revealed that there was no way to confirm the authenticity of updates or news shared across various media which was adding to the uncertainty in this pandemic (Munawar & Choudhry, 2021)

The key social effects include smoking and domestic conflicts; the economic consequences are inability to work in isolation and curbed social freedom in government-imposed lockdown restrictions. The psychosomatic effects include stress episodes, depression, nervousness, lonesomeness, and exhaustion (Badahdah et. al., 2020).

These psychological effects can be long-lasting, as observed in the previous pandemics. The mid-pandemic infections were also observed and studied during previous outbreaks, which include but are not confined to Human Immunodeficiency Virus (HIV), which was at peak when Influenza virus hit several European nations; the severe acute respiratory syndrome (SARS) infections were also reported along with Middle East Respiratory Syndrome (MERS). The research reported that during SARS and MERS, the medical staff members faced high infection rates. About 21% and 18.6% medical staff infected by SARS and MERS experienced adverse psychological effects respectively (Peeri, 2020).

One of the prominent examples of COVID-19 stress and its psychological reactions can be observed in the psychological sequelae experienced during the SARS outbreak in 2003 (McAlonan et. al., 2007). During the SARS outbreak (He et al., 2007) reported that the service

health providers showed a significant prevalence of psychological symptoms like stress, anxiety, depression, hyperarousal, trouble in falling asleep and waking up once fallen asleep. This led to long-term sleeping disorders, anger and anxiety, lack of work motivation, and burnouts. The service health providers got affected the most during SARS outbreak, which included mild to moderate burdening, and acute stress episodes (Otter et. al., 2016). The social scientists and psychologists have feared that the social and mental effects of the COVID-19 will remain for a long time.

Along with service health providers, the general population also shows psychological reactions and post-mental health issues in reaction to the global virus. It was anticipated by scientists that the significant mental health needs emerged after SARS outbreak. The results defined above are in lateral coherence with those observed after the SARS outbreak (Cheng et. al., 2004). This prediction is anticipated because several people had psychological disorders after SARS and needed intervention to service healthy life. The post-effects needed post interventions after the SARS pandemic (Taylor, 2019).

Similarly, Ebola virus presented the same results as were observed during the SARS and COVID-19. Amidst Ebola, the psychological effects included individual, social, as well as global consequences (Chen et. al., 2020). The psychological effects reported during Ebola pandemic were extreme fear, anxiety, shame, lack and even loss of confidence, post-traumatic symptoms, discrimination, and mourning. Similar psychological consequences have been reported during MERS.

A study done by Rabiaah et. al., 2020 concluded the statistical analysis about the prevalence of anxiety disorder during the MERS pandemic. The results reported that 77% of the students underwent low anxiety, and 18.4% of them had an intermediate level of anxiety

during the pandemic. The youngsters were the ones most affected; they displayed higher levels of psychological symptoms, i.e., anxiety, stress, prejudice, and dejection were the most common ones among many.

These post-pandemic effects have significantly risked the mental well-being of a population and have had negative significances on their psychological health. These pandemics have long-lasting psychological effects on patients, their family members, relatives, health care staff members, and the other people at risk of getting the virus (Morganstein et. al., 2017).

Research show that the psychological reactions to the intensive stress and fear caused by such pandemics are different from person to person. These reactions can be in the form of panic attacks leading to panic disorder, extreme anxiety leading to anxiety disorder, fear of death can cause mental distress, severe depression, and a worry about losing the loved ones. Other reactions included the post-traumatic symptoms of mourning, fear of foreigners, fear of contamination, danger, and they can be severe enough to lead to psychotic symptoms like hallucinations and delusions (Taylor, 2019).

The extreme exposure of people to the global condition of the virus, its ultimate effects, maximum death rates, news and videos about the virus and its consequences can be the cause of hypochondriasis during and after COVID-19. The psychological reactions of the pandemic could be severe. It might lead to psychotic disorders like schizophrenia (Marcus et. al., 2007). It is also stated that the COVID-19 leads to different mental health problems causing various psychological disorders in healthcare staff members (Kang et. al., 2020).

Psychologically, young population is the most affected during any global pandemic situation, including COVID-19 onset. The symptoms that were frequently observed among

the young population included intolerance, excessive concern, being stressed, and mild to severe depressive cycles. Moreover, uncertainty and doubtfulness have also been observed at the young population during coronavirus breakout. The younger generation is excessively getting insecure and experiencing haphazardness in their day-to-day routines, which is ultimately leading to confusion and uncertainty in their educational and social patterns (Rabiaah et. al., 2020).

Although coronavirus has affected all the mediums, the ones that are fighting the most and are frontline workers against the greatest outbreak in modern history are healthcare workers and doctors. The pandemic has had a devastating psycho-social and psychological consequences on the mental health of service health providers worldwide. The continued adaptation to safety measures during hospital duties and the late and long hour's duties lead to technological challenges like feelings of loneliness, anxiety, depression, self-harm, and insomnia (WHO, 2020).

Doctors and nurses play an extraordinary role among all the service health providers by providing class-one services on the frontline to the quarantined patients at the hospitals. The service health providers and doctors are in the line of fire between the affected and the vulnerable segments of a society. Their efforts are worth a thousand applauses, thanks to the prolonged and untiring efforts they have made for two and a half years of a worst outbreak and counting. They have demonstrated their devotion, professionalism, and commitment to their jobs and most importantly for the humanity with vigor and great valor against the pandemic (Catton, 2020).

Although they keep on fighting the pandemic, but as during the pandemic, the service health providers were strictly isolated from the general population which led to grave stress

cycles in them. The primary reason for COVID-19 stress among the service health providers includes staying away from their family members, uncertainty while performing duties at vulnerable hotspots, providing care to infected patients, as well as wearing the uneasy and rugged pandemic kits as a uniform for hours with little to no breaks in between (Kang et al. 2020). This high level of COVID-19 stress among healthcare professional's further leads to emotional and psychological problems and causes adverse effects on their cognitive functioning and clinical decision-making processes ultimately leading to burnout (Xiang et al. 2020).

Moreover, this COVID-stress further be the cause of emotional exhaustion and depersonalization because of a compulsion to wear protective gear for a prolonged period, because of heavy workloads, long working hours, and fear of catching the infection, and because of fear of infecting families (Liu, Luo, & Haase et al., 2020).

The women service health providers remained steadfast while combating the situation. On one hand, women service health providers in Pakistan have shown a prominent level of commitment, devotion, and dedication and have sacrificed their own needs during the pandemic (Mohsin & Syed, 2020). At the same time, they faced a lot of emotional and psychological stress.

On the other hand, they have exhibited mixed behaviors including self-isolation, emotional exhaustion, depersonalization, low personal accomplishment, abandonment, and feelings of negligence and discrimination (Liu et al., 2020). Though in Pakistan, both genders, i.e., males and females, service health providers have faced a lot of psychological and mental issues during the pandemic, the females experienced more problems because of their dual responsibilities, i.e., to fulfill the household tasks and to fulfill the workplace demands

concurrently.

The physical symptoms that appear due to burnout are excessive fatigue, physical exhaustion, and somatization. Psychologically, burnouts can result in social withdrawal, inability to regulate the expressions of emotions (Gorgievski & Hobfoll, 2008; Ahola et al., 2008), a lower level of morale, lack of efficiency and reduced excellence in performance (Taris, 2006).

At times of Pandemic, resilience emerges out a compelling force to overcome stress. Consider it a trait; resilience signifies a gathering of various characteristics that enable an individual to adapt to the circumstances and overcome stress. For instance, (Tugade et. al., 2014) described resilience operationally as an ability to have a quick and effective recovery from the stress produced by any stressor, just like a pandemic situation.

Service health providers have also used coping strategies to overcome stress during the time of pandemic. Literature suggests that at time of pandemic, problem solving, social support seeking and avoidance are used as way of coping the stress (Wu et. al., 2009)

Another important factor participated well to overcome stress is “organizational support”. Organizational support if one of psychosocial factor that relieves stress at time of fix. However, the type and the extinct of support given matters a lot (Mathieu & Zajac, 1990; Meyer & Allen, 1997; Mowdy et. al., 1982).

Theoretical Framework

The current study is based on “Transactional model” of stress given by Lazarus and Folkman (Lazarus and Folkman, 1986). The theory has undergone several revisions and the latest revision defined the variable “stress” as relationship (transaction) between individual and their

environment. Variable of “coping” is defined as “A person’s effort in both thoughts and actions to manage the stress” (Lazarus, 1993).

Furthermore, this definition point out two very important moderators of stress i.e., cognitive appraisal and coping. Here, the concept of “appraisal” is based on emotion research conducted by Arnold (1960), and later elaborated by Lazarus and Launier (1978). The theory defined appraisal as a key factor to understand the stress related transactions. The concept is based on an idea that “level of stress” is dependent on the anticipations & expectations of a person about the outcome. The person’s reaction to the stress depends upon the patterns of appraisal like how the stress is manipulated, maintained and altered. Such appraisals are in-turn dependent on both subjective and objective factors. The personal factors include motivation, level of resilience, dispositions, coping and on goals and values.

On other hand, the subjective factors include the situational parameters like controllability, predictability, support given, and imminence of stress. Lazarus (1991) explained two types of appraisals i.e., primary appraisals and secondary appraisals. The primary appraisals are based on three major components i.e., goal relevance, goal congruence and type of ego involvement. The goal relevance refers to how much the encountered stress is relevant to the interests of a person. The more the stress will be relevant the higher will be the chances that the person will approach for the appropriate appraisals.

The second primary appraisal is goal congruence that exhibits that how much the episode is following the goals. The type of ego involved demonstrations the person’s commitments to the outcome such as how much it is based on go-ideal, ego-identity, and on self-esteem of a person. The secondary appraisals are also having three components including blame or credit, coping potential and future expectations. In blame or credit, the

person evaluates that who is responsible to encounter the stress, in coping potential he finds objective or subjective ways to overcome the stress and in future expectations he makes predictions about whether the stress will lead to goal relevance or goal congruence (Lazarus and Folkman, 1984).

The theory further defined the "coping" as "the cognitive and behavioral efforts made to tolerate the stress, or to master the condition and ceasing its bad consequences or a struggle to reduce both external and internal demands (Folkman & Lazarus, 1980). The definition determines coping not in terms of its effects rather in terms of the coping processes. The coping processes can be either cognitive or behavioral. The coping processes can be in form of acts combining to make an episode (Lazarus & Folkman, 1984). These coping processes will focus on different elements encountered by the stress. The coping processes will help a person to change the negative outcomes and to overcome the stress just like by problem-focused coping. They can also help to reduce the negative impacts of emotions i.e., emotion-focused coping.

The transactional theory of stress suggests the presence of "stressors", the "reactions of stressors" and the "appraisals" used to encounter the outcomes of stressors. The current study is linked with "Transactional Model of stress and coping" (Lazarus and Folkman 1986). As defined by transactional model of stress and coping, the current study suggested stress as a situational factor i.e., the stress encountered by COVID-19 and is named as COVID-19 stress.

Moreover, the theory suggests the reactions to stress can be behavioral like the current study suggested the outcome of burnout as a result of COVID-19 stress. Moving forward, Lazarus (1991), suggested person strives to find appraisals to moderate the stress

with the help of coping. The current study also assumed coping strategies, resilience and organizational support as the moderators to buffer the effects of COVID-19 stress on burnout.

Furthermore, the theory suggested that these appraisals can be negative and can be positive. The negative appraisals will boost up the stress whereas, the positive appraisals help to reduce the stress. This notion is also in congruence with the assumption of the current study i.e., positive coping strategies buffers the effects of COVID-19 stress, whereas the negative coping strategies like Avoidance can enhances the effects of COVID-stress on burnout. So, the current study is solely based on "Transactional Model of stress and coping"

1.1 Rationale of the study

Being uncertain, lingering and fatal in nature it is challenging to cope with the post-pandemic social and behavioral aftershocks. Thus, it is imperative to deeply investigate the causes and the possible psychosocial effects ensued after the pandemic. It becomes even more important to study the detrimental effects of the COVID-19 pandemic on mental health at individual, societal and at public levels. An ample of research is already available addressing the direct and indirect psychological effects of COVID-19 on general population and individuals as well however, less data is available that compares the variables at accelerated and decelerated stage of pandemic in Pakistan. The emerging findings suggests that about more than 25% of general population experienced moderate to higher levels of COVID-19 stress (Zhou et. al., 2020). People have also displayed various other stress-related symptoms with differential diagnosis of anxiety and also leads to burnout (Wang et al., 2020).

The COVID-19 pandemic has equally affected all aspects of life and has influenced every population. However, the group that has been affected the most are the "doctors and

nurses" among the 'service health providers'. The doctors and nurses were the agents who came in direct contact with the sufferers. They stood on their ground day in and out to help humanity come out of the deadly pandemic unabatedly. Worldwide studies have been instigated concerning psychological effects of COVID-19 on medical staff members along with ways to prevent the negative impacts e.g., Bansal et al. (2020) reported in their study that COVID crises leads to stress and insecurity, and it can be the cause of uncertainty (Guo et. al., 2020). An extensive study addressing the Pandemic effects and their psychological well-being amidst fighting the pandemic would be a commendable step towards long-term emotional and physical support of service health providers.

Pakistani service health providers especially the doctors and nurses bear even more stress during pandemic. In the case of COVID-19 crisis, especially at peak time of COVID sort of distrust, allegations, and lack of coordination was seen between hospital authorities and other staff members regarding decision-making, planning, execution, service delivery, information sharing, and monitoring which ultimately directly or indirectly effected the performance of frontline staff members leading to stress and emotional crises (Mazhar and Shaikh, Mazhar and Shaikh2016).

Being a developmental country "scarce of resources" was one of the most powerful reason to induce stress among doctors and nurses. Insufficient infrastructure in need of social distancing, deprivation of protection kits, and unavailability of good quality masks & sanitizers became the stress booster components for them (Hashim, 2020; Khan, 2020).

The Service health providers have faced a lot of psychological issues including increased harassment, stigmatization (Bagcchi, 2020), psychological trauma and physical violence (Mock, 2020), as well as an increased level of stress, anxiety, depression, and burnout

(Roycroft et al., 2020). Confronting this alarming situation, patient-facing Service health providers in Pakistan were in danger of developing psychological distress (Riaz et al., 2021) and as COVID pandemic came in different waves, so the uncertainty of increasing/deceasing number of cases & deaths was another enough reason of increased stress and burnout among service health providers.

With no doubt, where there was stress, there was a way-out used too. While bearing the COVID stress, simultaneously, service health providers had “good knowledge”, “good attitude”, and “good practices” and the majority with a positive attitude, and with good practice acted as a moderators among Pakistani service health providers (Saqlain et al., 2020). This literature has left a window to combine the psychological factors with the social factors and to analyze them in context of COVID-19 pandemic. The current study aimed to close this research gap and to study combined role of both psychological and social factors in relationship between the COVID-19 stress and burnout among service health providers.

Another significant reason for opting this topic as a longitudinal design was “the periodic mutations of COVID 19” with different stages and variants to date. COVID-19 was constantly being mutated in several regions and was getting resilient with time. The viral mutations alongside alpha, gamma, beta, and delta variants have shaken the world economy and social structure to its very foundations. In view of the splitting variants and extended worldwide scope, the psychosocial consequences of COVID-19 form a valuable subject as a longitudinal research design. There is a sizeable literature on how imperative it was to study the long-term dropping effects of pandemic at decelerated stage of SARS. The factors like working of service health providers in high-risk wards, and to being stay in contact with infected patients shown to be associated with long term yet lower intensified psychosocial

effects like post traumatic symptoms, distress and burnout at decelerated stage of pandemic (Wu et al., 2009). Beside this, COVID-19 has led far-fetching psychosocial impacts on Service health providers, there is a paucity of research exploring subsiding psychosocial effects over the course of pandemic (Lai et. al., 2020). While studies are still emerging, there is rarity of recurrent research addressing the timelines changes in intensity & frequency of psychosocial effects on service health providers (Bohlken et. al., 2020). Such research is of utmost importance pertaining the information necessary for healthcare institutions as they build capacity & real support for their frontline workforce and then to react well to the long-term effects of this pandemic (Rodriguez et. al., 2020). Thus, the present study aimed at examining the pandemic psychosocial impacts on service health providers across time i.e., at accelerated stage when the intensity of the COVID-19 was at its peak and then at decelerated stage when the severity level of COVID-19 was decreased.

Another key facet that pricks out the relevance of current study with findings of prior pandemics is the high-level concern of service health providers about personal safety and safety of their dependents and immediate family members positing them to use psychosocial skills like resilience and coping strategies to overcome the pandemic (Maunder et. al., 2003).

The current study adds on to the available longitudinal perspective that safety concerns provided through organizational support steadily improve the resilience and copings skills of service health providers making it higher COVID-19 stress & burnout at accelerated stage leading to low COVID-19 stress & burnout at decelerated stage of pandemic. Chen et al., 2020 has already supported this notion and has shed light on institutional support intervention as a mediator of stress at time of pandemic.

While keeping in view the worth of literature & paucity of research, the current study

followed a panel design in order to explore the role of psychosocial factors includingresilience, coping strategies and institutional support in relationship between COVID-19 stressand burnout among medical staff and this is what also the positive of this study and none of panel study in Pakistan has already been done in this context.

1.2 Statement of the Problem

To study the role of psychosocial factors in relationship between COVID-19 tress and burnout among service health providers at both accelerated and decelerated stage of pandemic.

1.3 Research Objectives

Main study purported to meet the following objectives

1. To examine the relationship between COVID stress, resilience, organizational support, coping strategies and burnout among service health providers
2. To examine the differences in level of COVID-19 stress, Resilience, Organizational Support, coping strategies and Burnout among Service Health Providers across accelerated and decelerated stage of Pandemic among service health providers
3. To examine the moderating role of Resilience, Organizational Support, and Coping Strategies on the relationship between COVID-19 stress and Burnout among Service Health Providers

1.4 Research Questions

1. There is a positive relationship between COVID-19 stress, Avoidance Coping Strategy and unhealthy dimensions of Burnout among Service Health Providers
2. COVID-19 stress and unhealthy dimensions of Burnout are negatively correlated with Resilience, Organizational Support, and positive Coping Strategies
3. COVID-19 stress increases the level of burnout among Service Health Providers
4. Resilience decreases the level of unhealthy dimensions of burnout among service health providers
5. Organizational support decreases the level of unhealthy dimensions of burnout among service health providers
6. Social support seeking decreases the level of unhealthy dimensions of burnout among service health providers
7. Avoidance decreases the level of unhealthy dimensions of burnout among service health providers
8. Problem solving increases the level of healthy burnout among service health providers
9. Service health provider have higher level of COVID-19 stress and unhealthy Burnout at accelerated stage as compared to decelerated stage of Pandemic
10. Resilience buffers the effect of COVID-19 stress on Burnout among Service Health Providers
11. Organizational Support buffers the effect of COVID-19 stress on Burnout among Service Health Providers
12. Positive Coping Strategies buffers the effect of COVID-19 stress on Burnout among Service Health Providers

13. Avoidance Coping Strategy boosts the effect of COVID-19 stress on Burnout among Service Health Providers

1.5 Null Hypotheses

1. There is no relationship between COVID-19 stress, Avoidance Coping Strategy and unhealthy dimensions of Burnout among Service Health Providers
2. COVID-19 stress and negative dimensions of Burnout are not correlated with Resilience, Organizational Support, and positive Coping Strategies
3. COVID-19 stress has no effect on the level of burnout among Service Health Providers
4. Resilience has no effect on negative dimensions of burnout among service health providers
5. Organizational support has no effect on negative dimensions of burnout among service health providers
6. Social support seeking has no effect on negative dimensions of burnout among service health providers
7. Avoidance has no effect on negative dimensions of burnout among service health providers
8. Problem solving has no effect on negative dimensions of burnout among service health providers
9. Service health provider show no difference in level of COVID-19 stress and negative Burnout at accelerated stage as compared to decelerated stage of Pandemic
10. Resilience does not buffer the effect of COVID-19 stress on Burnout among Service Health Providers

11. Organizational Support does not buffer the effect of COVID-19 stress on Burnout among Service Health Providers
12. Positive Coping Strategies does not buffer the effect of COVID-19 stress on Burnout among Service Health Providers
13. Avoidance Coping Strategy does not boost the effect of COVID-19 stress on Burnout among Service Health Providers

1.6 Conceptual Model of the Study

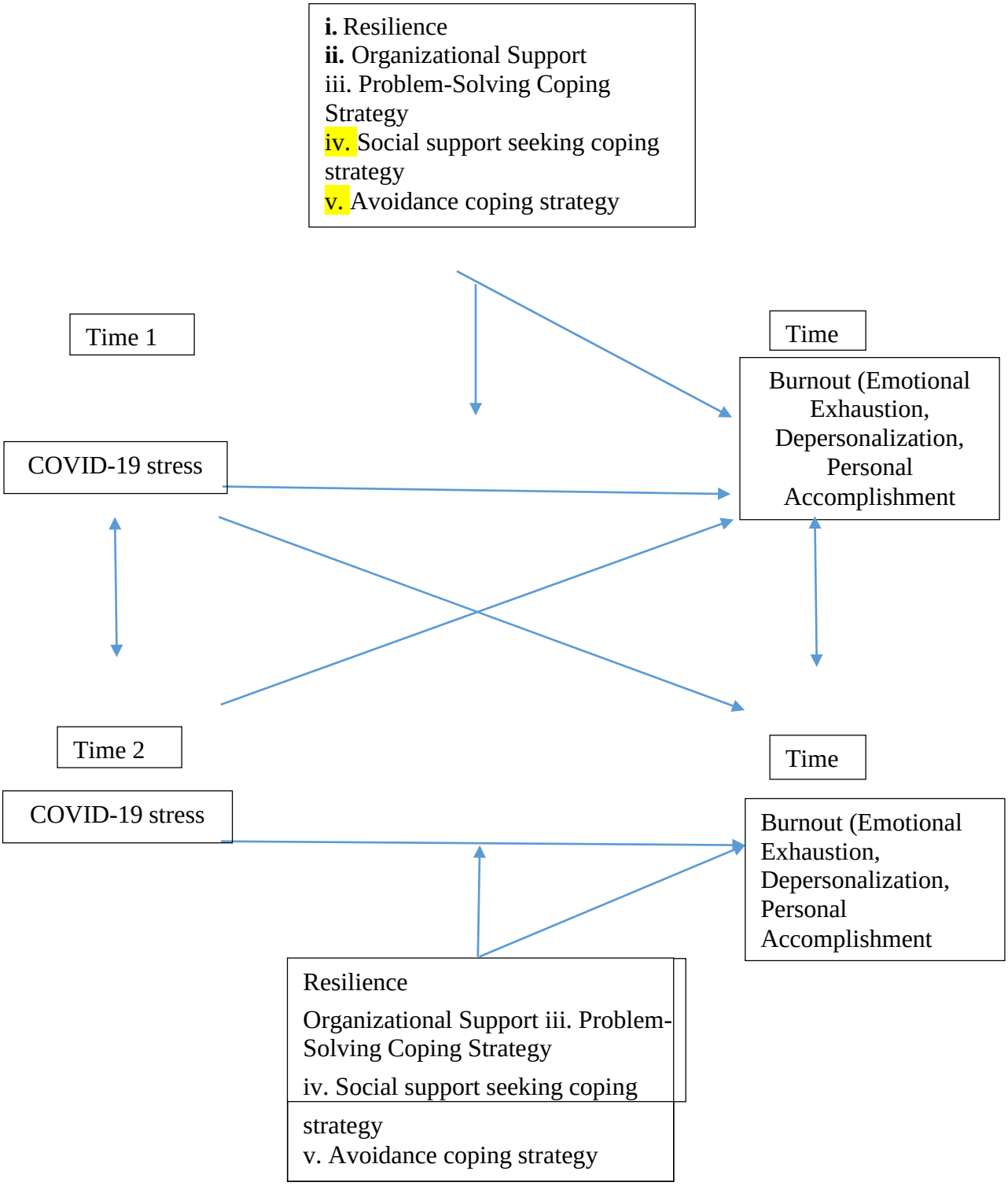


Fig. 1

1.7 Significance of the study

This research is of immense significance because COVID-19 is a pandemic that has effected nearly every population around the globe. The strong theoretical framework of this research makes it evidence based and helps to explore the relationship among variables that are of paramount significance during the years of breakout and prevalence of COVID-19 pandemic. Being an under developmental country, bearing a contagious virus with provision of required preventive kits is a great challenge that directly emerges the need of probing the psychological effects of this disease. Sample of Doctors and nurses is the one that acts like combating agent and thus is another noteworthy factor of enhancing significance of current study. Moreover, though an ample of data is available about the topic, but panel study makes this research significant over others.

1.8 Methodology

The current study followed a longitudinal research design targeting a sample of service health providers i.e. doctors and nurses with a purpose of finding the Role of psychosocial factors in relationship between COVID-19 stress and burnout among service health provider.

1.9 Delimitations

The sample of doctors and nurses among other service health providers is one of the delimitation of the study that was mainly done to keep current study practical and feasible. As sample has to have attrition rate for phase II, the sample age range is somehow broader i.e. 22 above instead of keeping a specific age range to get more reliable results. Restricting

to Government hospitals only is another restriction researches places upon study in order to meet the objectives of study easily at time of pandemic.

1.10 Operational Definitions

COVID-19 stress. Lazarus and Folkman (1984), in their one model of stress known as the "Transactional Model," defined the term ‘stress’ as, "A constant cognitive as well as behavioral strive to overcome an internal or an external demand. These demands are assessed as demanding or are beyond the resources of person to manage them". Besides this transactional model, the various other approaches also defined stress as "the conditional processes that create any physical or psychological demands on a person (Selye, 1976). So, stress arises because of a striving to fulfill these demands produced by conditional processes.

During the pandemic, certain behaviors are necessary to be adopted, and some sort of stress or anxiety is necessary to adopt those behaviors. Stress is a significant driver of these substantial behaviors (Taylor, 2019). People with stress at a below-average level are least likely to be involved in hygienic conduct and are least adaptive to preventive measures like keeping social distancing, hand washing, sanitizing hands, wearing masks, and getting vaccinated, in case if the remedy is available (Taylor, 2019).

By combining both clinical and theoretical observations, it is suggested to have COVID-19 stress with the presence of fear and anxiety. The stress factor includes anxious thoughts about getting in contact with the objects and things that are contaminated. It also includes an intensive fear of foreigners who might be carrying the infection, ~~The~~ fear of harmful socio-economic consequences in life and society just like a job loss, the developing habit of compulsive checking related to possible pandemic threatened the traumatic symptoms

like the intrusive thoughts and the nightmares (Taylor, 2019).

Burnout: According to Maslach (2003), the term "burnout" is conceptualized as "a syndrome resulting from the exposure to the long-term stress. Burnout can be manifested by multiple conditions like emotional fatigue, feeling overloaded, having emotional exhaustion, vulnerability to depersonalization leading to a poor view of self-competence, and it ultimately leads to work-related mental health impairment (Awa et al., 2010). It affects people, their performance, as well as their psychological and mental well-being.

According to Maslach (1982), these three dimensions of burnout include emotional exertion, depersonalization, and personal accomplishment. Among these three, two dimensions, i.e., emotional exertion and depersonalization are the negative dimensions of burnout, whereas the third one, i.e., personal accomplishment, is a positive dimension. These dimensions are prominently related to stressors at the workplace (Maslach & Leiter, 2016).

Depersonalization is related to cynicism, and reduced personal accomplishment is related to inefficacy (Maslach & Jackson, 1981; Maslach & Leiter, 2016). Emotional exhaustion is characterized by being emotionally worn-out and tired with a lack of energy and interest.

The third important dimension of ‘personal accomplishment’ refers to having a negative self-assessment and anticipating poor performance with failures (Maslach, 1993).

Resilience. the person’s ability to bounce back from the stressful situation (Smith et al. 2008).The term resilience can be defined as the "in the face of any adversity the person show adaptability to the situation" or "while having exposure to any trauma, tragedy, threat or any source of stress, the person adjusts to the situation and regulates accordingly (APA,

2014). In other words, "resilience can be defined as an ability to bounce back from the stressful situation, to adopt the hardships created by the stressor and to adopt the new situation flexibly eventually leading to the psychological growth in the face of adversity (Bonanno et al., 2004).

Coping Strategies. Coping is basically a constant effort to overcome an internal or an external stressor (Lazarus & Folkman, 1984). The term “coping” implies to the processes of cognitive appraisals in which a person recognizes whether they have resources to respond effectively to the external stressors and challenges or not (Folkman & Lazarus, 1988) and the coping strategies refers to all those tips and tricks that are established in order to develop those cognitive appraisals to overcome the stress. The coping strategies include problem solving, social support seeking and avoidance.

Organizational support. The organizational support is the support given by any institute or organization to their employees and is supposed to directly affect the performances of employees. It is believed that employers usually value the commitment, devotion and loyalty of their employees. All those employees who are emotionally committed to their job exhibit their excellence in performance, have reduced absenteeism, and will have significantly lesser chances of quitting their jobs. However, all of it is based on the extent of institutional support provided by the organization (Mathieu & Zajac, 1990; Meyer & Allen, 1997; Mowdy et. al., 1982).

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

2.1 COVID-19 Stress

Grath (1982) defined ‘stressors’ as the external forces imposed on the person to fulfill demands. Now, these demands can be in the form of work burden, strive to overcome failure or a situation like a pandemic to overcome a hassle brought by that pandemic. The current situation of COVID-19 can be linked with this theoretical framework.

The COVID-19 pandemic is a leading cause of stress among all the types of population. There has also been an extensive presence of emotional stress as a psychological reaction to coronavirus contagion. The statistics collected from China recommend that almost 25% of the overall population faces a slightly higher level of stress and anxiety associated indications in wake of the global pandemic since 2019 (Wang et. al., 2020).

Here, during the COVID-19 Pandemic, the definition of stress has been squeezed, narrowed and is carved and conveyed into a single directional one focusing extensively on the fright of getting taint and catching the infection (Ahorsu et. al., 2020; Mertens et. al., 2020). The clinical observations, on the other hand, also confirms the presence of a broader level of distress-related symptoms (Taylor, 2019), which led to the assumption of stress due to coronavirus as multiple factorial ones (Taylor et. al., 2020).

On the contrary, people with an average level of stress and anxiety will more likely adapt to the required behaviors. On the other side, the people with excessive anxiety and stress would again engage in maladaptive behaviors or troublesome activities, creating panic and rushing needlessly towards the hospitals when they misapprehend their slight suffering or

symptoms, such as mild temperature might be taken excessively serious and might demand that they need hospitalization (Asmundson & Taylor, 2020).

Since COVID-19 was declared a global pandemic by WHO, several growing studies were initiated and concluded worldwide to find out the psychological impact on frontline staff members and their short-term to long-term capacity to handle excessive stress episodes post-pandemic (Chen et. al., 2020).

The primary purpose for these extensive studies were to find a group of population that was nakedly exposed to the seriousness and extremity of the coronavirus. Amidst the pandemic, more than 70% of service health providers faced stress in Wuhan and Hubei provinces (Lai et. al., 2019) Besides China, the service health providers around the globe underwent a great deal of physical, mental, and psychological stress cycles to some degree. Due to long work shifts, consistent night shifts, duties at emergency wards, intensive care units (ICU), and long working hours, they remained under tremendous pressure and traumatic situations. The shortage of service health providers contributed to longer working hours and lesser sleep cycles to the doctors and nurses. This resulted in insomnia and other symptoms, especially in service health providers in the most affected areas in the UK, the USA, China, and India. They have also faced stress because of scarce protective equipment (PPE) and the constant fear of getting infected. They also feel stressed by the anxious thought of infecting their families and with a possible cause of an infecting vehicle (Lancet, 2020). The medical staff members also experienced burnouts due to several factors, which included uncertainty, extreme work pressure, wakefulness, and being cheerless (Pappa et. al., 2020; Badahdah et. al., 2020).

Service health providers were seen posting stressful working conditions in which they

were performing duties which clearly explained the primary drivers of various psychological disorders. One of the studies conducted in China by Lai et. al. (2020) reported the prevalence of 50% depression among medicinal specialists, 45% of disorders were known to be anxiety, and 34% were of insomnia (Lai et. al., 2020). The results are supported by another study that was done by Badahdah et al. (2020). The study was conducted on 509 physicians and nurses, and the results showed the presence of 25.9% of anxiety and 56.4% of COVID-19 stress among service health providers. One more study was conducted on 994 service health providers, and the statistical analysis revealed 36.9% of them were suffering from one or the other kind of stress, along with disturbances to mental health states (Kang et al. 2020; Xiang et al. 2020).

In addition to this, the COVID-19 stress further leads to various mental disorders as well. A systematic review found that service health providers experienced psychological distress during COVID-19 leading to various psychological disorders with a ratio of 26% Anxiety, 25% depression, 35% distress, 40% of stress, and 3-16% of post-traumatic stress disorder (Luo et. al., 2020).

2.2 Covid-19 Stress in Relevance to Pakistan

In Pakistan, the first COVID-19 infection was detected in February 2020. Afterwards, the first nationwide lockdown was imposed in March 2020 to curb the contagion countrywide. After the first few months, the confirmed cases reported were nearly 0.4 million and counting. The government of Pakistan, in general, had done a remarkable job in tackling the pandemic and ultimately cutting it to size. Moreover, Pakistan has experienced its fourth coronavirus episode. The preventive measures were extensively taken in the form of smart- and mini lockdowns countrywide. Pakistan comprises a massive population and scarce resources which

leads to a wide imbalance in resources and operational procedures. The lack of diagnostic kits, low doctors-to-patients ratio, grim facilities at hospitals, and lack of medical infrastructure negatively contributed to Pakistan's efforts to wipe the pandemic off its boundaries. An estimated doctor-to-patient ratio is 1:1300, obviously below average (Nizar & Chagani, 2016).

The weak healthcare system of Pakistan opened a way for novel coronavirus to hit and spread immediately at start. The lack of standardized operating procedures and the poor healthcare infrastructures led to having much strain, ending up in a tremendous increase in the number of COVID-19 positive cases in Pakistan (Khalid et. al., 2020).

Pakistan's geolocation is also a cause of its vulnerability to the virus. It is near to the countries which were affected the most. China, which is an epicenter of the coronavirus outbreak is also on the shoulder border of Pakistan. China was the first country to face the viral disease outbreak, and then Iran too, which enlisted Pakistan to be more susceptible because of closer geolocation (Saqlain et. al., 2020).

If we get a month-wise estimation of cases, "June 2020" is the month "with the highest number of cases and deaths due to COVID-19 in Pakistan. Moreover, if we locate the provisional ratio, the analysis show "Punjab" had maximum cases, and "Lahore" was the epicenter of this Novel virus with the highest number of confirmed cases in this city. The first-step preventive measures taken by the Government of Pakistan are to keep social distancing, a strict notice to wear the mask, and to have partial or full-time lockdowns as per need (Majeed et. al, 2020).

The service health providers remained on duties at coronavirus wards, at emergency departments, in ICUs, and at isolation centers, while facing many challenges such as the stress of performing health care duties with scarce resources (Saqlain et al., 2020). They also feel

overburdened because of long working hours and consistent day and night shifts (Raza et al., 2020)-while dealing with both affected and non-affected emergency patients.

Another reason for stress among service health providers was the availability of inadequate support systems, lack of training from administration, and exclusion from colleagues with a stigma (Jafree et al., 2020. One of main psychological issue seen among service health providers during the pandemic were the anxiety due to shortage of protective kits and lack of shielding gear provision (Ahmed, et al., 2020). Despite many efforts, unfortunately, service health providers also faced an immersive fear because of public violence and abuse (Khalid & Ali, 2020), with a myth that doctors show negligence in taking care of COVID-19 patients.

It was necessary to reach the core of such issues and address them as their cause rather than that for the generic approaches. Here, at the time of pandemic, the generic psycho-therapeutic approaches do not seem much productive. The approaches producing better results were the problem-focused approaches. It was found that psychological issues like feeling overburdened, stressed, and anxious erode the confidence level of service health providers and negatively inflicted the healthcare systems, and ultimately worsen the grave situation. The situation concluded that targeted approaches as per the cause of the problem should be used, and context-specific support must be delivered to the service health providers (Shanafelt et al., 2020).

While noticing the gender-wise prevalence, it was found that 50% of the service health providers were women. These women were designated to various positions i.e., doctors, nurses, laboratory in charge, and associated service health providers and were distributed equally among all the COVID-19 dedicated hospitals throughout the country (Mohsin & Syed,

2020).

Besides Pakistan, globally, healthcare organizations and governments are struggling to take care of physicians and give them protocols against disinfections, delivering them security, cleaning, and provide services for sterilizing the hospitals, isolation centers, and other health centers. They are enforced with obligations (Bartoszko et al., 2020). Extraordinary events require special attention, and the present times demand proficient and vigilant health care providers without jeopardizing their health at any cost. Any carelessness leading to infected physicians means an immediate decline in the trained workforce which none of the countries can afford right now (Alsahafi & Cheng, 2016).

To overcome this awful health issue, Pakistan collaborated with COVID-19 Experts Advisory Group (CEAG) and developed proper guidelines to get along with international community to curb the calamity. As explained before, throughout the globe, the population that was getting affected at maximum were the service health providers, so the primary aim of establishing these guidelines in Pakistan was to improve the healthcare system and give protection to the service health providers. These protective guidelines and measures included training sessions for service health providers who were trained to keep themselves safe. They were skilled in the proper handling of personal protective equipment (PPE). Another protective measure made was to give 14 days' leave to get quarantined after having duties at high-risk places such as COVID-19 patient's ward or intensive care units (ICUs).

Moreover, a regulation was made to have alternative duties, i.e., if they spend a week at a high-risk place, the workers and doctors were allotted least risk duties to minimize the consistent exposure to COVID-19 patients (Ayyaz et al., 2020).

Nonetheless, the Government of Pakistan remained unable to fully adapt to the decided

guidelines and rules for several reasons (Raza et al., 2020). Another protective measure taken at hospitals was to stop treating outpatients and to stop having elective surgical facilities. In addition, it was done to have emergency preparedness at both the community and the national levels (Sethi et al., 2020).

Another need realized at the pandemic was the availability of ample numbers of service health providers with enhanced abilities to use the specialized equipment and deal with the higher flow of patients (Shanafelt et al., 2020). In order to fulfill the required demand, several service health providers were brought out for the duties and were allotted responsibilities. It was also understood how vital it is to keep well-being and safety and thus render advanced patient care ways to combat the spreading virus (Liu et al., 2020).

Moreover, the mental well-being of service health providers is essential and is related to patient's safety. Therefore, it is of great significance to monitor the psychological needs of service health providers and to shield them out from the anxiety and stress they are facing. The organizations must consider that the duty of service health providers at emergency wards and isolation wards may lead to ample stress, and they should be provided a proper space as well as time to overcome that stress (Brooks et al., 2020).

The consistent exposure to stress while managing the complex care and treatment processes, the service health providers can face emotional exhaustion and depersonalization. Particularly during the COVID-19 pandemic, it has been seen that because of long working hours and consistent stress of getting infected, the service health providers face uncertainty and burnouts. The relocating staff members and increased work pressure let the service health providers experience burnout rapidly (Drennan & Ross, 2019).

Another main reason for burnout among service health providers is the incompatibility

between ideal expectations and real-life situations (Woo et al., 2020). The service health providers bearing burnout can further have multiple psychological and behavioral issues which are of primary importance while operating in intensive care units (Hernández et al., 2018).

2.3 Burnout

According to Maslach (2003), the term "burnout" is conceptualized as "a syndrome resulting from the exposure to the long-term stress. Burnout can also have an impact on the quality of work. During a pandemic, burnout can negatively affect the standard of care being provided to the patients affected by the virus, ultimately leading to the worst pandemic condition (Rupert & Morgan, 2005).

By different approaches, burnout is considered a condition with mental health impairments (Awa et al., 2010), and often correlates with psychological consequences like depression and anxiety (Morse et al., 2012). Burnout manifests the distressing feelings in the sufferer (Freudenberger, 1975), but it also turns on a lot of physical and mental health concerns (Maslach et al., 2001).

This literature suggests burnout as a multi-dimensional construct, whereas few others conceptualize burnout as a unidimensional concept by arguing burnout as a stimulus about exhaustion only (Pines & Aronson, 1988; Kristensen et al., 2005; Shirom et al., 2005), opening a way to measure burnout and examining it at a single dimension only. However, besides these two concepts, i.e., unidimensional and multi-dimensional, Maslach (1982) presented a three-dimensional model of burnout and has been considered as a "gold standard" in burnout researches (Schutte et al., 2000).

When all these dimensions combine, the burnout collectively affects the physical as well as the mental health of a person (Lindwall et al., 2014; Wei et al., 2017; Estiri et al., 2016) ultimately leading to the negative impact on the person's performance at work and his level of job satisfaction (Shaukat et. al., 2017).

Characteristics of burnout. Burnout is a state that results from a continued incongruity and discrepancy between a person and at least one of the given six burnout characters. This mismatch between the person and these dimensions usually happens at the workplace and is noticeable, leading to poor performance. The six main characteristics of burnout include:

(1) Workload: An excessive demand of work that is beyond the capacity and potential of the worker and thus accomplishment cannot be achieved leading to "lack of personal accomplishment."

(2) Control: An imbalance between the demand of the work and the level of control given to the team member. The team member feels that he does not have sufficient control over the necessary resources to achieve the tasks and goals of a given job or assignment. This lack of control leads to an imbalance between the demand and control, leading to burnout

(3) Rewards: A positive reinforcement that the action is given the best remuneration and makes sure that the behavior will occur again in the future. At the workplace, this reward can be in the form of financial rewards like incentives, social rewards. However, it can be also an intrinsic reward, i.e., the pride a person can feel while doing a specific job. Again the imbalance between the demand of the work and the reward given can lead to burnout.

(4) Community: A teamwork is an essential habit that leads to the most favorable results. Humans are "social animals," and it is necessary to give them a social environment at work,

home, or anywhere. When employees do not perceive a sense of connection and an open-ended relation with their colleagues, managers, and other leading figures, they feel frustrated and feel that they lack social support. The lack of community work can be another reason for burnout at the workplace.

(5) Fairness: It is a crucial component of preventing burnout at the workplace. If a person feels that the workplace decisions are unfair, i.e., there is some inequity of pay, inequity in the distribution of workload, and the feeling that a specific worker is dealt with unfairness, it will automatically lead to burnout.

(6) Values: The norms and the standards devised, must be in a single wavelength. Any vagueness in the organizational values or a gigantic gap between a person's values and organizational values can be the cause of conflict which ultimately lead to burnouts.

Maslach and Leiter, (2016) theorized these six characteristics as the background for deterioration among employees and can negatively affect the employees' health and job performance.

During the pandemic, it has been found that the population that undergoes burnout the most are the service health providers. It is because they seem to be more emotionally involved in order to keep going with their families and workspace simultaneously. The service health providers throughout the COVID-19 pandemic faced the undue workload along with the lack of balance between demand-control cycles. The pandemic situations caused stress, and consistent stress led to emotional exertion, depersonalization, and reduced personal accomplishment, ultimately resulting in burnout (Horgan et. al., 2014).

The service health providers at the maximum level of emotional exertion perform duties

at complex care and treatment processes. This burnout may be due to the lack of equilibrium between what they need to give their better and the actual situations to work during the Pandemic (Woo et. al., 2020).

The adoptive ability always remained there to overcome burnout. Especially during the times of Pandemic like COVID-19, though the service health providers feel all dimensions of burnout, including the emotional exertion, depersonalization, and reduction in personal accomplishment, they can also adopt them over time (Feldman, 2020). However, this adaptation is a time-consuming and ongoing process. They try to adapt to the situation with the help of being resilient.

2.4 Resilience

Resilience is considered to be a multidimensional psychological characteristic that enables individuals to thrive in the face of adversity, cope effectively with stress, and maintain stable psychological functioning (Connor & Davidson, 2003; Mealer et al., 201). Characteristics of resilient people include viewing stressors as challenges to overcome, optimism, commitment, and adaptability to change (Connor & Davidson, 2003). Resilience is an important trait of intensive care unit (ICU) nurses; compared to nurses diagnosed with PTSD, resilient ICU nurses had a more positive worldview, were cognitively flexible to remain optimistic and utilized positive reframing in response to trauma and stressors, and maintained better self-care habits (Mealer et al., 201). Additionally, highly resilient nurses had a significantly lower prevalence of burnout and PTSD. Among healthcare workers, resilience is clearly protective against the development of PTSD.

There are different characteristics of resilience. For example, Woods et. al. (2005)

elaborated the characteristics of resilience as (1) Buffering capacity that is the size or kinds of disruptions the system can absorb or adapt to without a fundamental breakdown in performance or the system's structure; (2) flexibility versus stiffness, which include the system's ability to restructure itself in response to external changes or pressures; (3) Margin that is how closely or how precarious the system is currently operating relative to one or another kind of performance boundary; (4) Tolerance that is how a system behaves near a boundary – whether the system gracefully degrades as stress/pressure increase or collapses immediately when pressure exceeds adaptive capacity.

In addition to resilience characteristics, Woods (2005) define resilience at scales ranging between above and below. It categorizes resilience as (1) low resilience, i.e., The resilience affected by how organizational context creates or facilitates resolution of pressures/goal conflicts/dilemmas; for example, mismanaging goal conflicts or poor automation design can create authority-responsibility double binds for operational personnel (Woods et al., 1994; Woods, 2005). (2) Upward resilience, i.e., affected by how adaptations by local actors in the form of workarounds or innovative tactics reverberate and influence more strategic goals and interactions (e.g., workload bottlenecks at the operational scale can lead to practitioner workarounds that make management’s attempts to command compliance with broad standards unworkable (Cooke, Doust, & Steele, 2013).

Moroever, (Goodman et. al., 2014) conceptualize resilience as a mental health preserver by removing the person from the stressful condition during epidemics and pandemics.

The previous literature identified resilience as a moderator or a mediator for various psychological factors. It acts as a mediator for people's subjective well-being and

psychological health during the COVID-19 Pandemic (Yildrim et. al., 2020). Resilience tends to be a source of good mental health while acting as a moderator to buffer the level of stress (Ong et. al., 2006)

While concluding the literature, it can be observed that resilience can mediate the relation between the risk factors, e.g., the perceived stress and mental health outcomes among the service health providers. So, resilience acts as a mediator with some constructs, while it acts as a moderator for others. Closing it to more straightforward terms, the psychological resilience usually brought out in the people who strengthen their psychological and behavioral abilities. Their flourished abilities allowed them to remain cool and calm even during the chaos and crises and to keep on moving no matter how stressful the situation is, thus allowing them to give a shield to the long term negative consequences (Aknin et. al., 2021).

There is a proven record under the literature that calls resilience a psychological immune system of a person. It is a system that sustains a person's ability to deal with stress and shields out harmful mental health outcomes (APA, 2014). Resilience is the ability to make realistic plans to catch out with the actual goals. The steps taken to reach the realistic goals are (1) to keep confidence in one's strengths and abilities, (2) to have good communication skills and problem-solving skills, and (3) to have an ability to manage the solid impulses and to keep control on the feelings.

Hence, the literature shows that the aftermath of tragic events can have a positive impact in terms of personal growth and meaning, suggesting that resilient attitudes may be more prevalent than expected (Brook et al., 2020; Bonanno & Loss, 2004).

Moreover, the ways to become resilient vary from one age group to another. However, just like the factors adopted by adults to become resilient are to develop external connections,

to remain independent, to have self-care, to show a good level of self-acceptance, showing altruism, to develop a capacity to overcome hardship experiences, to maintain the health status and to develop a positive perspective of life (Kamalpour et. al., 2020).

Furthermore, the resilience ability is also situational. Depending on the type of situation, the various resilient abilities are used. Just like, for perceived risk, the resilient person will shape health-related behaviors (Janz & Becker, 1984).

Adding on to literature, if the perceived risk experience leads to the experience of fear, then it can tend to produce adverse outcomes. Under this context, the risk-resilience model (Masten, 2001) emphasized that if the perceived risk leads to fear, it gives ways to adversity and thus heightens the tendency to produce adverse outcomes, but if the person is resilient, then he will turn these adverse outcomes into the positive outcomes. For example, during the Pandemic of COVID-19, the perceived risk because of the high severity of the virus is associated with poor mental health outcomes (Li et. al., 2020), and resilient people tend to build a greater tendency to practice defensive behaviors against COVID-19 (Khosravi 2020; Wise et. al., 2020).

The coronavirus crisis may produce challenges for service health providers that can affect their power of resilience and mental health by looking at the current situation. Though every profession is probable to produce burnout and emerge the need for resilience, service health providers are known to have it at maximum. The earlier research conducted in the service health providers depicted that usually, the service health providers focused on "Avoidance" of burnout to cope with the stress at the workplace (Fertleman & Carroll, 2013).

The research conducted by Robertson and Rodriguez (2016), concluded that theservice health providers while working and dealing with patients in the primary care unit get

overwhelmed by the different types of challenges like clinical issues, patient's reservations, and organizational issues. Now, the dealing capacity of the service health providers depends on how resilient they are. The high resilient service health providers can show a positive outlook towards the patients, can perform their duties well even in times of stress and work pressure, and can have an ability to use different product strategies to overcome the stress (Wann et. al., 2011). They probe out the ways to overcome the lack of balance in job demand and control and thus pretend to be a shield against stress.

A broader literature addressed the significance of resilience and found it to be a strong predictor of managing stress and maintaining a good quality of life (Ruocco et. al., 2019). It is also considered a strong predictor of both psychological well-being and good mental health (Yildrim et. al., 2019). In addition to resilience, the service health providers may also adopt social support and self-management strategies to overcome the distress and psychological issues (Liu et. al., 2020).

Despite the negative mental effects, dealing with the COVID-19 pandemic has forced workers to develop resilience strategies, as during other outbreaks (Hyun, 2021).

2.5 Coping Strategies

These cognitive appraisals varied from person to person and can be of different types. These coping process can be problem-focused coping or the emotion-focused coping. The problem-focused coping widely emphasizes on the problem and to sort out the solution to that specific problem. On the other hand, the emotion-focused coping deals with the emotions, feelings and sentiments of a person (Folkman & Lazarus, 1980; Lazarus & Folkman, 1984).

Problem-focused (e.g., trying to solve the situation, address the cause) and emotion-

focused (e.g., reinterpretation, distancing) or as approach-focused (i.e., strategies aimed at dealing with stressor) and avoidance-focused (i.e., maladaptive avoidance of the situation) (Littleton et al., 2007; Hartmann et al, 2020). Furthermore, approach-focused coping styles such as proactive behaviors, seeking social support and facing the situation are associated with greater resilience (Brooks et al., 2020)

The coping styles can be of two types i.e., active coping style or passive coping style. The active coping styles are the one where the person will be aware of his stressor and he will followed the process by attempting to overcome the negative outcomes of that particular stressor by using coping strategies like social support seeking, being an activist and perform acceptance. The passive coping style will be the one where the individual will use denial and will be avoidant to the stressor (Jex et. al., 2001).

Another coping style is the avoidance, which involves assertiveness and to have a withdrawal from the stressor (Anshel, 1996; Anshel & Weinberg, 1999; Roth & Cohen, 1986). The perception of any challenge can be either threatening or non-threatening depending upon how much resources are available to cope with it effectively. The existence of psychological problems during the time of stress is obvious. The choice of coping strategies effects a lot depending upon whether someone is choosing the adequate coping style or inadequate coping style (Lazarus & Folkman, 1984).

Coping strategies are basically the tips and tricks choose to overcome a stress. These coping strategies are categorized mainly in to four different types. (1) Positive coping strategy: A strive to reframe the behaviors or thoughts into positive framework. Such type of coping strategy improves one’s self-esteem and helps in reducing the stress and other psychological problems which are associated with the stressors. (2) Religious or denial coping strategy: when

a person unable to defend the stressors start relying on religious beliefs or accept a denial and starts believing that the stressor does not exist at all. This type of coping strategy does not boost the self-esteem and do not decreases the pressure of stressors actually. (3) Active-avoidance coping strategy i.e. the one in which the person knows about the presence of stressor but use avoidance in order to ignore the stressor. Here the person avoids the impacts of stressor by using drugs, by involving in various socially taboo activities that prevents him to deal with the stressor directly. In such a coping strategy, the person can use the defense mechanism of self-blaming as well.

(4) Problem-solving coping strategy i.e. The most effective and productive form of coping strategy in which the individual actually underpins the problem and find solutions to sort out that problem. In this coping strategy, the person properly plans to figure out the problem, its root cause, chunk out the stressors, and take positive coping measures like social support seeking, emotional support seeking and thus deal with the stressors successfully (Hastings et. al., 2005).

The people with belief and confidence in themselves use the problem-focused coping strategy. Those individuals who do not believe in their capacity to spot, deal and to vanish the stressor turn towards the emotion-focused coping strategy. The defensive schemes they may use can be “I wish I could change whatever is happening, but nothing is in my hand. It is better to distance myself or they may start emphasizing on selective thoughts only (Lazarus & Folkman, 1987).

It is also believed that one’s ability to choose the right coping strategy for the right stressor and to use it appropriately depends on how he is evaluating and judging his own self. When the person thinks that he is capable, he will do all the process rightly and will pick up

the coping strategy right way (Lazarus & Folkman, 1987).

It is assumed that the type of coping style and the symptoms of stress have a high predictive association between each other, and the right choice prevents negative mental health consequences (Lazarus et al., 1984). The different coping styles are appropriate for different stressors. It has been reported that the coping style of avoidance and denial can be best used by the person with mental health constraints. They are best to deal with the mental health issues.

On the other hand, active coping style has specifically high association with anxiety and will help to overcome anxiety at finest level (Hastings et al., 2005) and for stress management, another coping style i.e., problem-focused coping style produce enormously positive outcomes (Heppner et al., 1995).

The social support seeking coping strategy comes in closer relation with the problem-focused coping strategy and the combination of two can help to cope the root cause problem with greater ease and satisfaction. Under stressful situations, mostly people utilize social support seeking coping strategy (Mortenson, 2006).

The tactics often used under social support seeking coping strategy include getting the advice from a wiser person, to share your own feelings and thoughts to minimize your mental burnouts, and to ask for resources such as financial help from others. Both coping strategies i.e., problem focused, and social support seeking are parallel to one another. The above-mentioned coping strategies are highly positive and are helpful in overcoming the stressful situations (Felsten, 1998; Kang et. al., 2009)

It is believed that the service health providers that gets under stress the most, they are

believed to protect themselves by using the coping strategies mentioned above. A study done by (Wu et. al., 2009) concluded that the service health providers use coping strategies to overcome stress at the time of disease epidemics and pandemics. The coping strategies used at maximum include the two main strategies i.e. problem-solving coping strategy and social support seeking. Other than these two, being optimistic, resilient and altruistic approach have also been found to be used as coping strategies by service health providers to reduce psychological stress (Park et al., 2018).

Besides coping strategies, the institutional support has also been consistently identified as a shield and a protective measure to overcome stress by service health providers in various medical facilities worldwide. The institutional support is of great significance at time of pandemics especially for the service health providers. It can be clearly understood as the supportive responses offered by the institutes. These supportive responses can be in the form of financial support, mental support, physical support or training support. The instructional support alliances the physical, psychological and emotional needs of employees at the workplace (Shanafelt et. al., 2020; Zhang et. al., 2020), addressing their issues and thus helping them out to overcome the stress.

A systematic review of literature is available that supports the assumption that institutional support is directly associated with the psychological health of service health providers no matter which type of institutional support there is (Dugani et. al., 2018; Bronkhorst et. al., 2015). All types of institutional supports lead to positive outcome of behaviors.

With a population of 220 million people, Pakistan is the fifth most populated country in the world and the second most populated Muslim country (meter 2020). Religion has a

pivotal role in the lives of the 98% majority Muslim population. People in the country are known to seek guidance from religion whenever they are in trouble and to practice religion as a coping strategy like giving/seeking social support, altruism, and forgiveness when they face health problems (Shafiq, 2020) and same they did during the COVID-19.

Alternative coping strategy used by Pakistani doctors and nurses was the use of digital interventions to improve health services and care outcomes is also recommended during COVID-19. The push toward digital is twofold. On the one hand, the use of electronic medical records and telemedicine can reduce the overloaded work experience thus reducing the burnout (Moazzami et al., 2020; Sultana et al., 2020) among the frontline health care workers in COVID-19.

Another approach used was to provide mental health resources and interventions that use digital platforms such as mobile phones, apps, or Internet devices. This can positively affect working and mental life and health professionals ultimately reducing burnout ofPakistan (Sultana et al., 2020).

2.6 Organizational support

In contrast, the employees also demand organizational commitment to them and to their needs as well. The balance between both the organizational commitment and employee's commitment is vital. These assumptions are supported by the "organizational support theory". The theory addresses that the employees usually develop the global belief that the employee devotion is dependent on the extent to which the organization values the contributions of the employees and how much they care about their well-being. It determines the organization's readiness and is necessary to meet the socioeconomic needs of the running time (Eisenberger et. al., 1986; Shore et. al., 1995). The equilibrium between the facilitations given by organization and the performance of excellence given by employees is necessary.

It is noticeable that there are different types of organizational supports that an organization opt for. Shore and Shore (1995) simplified it as "the recognition of employee" by an organization is also its support. The recognition given by organization to their employee is positively related to better performance of an employee. Moreover, the organizational support can also be enhanced with better pay allowances or different types of promotions given to the employees as per their performances (Greenberg, 1990). In all, these supports are positively linked with betterment in the employee's performance inside an organization.

It is considered essential to improve organizational measures that affect the culture of work and stress in the workplace. Potential strategies for service health providers include improving workflow management, organizing services focused on reducing workload, improving interoperability, organization of discussions and exchange of opinions,

improvement of communication skills, providing adequate rest and exercise, and organizing seminars on coping skills (Sultana et al., 2020); such organizational support should include guarantees such as assistance to those doctors and nurses who fall ill, as well as medical and financial support for their families and protection from threats of neglect (Galbraith et al., 2020).

Favorable organizational cultures for service health providers have been described as ones with satisfactory coworker communication, higher levels of nurse autonomy, efficient nursing care plans and adequacy in staffing and resources (Prezerakos et al., 2006). When medical practitioners are facilitated with a positive organizational culture, their commitment to a culture of error reporting and error sharing increases, consequently improving patient safety and reducing mortality rates (Kwak et al., 2010). WHO also indicates that the organizational culture of a hospital influences health practitioner job satisfaction, role delivery and quality of patient care (Sorra & Dyer, 2010) and same played a key role during time of pandemic.

2.7 Psychosocial moderators in relevance with COVID-19 stress

Stress can be an obvious agent at workplace. The presence of stress can be the leading factor in poor performance. It is the organizational support that can help in making the work environment stress-free. There are three main stressors that can affect the performance of an employee at the workplace, which include (1) workload i.e. increase in work demand without looking at the constraint of time. The employee feels unable to accomplish the demand within given time or beyond the capacity. And if an employee strives to do so he may feel exhausted and burnt out. (2) Role ambiguity i.e., a second stressor that can arise in an organization because of lack of support of organization. The role ambiguity refers to the absence of clearing

the employee about his roles and responsibilities. It can also involve giving all or most of those responsibilities to an employee which are incompatible to his own caliber. The role ambiguity can lead to role conflict as well (3) Lack of Organizational support i.e., Lack of concern from organization about the needs of employee (Lazarus & Folkman, 1984).

The presence of these stressors can directly affect the overall output produced by the organization. Dekker and Barling (1995) argued that the employees might also feel less valued and thus less motivated in bigger organizations. The highly formalized procedures and policies of bigger organizations may create discrimination and reduces the flexibility in dealing the individual employee. It can affect vigorously the individual's needs especially if the duties are not evenly distributed and if the policies differs from employee to employee as per grades or designations. On the other hand, even distribution of duties can minimize this effect in the larger organization and can help them reducing stress. Even distribution of duties can be a type of organizational support.

According to Wayne et. al., 1997, there are certain ways to overcome the effect of these stressors at organizational output. Job training is a discretionary practice being invested in the employees, helping them to beat the stressors and other related factors. The ecological systems theory reported the link between the direct and indirect effect of institutional support on the occupational stress and psychological distress of the employee. The theory suggested an inverse relation between the three. The higher the institutional support will be, the lesser the employee will have psychological distress and will have lower perceived occupational stress. On the other hand, lack of organizational support will increase the both i.e. psychological distress as well as perceived occupational stress (Thorsteinsson et. al., 2014).

During health crises, the service health providers that require institutional support at

most are the service health providers. It is specifically worth noting that institutional support plays a critical role for service health providers as seen during the influenza pandemic (Balicer et. al., 2006). It has also been reported during COVID-19 pandemic. In current pandemic context, a study was conducted with 69 frontline health care providers. The assumption reported was; the lack of institutional support at the outbreak of pandemic COVID-19 was a direct source of distress among frontline staff members. The stressor was the uncertainty by organization that whether they would take care of their personal and their families or not if they get infected by the viral infection. The study suggested the importance of institutional support during the unprecedented public health emergency of COVID-19 (Shanafelt et. al., 2020).

It's a worldwide need to provide systematic interventions like an appropriate organizational support for the better mental health of medical staff members under high work pressure (Lancet, 2020). The psychological problems faced by service health providers can badly effect their span of attention, concentration, decision making power at the time of urgency, and by considering their level of understanding. By providing institutional level support, all these negative impacts can be regulated and can give a way to better control the COVID-19 outbreak.

Throughout the COVID-19, the most affected group of people are the service health providers. The service health providers are the ones that are obliged to operate and enhance doctor-patient relationships with one-on-one therapies. Their individual mental health, however, must be great to effectively consult the patients amidst the pandemic. The healthcare staff experience constant work pressure and tightened duty hours which might lead to serious work pressures and stressful situations. The consistent day-to-day fear of catching the virus

could let them develop the psychological symptoms of stress, psychological distress, anxiousness and burnouts as well (Chan & Huak 2004; Radev et al., 2004; Wu et al., 2009).

During the current COVID-19 pandemic, it has been observed that the service health providers have experienced the psychological issues including fear, anger, trauma, anxiety, and depression (Kang et al. 2020). What they experience the most is the fear of becoming an infection transmitter, generally for the population and specifically for their family and loved ones.

The other problems they encounter are the levels of sleep disorders, among which the most common one is partial to complete lack of sleep leading to insomnia, lack of quality of sleep leading to lethargy, feeling of helplessness and hopelessness leading to depression, nervousness because of vague cause and treatment they keep on giving to the infected patients because of unknown etiology, sadness and burnout (Ho et. al., 2020; Huang & Zhao, 2020; Lai et. al., 2020; Gong et. al., 2020. They not only develop these psychological symptoms, rather they deepen this psychological damage because of continuous risk of catching the infection, by witnessing the deaths of their colleagues and by constantly keeping themselves at risk. The psychological distress is one of the most common issues faced by all frontline healthcare staff members at the time of pandemic outbreak including doctors and nurses (Wu, Fang, & Guan et al., 2009) and the same thing has been shown in previous studies that service health providers undergo stress at highest level (Lai, et al., 2019).

The stress can be accompanied by fear, intrusive thoughts, insomnia and nightmares. The condition gets worsened when the means of transmission of virus could be anything i.e., it may not confine to humans only, rather it is transmittable through any object and even through air droplets like respiratory droplets. This multi-mode of transmission intensifies

stress (Arslan et. al., 2020).

Another reason of rapid increase in the frequency and intensity of stress is the day-by-day high rate of infection spread and the leading rate of deaths causing anxiety, depression and adjustment issues (Arslan et al., 2020).

During the COVID-19, strict lockdowns have been imposed by the Government to keep the confirmed cases at borderline and to limit the social interaction while the service health providers have been required to keep performing their duties. They have been required to continue with the daily duties even with extra burden and with long-hour shifts. While performing the duties with the penetratingly challenges they remained anxious about getting infected and then transmitting the virus to their family members (Marchetti et al., 2020) giving way to stress and lack of efficiency during work.

The hospitals, isolation centers and intensive care units showed an exponential increase in demand of service health providers by increased number of in-patients at hospitals. The medical staff faced long working hour's shifts with scarce resources, unwarranted risky infrastructures (Kisely et. al., 2020; Shigemura et. al., 2020) and with the requirements of keep on wearing the personal protective measure (PPE) throughout the day that may cause extreme psychical discomfort and breathing difficulties, ultimately leading to a bad impact on their performances. Moreover, the healthcare workers feel anxious about the acceptance of their work and the impact it has on the patients, and most importantly on themselves. The COVID-19 had been a disease without a specific cure for more than a year since the outbreak, making it a challenging task to tackle. The physicians and nurses are well aware of the complexities and risks it endures (Monte et. al., 2020).

The substantial percentage of service health providers are diagnosed with mental

disorders such as depression and anxiety with symptoms of stress and distress. After the outbreak, as the COVID-19 infection rate increased the prevalence of psychological disorders among service health providers, it eventually left them more stressed than ever before (Barello et al., 2020; Chen et al., 2020; Tella et al., 2020; Xiao et al., 2020).

While compiling the literature, it has been observed that besides other consequences, one of the most common results of consistent stress is to have burnout among service health providers (Xu et. al., 2020). The consistent stress leads to the feeling of emotional exhaustion and depersonalization and becomes the root cause of burnout among service health providers. This burnout, in turn predispose the clinicians and other frontline staff members to a variety of mental health issues.

Here, the burnout will be the prolonged response assumed and established in response to the consistent chronic stress (Maslach, 2003) and such a burnout at workplace include the emotional exhaustion, depersonalization and reduced level of personal accomplishment. The early researches addressed the different occupations facing burnout and they concluded that the health care profession is the most vulnerable one. As a healthcare professional, the prime objective is to provide aid and services to the people in need of healthcare and mostimportantly if the ensuing condition is a viral disease and requires special attention and care. The emotional and interpersonal well-being is most important in a prolonged workingenvironment. Failure of mental strength might lead to burnouts and emotional breakdown situations (Bakker et. al., 2014).

The situation that arises after a burnout further effects the work quality, and it negatively influences the performance and thus lower down the overall standard being provided to the patients (Rupert et al., 2015). The whole saga ultimately lead to the generalized

negative outlook of service health providers toward themselves and towards others (Paris & Hoge, 2010). These burnouts have negative consequences on both the medical staff members and their psychological health as well as to the patients. The resulting situation can worsen the overall condition of both the service health providers and patients as well (Rupert et al., 2015).

Among the three dimensions of burnout, the dimension of depersonalization leads to the emotional distancing or emotional disengagement of medical staff members from their clients putting the situation at higher risk (Maslach & Jackson, 1981). Besides these three dimensions, burnout can be characterized by the state with depleted psychological resources letting the chronic exposure of stress to produce strong negative consequences among service health providers (Kumar, 2016; Callahan, 2019).

The associated risk factors of burnout among service health providers includes reduced quality of work, stressful professional experiences, and social isolation at younger age and throughout the professional career (Murali et al., 2018). The other consequences of burnout include an increased risk of medical errors due to high work pressure (Lapa et al., 2017).

Nonetheless, where there is stress, there is an ability to cope that stress. To overcome the stress and to lower down its negative consequences, the person tends to bounce back, try to bend not to break, and even try to move towards the positive growth.

According to American Psychological Association (2014), resilience is basically the process of adopting the adversity a person come across and to overcome the trauma or the tragedy. Resilience on one hand shields again stress and on the other hand gives birth to positive growth. It is also considered that the ability of resilience changes and cultivates over time, and it develops one's better interaction with the environment letting the person to live in better way (Cohen & Turkewitz, 2012). It is a flexible adaptation to the newer situation and

strive to convert the negative consequences into a positive one (Tugade & Fredrickson, 2004). Resilience is a subjective strength and varies from individual to individual. It can contribute to yield out the positive functioning and to reduce out the negative emotions, feelings, thoughts and behaviors. It leads to the optimal development allowing the person service with the change.

As already mentioned, resilience is generally defined as the ability to adapt and maintain adequate functioning despite adverse events and can be conceptualized as a trait, outcome or process (Hartmann et al., 2020; Kunzler et al, 2020; Morse et al, 2021). For healthcare workers, coping with mental health problems such as anxiety, depression and burnout during the emergency can be challenging. Overwhelmed by the workload, the lack of material and human resources, workers also face an increased risk of 'moral injury' when addressing the ethical challenges of the pandemic and the discrimination experienced due to the fear of contagion by the general population (Vinkers et al, 2020; Baldassarre et al, 2020). As evidenced by previous research, psychological resilience is a fundamental variable in reducing and preventing the negative psychological effects of the pandemic (Blanc et al, 2019).

Resilience improves personal growth and perceived professional benefits (Kalaitzaki et al, 2021; Liu et al, 2021) and has a positive impact on work engagement even in non-healthcare workers (Joseph et al, 2012). Overall, we found that age and work experience positively correlate with aspects of resilience in workers. A relevant point is that resilience is considered not only at the individual level, as a key role is played by the organizational resilience mechanisms that shape the way healthcare professionals experience the crisis (Heath et al, 2020; Rangachari et al., 2020; Kreh et al, 2021). Resilience seems to be a pivotal variable

in dealing with work-related stress, even in the toughest situations, such as the COVID-19 pandemic.

It has also been concluded that resilience act as a moderator between the stress and the burnout and can ultimately mitigate the detrimental effects on the stress on the burnout of an individual (Hao & Singh, 2015) assuming that increase in the level of resilience decreases the effects of stress on the burnout of a person. In the context of epidemics and pandemics, the resilience reduces the adverse effects of stress and promotes the positive mental health as well.

The study conducted by Arslan et al., (2020) concluded that it acts like a mediator in relation between the psychological health of a person, the positive and negative effects of stress during the COVID-19 pandemic. In addition, it is also supposed that resilience act as a mediator between the various COVID-19 related factors such as the perceived risk, fear, stress and anxiety (Yildirim et al., 2020). The literature also gives a back to dynamic effects of resilience. Having a good resilience can help the medical health service health providers lessen the adverse effects brought by various stressors (Brennan, 2017). The need of effective interventions for the service health providers has been found. It was noted that good interventions can help medical staff members to improve their resilience helping them to have more conductive ways of coping with the challenges and stress brought by work pressure (Dowd et. al., 2018).

Among the different frontline staff members, doctors and nurses remained in direct contact with the patients so they should be able to adapt to newer situations, to be more realistic and to have positive expectations for the future medical-related outcomes. Improving the resilience of the nurses and doctors is conductive to enrich their coping capabilities in order to achieve the positive future outcome (Çam & Büyükbayram, 2017).

Another study also supported the idea that interventions taken to improve the resilience can help them to benefit their physical health, mental health and to overcome the expected stress at the time of pandemic among medical staff members (Maunder et. al., 2008). With the outbreak, though the high-risk appraisals can reduce the level of resilience, but it can be better retained by strengthening the coping abilities and by dismissing the intensity of negative emotions and feelings (Son et. al., 2019).

There are specific variables that are likely to mediate the stress responses. The confidence in support and training given or taken by the health care service health providers, the availability of social support, a way out to the interpersonal problems and pandemic self-efficacy are few of the variables that can help service health providers to overcome the stress and maintain excellence in the performance (Kang et al., 2020).

The job satisfaction can be achieved by provision of assistance and by developing the practical competencies (Maunder et al., 2008; Aiello et. al., 2011; Aiello et al., 2011; Cooke et al., 2013) discovered the association between resilience and low burnout. It has been observed that higher amount of resilience with appropriate use of coping strategies can help the individual overcome emotional exertion, depersonalization and to enhance the personal accomplishment. They rely on coping mechanism to overcome the stressful experiences as a way of preventing the burnout syndrome. The task-oriented coping, emotion-oriented coping and avoidance-oriented coping addressed by Endler and Parker (1994) can be used as a way of buffering the effect of stress on burnout. It has also been concluded that the task-oriented coping predicts lower burnout levels among the service health providers (Jaracz et al., 2005; Howlett et al., 2015; Rodríguez-Rey et al., 2019).

CHAPTER 3

RESEARCH METHODOLOHY

3.1 Introduction

The current study followed a longitudinal research design targeting a sample of service health providers i.e. doctors and nurses with a purpose of finding the Role of psychosocial factors in relationship between COVID-19 stress and burnout among service health provider. The study has two stages:

i. Phase I - Pilot Study

The Pilot study was carried out to inspect the trend of relationships between the research variables and to find out the psychometric properties of the scale.

ii. Phase II - Main Study:

This phase further has following 2 parts i.e. accelerated stage and decelerated stage. These stages have been considered from CDC and WHO which have their frameworks for preparing and planning response to a pandemic. The stages followed in this study are taken from CDC and WHO framework and are as:

Accelerated stage study. The stage I was the Accelerated stage i.e. the data was collected when the ratio of COVID-19 was at peak throughout the Pakistan. : This stage is relevant once the epidemic takes root within a country. There is usually a big lag in surveillance and response efforts, and the key questions are to model spread patterns at different spatio-temporal scales, and to derive short-term forecasts and projections. For current study, the timeline for accelerated stage was between February 2020 till April 2022.

Decelerated stag e study. The stage II was the Decelerated stage i.e. the data was collected when the ratio of COVID-19 declined throughout the Pakistan. Decelerated stage: As per CDC and WHO model, in this stage, different interventions, which are mostly non-pharmaceutical in the case of a novel pathogen, are implemented by government agencies, once the outbreak has taken hold within the population. This stage involves understanding the impact of interventions on case counts and health infrastructure demands, taking individual behaviors into account. The additional datasets needed in this stage include those on behavioral changes and hospital capacities. For current study, the timeline for accelerated stage was between July 2020 to December 2020.

The main aim of Phase II of the study was to do a comparative analysis of how the COVID stress and its consequence of Burnout declined if the ratio of COVID 19 declined. Another aim of the Phase II was to look at the regressive level of variables from Phase I to Phase II. Moreover, this phase also targeted to analyze how the moderating variablesincluding resilience, organizational support and coping strategies moderated the effect of Independent and dependent variables i.e. COVID stress and Burnout.

3.2 Research Design

The current study followed a longitudinal research design targeting a sample of service health providers i.e. doctors and nurses with a purpose of finding the Role of psychosocial factors in relationship between COVID-19 stress and burnout among service health provider.

3.3 Research Instrument

Following instruments were used:

Consent form and demographic sheet. In order to take the willingness of participants, the consent form was given. The demographic sheet included the information

like name of the participant, age, gender, profession, pre-morbid history, family structure and the monthly income of the participant.

COVID Stress Scales (CSS). Taylor et al., 2020. has developed and validated the scale and is a standardize measure of stress at time of COVID-19 pandemic. The scale is having 36 items in total. It has 6 sub-scales including (1) COVID danger sub-scale, (2) Socio economic consequences sub-scale, (3) COVID xenophobia sub-scale, (4) Contamination sub-scale (5) compulsive-checking sub-scale, and (6) COVID traumatic stress symptoms sub-scale. It is a Likert scale with five point scoring. The scoring ranges from 0-4. The "0"is for "not at all", "1" is for "slightly agree", "2" is for "Moderately agree", "3" is for "very much agree" and "4 is for "extremely agree" leading from lower stress prediction to extreme stress prediction. All of sub-scales show higher level of reliabilities that is > .80 (Taylor et al., 2020). The scales have also proven validity i.e. convergent validity with pre-COVID health anxiety scale, and with compulsive checking and contamination symptoms scales (Tavakol & Dennick, 2011).

Maslach Burnout Inventory (MBI). It is an instrument to measure burnout (Maslach, Jackson, & Leiter, 1996). There are 22 items with three subscales including emotional exhaustion, depersonalization and personal accomplishment. The first sub-scale of emotional exhaustion is having 9 items, the second sub-scale of depersonalization is having 5 items and the third sub-scale of personal accomplishment is having 8 items in total. The sub-scale of depersonalization measures the unsympathetic and impersonal responses on individual towards one's care. For both of sub-scales i.e. for depersonalization and for personal accomplishment, the higher scores show the higher level of burnout. The third sub-scale i.e. personal accomplishment measures the level of competence and achievement so the lower

score on this subscale indicate the higher level of burnout. The scoring of all sub-scales ranges between 1-6. The score "1" indicates "a few times a year or less" while "6" indicates "every day" depicting lower to extremely higher levels of burnout. The reliability of emotional exhaustion sub-scale is .89, of depersonalization sub-scale is .59 and of personal accomplishment scale is .74 (Maslach, Jackson, & Leiter, 1996).

Brief Resilience scale. A 6 items measure to determine the person's ability to bounce back from the stressful situation and is developed by smith, Dalen, Wiggins, & Tooley et al., in 2008. It is a 5-point Likert scale. The responses are rated from 1-5 score. "1" is for "strongly disagree" till "5" for the "strongly agree". Half of the items are reversed score to avoid the desi liability response bias (Cronbach, 1950). The Brief resilience scale is a single factor scale and the higher scores indicates that the person is more resilient. Smith et al. (2008) reported Cronbach's alpha of BRS as .71.

Coping strategy indicator. A measure of coping strategies indicator is developed by khan (1990). It is a measure to find out which type of coping strategy is used to overcome stress. The CSI has 33 items divided in to 3 sub-scales with 11 items in each scale. The first sub-scale of CSI is the "problem solving" that measures an instrumental approach of a person to sort out the problem and to find out the remedies against that particular problem. The second sub-scale of CSI is the "social support seeking sub-scale". It is also having 11 items and is based on how the person uses the human contact and resources to overcome the stress. It amplify about how the friends, family and society can be source of overcoming the stress. The last coping strategy is the "Avoidance" and is also based on 11 number of items. It suggests that how the person tend to escape from the stressful situation. The alpha reliability of these sub-scales ranges between .84 to .93 (Khan, 1990). The convergent validity of the

CSI scale is demonstrated with already existing measures of pathology, personality and the coping and non-convergence with social desirability indices The CSI is also having the criterion reliability in both the laboratory stimulations and in real world settings (khan, 1994).

COVID-19 Organizational Support Scale (COVID-OS). This measure is being developed by Shanafelt, Ripp & Trockel (2020) and is based particularly on the context of COVID-19. The scale is having 8 items in total. It is a 7-point Likert scale ranging between "1" for "strongly disagree" to "7" for "strongly agree". The alpha reliability coefficient for the test score was .80.

Content validity of instruments

To ensure the content validity of instruments, questionnaires were given to two PhD Doctors and one PhD scholar from the department of Applied Psychology National University of Modern Languages, Islamabad. The selected members had a strong grip on Psychometrics and subject matters and they reviewed items carefully. This process confirmed that the content of questionnaires was relevant, language was appropriate, and items were understandable for the targeted population. The selected members endorsed that items are appropriate to use for targeted population.

Procedure

After permission was taken from the Directorate of Health and from relevant authorities including DHO and Deputy DHO of Abbottabad Health sector, data collection was started. Before taking permission, the authorities were given an orientation about the type of study and its objectives. Surety was given to conduct whole of the process while keeping in account the ethical standards. After getting official permission, the participants were approached. Participants were given the assurance that the information they will give

will be kept confidential and they could quit research at any stage of the study. They were also assured that the information they will give will be used for this research only. After that a booklet of questionnaires [i.e. COVID stress Scale (CSS), Brief Resilience Scale (BRS), Organizational Support Scale (OS), Coping Strategy Indicator (CSI) and Maslach Burnout Inventory (MBI)] was handed over to the participants. Each individual took almost 50 minutes to complete the questionnaire. Participants were given proper instructions about how to fill up the questionnaires. After getting data, the analysis was run on SPSS to get the numerical results.

3.4 Verification of tool - Pilot study

Objectives

1. To examine the trend of relationships between the study variables
2. To determine the psychometric properties of the scales

Sample

Sample of Pilot study comprised 60 Service Health Providers (males = 31, Females = 29) from two groups (doctors: 35 and nurses: 25) with age 22 years above. The inclusion criteria of sample include Doctors and Nurses and exclusion criteria include other support staff. The selected sample was performing eight hours duty per day in COVID ward. The sample was taken through convenient sampling technique from various Government hospitals of Abbottabad district. Each participant was independently approached and guided by the researcher. The researcher provided them brief introduction about the type of study, its nature. Then researcher distributed the booklet containing all the scales of study. Initially 71 service health providers (males = 42, Females = 29) were approached while, with an attrition rate of 15%, 11 participants withdrew from the research. These eleven questionnaires were discarded. The final sample left was 60 which was used for the pilot study. The table 1 shows the percentages and frequencies of demographic information of the finalized sample.

Table 1

Sample characteristics detail of the of Pilot Study (N=60)

Sample characteristics	Characteristics	Total Sample *f%*
Gender	Males	31 (52%)
	Females	29 (48%)
Group	Doctors	35 (58.3%)
	Nurses	25 (41.6%)

Procedure

After permission was taken from the Directorate of Health and from relevant authorities including DHO and Deputy DHO of Abbottabad Health sector, data collection was started. Before taking permission, the authorities were given an orientation about the type of study and its objectives. Surety was given to conduct whole of the process while keeping in account the ethical standards. After getting official permission, the participants were approached. Participants were given the assurance that the information they will give will be kept confidential and they could quit research at any stage of the study. They were also assured that the information they will give will be used for this research only. After that a booklet of questionnaires [i.e. COVID stress Scale (CSS), Brief Resilience Scale (BRS), Organizational Support Scale (OS), Coping Strategy Indicator (CSI) and Maslach Burnout Inventory (MBI)] was handed over to the participants. Each individual took almost 50 minutes to complete the questionnaire. Participants were given proper instructions about how to fill up the questionnaires. After getting data, the analysis was run on SPSS to get the numerical results.

Results

The result section of the current study shows the results of pilot study. The results include Inter-scale correlation, alpha coefficients of all scales, and descriptive statistics of the study variables. Moreover, the pilot study analyzed the Item Correlation and corrected item correlation of CSS and its six sub-scales (COVID stress scale), BRS (Brief Resilience Scale), BRS (Brief Resilience Scale), CSI (Coping Strategy Indicators with its three sub-scales) and MBI (Maslach Burnout Inventory with its three sub-scales).

To estimate the trends of data; descriptive analysis is conducted (see Table 2). The values of mean and SD show deviations from the means on all variables are normal. Skewness also indicated that the data is normally distributed.

Moreover, Table 2 shows correlation among all the study variables. Values in the table indicate significant level of correlation among all sub-scales of COVID stress scales ranging between .45 to .67 as depicted by the (Tavakol & Dennick, 2011) that all sub-scales of COVID stress scale comes in a supplement and the alpha reliability coefficient for the test score of all sub-scales was greater than .80.

Further moving, the vales in the table 2 indicates the significant internal consistency of all sub-scales of Coping strategy indicator with COVID stress scale ranging between .38 to .87 as backed by the analyses done by khan (1990) which indicated a high internal consistency on all the three sub-scales of CSI i.e. for social support seeking subscales the internal consistency shown was .92, .89 for problem solving and .83 for Avoidance. The results shows that problem-solving and social support seeking coping strategies are having negative significant correlation with COVID stress scales (CSS) and Maslach Burnout Inventroy (MBI),

whereas, Avoidance coping strategy is having significant positive correlation with CSS and MBI.

Table 2

Inter-scale correlation, alpha coefficients, and descriptive statistics of the study variables (N=60)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. CSS-D	-	.67**	.62**	.59**	.58**	.45**	-.78**	.87**	.80**	-.86*	-.91**	.57**	.50**	-.86**
2. CSS-SEC	-	-	.73**	.66**	.65**	.48**	-.58**	.65**	.59**	-.62**	-.63**	.62**	.57**	-.56**
3. CSS-X	-	-	-	.75**	.68**	.57**	-.48**	.57**	.55**	-.54**	-.56**	.57**	.48**	-.52**.
4. CSS-Con	-	-	-	-	.69**	.59**	-.47**	.50**	.50**	-.54**	-.54**	.43**	.38**	-.48**
5. CSS-TS	-	-	-	-	-	.62**	-.46**	.57**	.47**	-.47**	-.54**	.47**	.41**	-.50**
6. CSS-CC						-	-.38**	.42**	.38**	-.39**	-.43*	.35**	.25**	-.37**
7. CSI-PS							-	-.74**	-.67**	.72**	.76**	-.46**	-.44*	.69**
8. CSI-SSS								-	,75**	-.84**	-.87**	.49**	.44**	-.82**
9. CSI-Avo									-	.15**	-.77**	-.18**	-.16**	.08
10. BRS										-	.84**	-.53**	-.51**	.83**
11. COSS											-	.14*	.18**	-.11
12. MBI-EE												-	.84**	-.46**
13. MBI-D													-	-.44**
14. MBI-PA														-
a	.79	.83	.82	.82	.82	.79	.76	.76	.64	.64	.85	.81	.64	.68
M(SD)	18.8 (3.6)	17.7 (4.2)	18.4 (4.1)	18.6 (4.1)	17.2 (4.2)	18.0 (3.7)	14.2 (4.1)	28.2 (4.0)	27.4 (4.0)	11.3 (3.3)	13.6 (3.2)	41.9 (7.9)	23.6 (5.1)	13.6 (3.7)
Skewness	-.77	-.78	-1.1	-1.1	-.61	-.76	2.1	-1.1	-1.1	1.6	.96	-1.4	-1.4	1.2
Kurtosis	.025	.32	1.5	1.4	.15	.71	5.5	1.3	4.6	4.6	.96	1.0	1.7	2.4

*$p<.05$, **$p<.01$

Note: CSS-D=COVID stress scale-Danger subscale, CSS-SEC= COVID stress scale-Socio-economic consequence subscale, CSS-X= COVID stress scale-Xenophobia subscale, CSS-Con= COVID stress scale-Contamination subscale, CSS-TS= COVID stress scale-Traumatic stress subscale, CSS-CC= COVID stress scale-compulsive checking subscale, CSI-PS= Coping strategy indicator-Problem solving subscale, CSI-SSS=Coping strategy indicator-Social support seeking subscale, CSI-Avo=Coping strategy indicator-Avoidance subscale, BRS=Brief Resilience scale, COVID-OSS=COVID Organizational support scale, MBI-EE= Maslach burnout inventory-Emotional exertion subscale, MBI-D= Maslach burnout inventory-Depersonalization subscale, MBI-PA= Maslach burnout inventory-Personal accomplishment subscale

Next, the Brief resilience scale (BRS) also shows an internal consistency ranging between -.43 to -.86. According to Windle (2011), the BRS is one of the scale who is having the most satisfactory psychometric properties like reliability and validity. BRS shows a high degree of alpha reliability ranging between .80 to .91 (Scheier, Carver, & Bridges, 1994; Ryff & Keyes, 1995; Bagby, Parker, & Taylor, 1994; Denollet, 2005; Watson, Clark, & Tellegen, 1988). Similarly, the fourth scale of current study i.e. COVID Organizational support scale has also shown a significant level of internal consistency ranging between upto -.91 showing as the COVID organizational support increases it lowers the level of COVID stress as backed by the study of Stephen et al., 2020.

The last inventory of the current study i.e. Maslach Burnout inventory (MBI) has also shown a significant level of internal consistent for all three sub-scales i.e. emotional exhaustion, depersonalization and personal accomplishment ranging till .86. The all sub-scales are having good internal consistency in the analyses done by Maslach, Jackson, and Leiter, (1996). The two sub-scales i.e. emotional exhaustion and depersonalization are positively correlated with COVID stress and negative coping strategy Avoidance whereas, personal Accomplishment is negatively correlated with COVID stress and positive coping strategies of CSI.

Table 3

Item-total Correlation and corrected item correlation of COVID stress scale with its sub- scales (N=60)

Item	Item-total correlation	Corrected Item-total correlation	Item	Item-total correlation	Corrected Item-total correlation
	Danger			Contamination	
1	.57**	.50	19	.73**	.67
2	.60**	.53	20	.68**	.61
3	.72**	.65	21	.78**	.73
4	.77**	.71	22	.71**	.65
5	.75**	.68	23	.78**	.72
6	.78**	.73	24	.68**	.60
	Socio-economic consequence			Traumatic stress	
7	.77**	.72	25	.59**	.51
8	.65**	.58	26	.67**	.60
9	.73**	.68	27	.78**	.73
10	.74**	.69	28	.79**	.74
11	.80**	.75	29	.72**	.66
12	,73**	.67	30	.77**	.71
	Xenophobia			Compulsive checking	
13	.68**	.61	31	.65**	.47
14	.73**	.67	32	.68**	.53
15	.73**	.66	33	.70**	.54
16	.73**	.67	34	.73**	.58
17	.75**	.69	35	.71**	.56
18	.70**	.63	36	.70**	.54

**$p<.01$

The table 3 shows an item-correlation and corrected item correlated of all the 36 items distributed in 6-subscales. All of the 36 items showed a significant positive correlation at .01 level of significance so, all items can be considered to have good level of reliability to be used in the further study.

Table 4

Item total Correlation and corrected item correlation of CSI scale with its sub-scales (N=60)

Item	*Item-total correlation*	*Corrected Item-total correlation*	*Item*	*Item-total correlation*	*Corrected Item-total correlation*
	Problem Solving				Social support seeking
2	.63**	.56	1	.52**	.45
3	.58**	.53	5	.59*	.52
8	.53**	.51	7	.58*	.51
9	.59**	.52	12	.60**	.51
11	.69**	.64	14	.55**	.48
15	.61**	.55	19	.66**	.60
16	.66**	.61	23	.58**	.51
17	.62**	.55	24	.50**	.42
20	.65**	.68	25	.58**	.52
29	.56**	.68	31	.50**	.44
33	.73**	.68	32	.50**	.43
	Avoidance				Avoidance
4	.50**	.48	22	.55**	.48
8	.54**	.46	26	.46**	.43
21	.50**	.48	27	.59**	.52
10	.48**	.39	28	.56**	.55
13	.62**	.54	30	.66**	.60
18	.60**	.51			

**p<.001, *p<.01

The table 4 showed the item correlation and corrected-item correlation of all 33 items divided in to three sub-scales i.e. problem solving sub-scale, social support seeking sub-scale and Avoidance subscale of coping strategy indicator. All of the 33 items showed a significant positive correlation so, all items can be considered to have good level of reliability to be used in the further study.

Table 5

Item-total Correlation and corrected item correlation of Brief Resilience scale (N=60)

Item#	Item-total correlation	Corrected Item-total correlation
1	.60**	.50
2	.60**	.49
3	.58**	.47
4	.63**	.54
5	.62**	.52
6	.55**	.44

**$p<.01$

The table 5 showed the item correlation and corrected-item correlation of all 6 items. All of the 6 items showed a significant positive correlation and thus, all items can be considered to have good level of reliability to be used in the further study

Table 6

Item-total Correlation and corrected item correlation of COVID Organization support scale (COS) (N=60)

Item#	Item-total Correlation	Corrected Item-total Correlation
1	.62**	.55
2	.55**	.46
3	.61**	.49
4	.55**	.46
5	.57**	.51
6	.61**	.54
7	.63**	.56
8	.61**	.49

**p<.01

The table 6 showed the item correlation and corrected-item correlation of all 8 items. All of the 8 items showed a significant positive correlation. So, all items can be considered to have good level of reliability to be used in the further study.

Table 7

Item-total Correlation and corrected item correlation of MBI scale with its sub-scales (N=60)

Item	Item-total correlation	Corrected Item-total correlation	Item	Item-total correlation	Corrected Item-total correlation
	Emotional Exhaustion			Personal Accomplishment	
1	.73**	.69	4	.65**	.75
2	.61**	.56	7	.63**	.56
3	.67**	62	9	.62**	.55
6	.72**	.68	12	.42**	.32
8	.68**	.63	17	.65**	.75
13	.61**	.54	18	.53**	.36
14	.70**	.66	19	.53**	.44
16	.72**	.68	21	.56**	.48
20	.73**	.68			
	Depersonalization				
5	.69**	.61			
10	.82**	.77			
11	.76**	.70		.	
15	.76**	.70			
22	.74**	.67			

* $p<.005$

** $p<.01$

The table 7 showed the item correlation and corrected-item correlation of all 22 items divided in to three sub-scales i.e. emotional exertion, depersonalization and personal accomplishment. All of the 22 items showed a significant positive correlation. So, all items can be considered to have good level of reliability to be used in the further study

Discussion

The main aim of this part of study was to find out psychometric properties of all the scales and sub-scales i.e. COVID stress scale, coping strategy indicator scale, Brief Resilience scale, COVID organization support scale, and Maslach Burnout inventory. The sample consisted of (N=60) with the 50% males and 50% females.

Table 2 in the result section indicates the descriptive characteristics of data where the values of mean and Standard Deviation show deviations from the means on all variables are normal. Values of kurtosis and Skewness also indicate that the data is normally distributed.

Table 2 also represents the alpha coefficient reliability of the instruments used in the sample. The COVID stress scale is used to measure the level of COVID stress among service health providers. The scale is having 6 sub-scales and all sub-scales showed a good to excellent level of reliability as shown by the study conducted by Taylor, Landry & Paluszek et al., (2020) that COVID stress scale gives a potential analyses to identify people who are in need of mental health services because of Pandemic stress.

The coping strategy indicator is used to measure the coping approaches used by service health providers at the time of COVID stress and has an alpha reliability of ranging between α=.36-.63). The coping strategy indicator (CSI) has three sub-scales and all three sub-scales showed a good level of reliability. The previous studies have also concluded the superiority of CSI psychometric properties and have suggested that its scales are having internal consistency averaging .84 to .93 (Khan, 1994).

Another scale used to measure the level of resilience among service health providers at time of COVID stress is Brief Resilience scale (BRS). The BRS has 6 items in total and has (α=.64) alpha reliability (Table 2). The scale used to measure the institutional support is

COVID organization support scale having 8 items has (α= .85) alpha reliability (Table 2). The study conducted by Stephen et al., 2020 on 712 service health providers in Bolivia, Ecuador, and in Peru have also shown the good reliability of CSI sub-scales.

The scale used to measure the level of burnout among service health providers is the Maslach burnout inventory (MBI) having (α= .90) with three subscales i.e. Emotional exertion sub-scale having (α=.81), depersonalization sub-scale having (α=.64) and personal accomplishment sub-scale having (α=.68) alpha reliabilities (Table 2)

The Reliabilities of all the scales of study variables are good. They lie within the acceptable range. According to criteria defined by Nunnally and Bernstein reliability above 0.7 was considered high reliability (Kline, 1999).

Furthermore, the Table 2 shows the significant correlations either positive or negative among all the study variables. The previous literature supported the results. During the MERS and SARS, the pandemics lead to the psychological consequences and thus same way with COVID-19 (Zhou et al. 2020; Zhu et al. 2020). The psychological symptoms get more worsen if the stress is because of viral infection like the infection transmittable through blood or through any other fluid or through droplets and airborne (Shiao et al. 2007).

In such situations, the service health providers become vulnerable to job related hazards at their maximum and undergo emotional pressure at job (Wheeler 1997). This enhances its significance when an epidemic becomes a global problem and takes the position of a pandemic just like COVID-19 and give a way to higher level of stress and burnout especially among service health providers (Maunder et al. 2006).

The current pilot study results supported the literature and evidences the presence of COVID stress leading to burnout among service health providers. The Table 2 shows the

presence of COVID stress among all 6 sub-dimensions i.e. danger, socio-economic consequence, xenophobia, contamination, traumatic stress and compulsive checking. The table 2 results are all supported by previous and latest studies. The research supported the findings and suggested that service health providers remains susceptible to feel more stress and thus more burnout during the pandemic. The staff on duties at risk places like at intensive care units, at isolation centers and at emergencies get overwhelmed by the job related stress (Elshaer, Moustafa & Aiad et al. 2018).

There are certain factors that contributed to the high risk of burnout. These factors include the high mortality rates, inappropriate job conditions, over workload, and lack of time to manage the needs of the patients admitted in the hospitals. Because of these factors, the stress level increased ultimately leading to the higher level of burnout among service health providers. Moreover, the job burnout is consistently accompanied by the reduced ability of giving quality work, high rate of absentees from the workplace and avoidance from owing the duties. Such a situation can cause an irreversible effects on the performance of healthcare division (Bakker, Blanc & Schaufeli, 2005; Embriaco, Papazian & Kentish-Barnes et al. 2007).

The results shows the positive correlation with use of negative coping strategies i.e. social support seeking and avoidance during COVID stress and negative correlation with positive coping strategy i.e. problem solving. Researches supported the idea by highlighting the significance of two coping strategies i.e. problem focused copings strategy and the emotion focused coping strategy.

The problem focused coping strategy is a positive coping strategy in which the person focus on the problem, its cause and tend to find out the appropriate solution. The emotion

coping strategy aims to reduce the emotional distress during the stressful situation (Folkman & Lazarus, 1980).

Moreover, the results shows that during COVID stress, at peak level, the service health providers becomes more stressful and lack the power of using resilience as a mediator. The literature shows and the current study results approved that the institutional support can lower down the stress among service health providers during the situation of pandemic.

The studies done by Botha et al., (2015) suggested that institutional support should be given by the organizations to the medical staff members to reduce their levels of stress. The interventions which can mold the negative consequences of stress are training sessions, counselling sessions and group therapies like mindfulness

The table 3, 4, 5,6 & 7 shows the item correlation and corrected item correlation of all the scales and sub-scales used in the study. The items shows a good level of alpha reliability and thus can be considered to be used in the further study as the studies shows that reliability is between moderate level to very good level (kappa, 0.52–0.83).

3.5 Population, Sample and Sample characteristics

Population of current study was “Pakistani Government hospital service health providers”. The inclusion criteria was “Doctors and Nurses” and the exclusion criteria of the study was “other staff members”. Sample of main study at Accelerated stage of Pandemic comprised of 305 Service Health Providers [males = 175 (57%), Females = 130 (42%)] including Doctors (N = 200) and Nurses (N = 105) with age range 22 and above with M = 17.8 and SD = 2.6. The inclusion criteria of sample include Doctors and Nurses performing eight hours duty in COVID wards of civil hospitals and exclusion criteria include other support staff. The sample was taken through convenient sampling technique from various Government hospitals of Abbottabad district. All of the participants were guided and instructed individually about the objectives of study.

Participants were assured of their rights of confidentiality, privacy and their right to withdraw from the research at any stage of the research. After giving brief instructions, all the questionnaires were administered. Initially 350 Service Health Providers (males = 200, Females = 150) were approached with an attrition rate of 12% as 45 participants were discarded because of providing incomplete information. Finally, a data of 305 Participants was used to do statistical analysis at accelerated stage of pandemic.

3.6 Sampling technique

Convenient sampling technique was used to attain the objectives of the current study.

3.7 Data Collection

After taking the formal approval from hospital authorities, the process of data collection was started. An informed consent was also sought from the participants and only those individuals were included in the study who agreed to voluntary participation. After the permission was granted, the participants were given instructions about how to fill the questionnaires. They were also given a confidence that information they will give will keep confidential and will be used for the current study only. They were also given a assurance that they can leave the study at any stage. Their readiness was taken through a consent form. The demographic information was taken including their Contact numbers and ID card numbers so that they can be approached for data collection for stage-II i.e. decelerated stage of the study. After that a booklet of questionnaires [i.e. COVID stress Scale (CSS), Brief Resilience Scale (BRS), Organizational Support Scale (OS), Coping Strategy Indicator (CSI) and Maslach Burnout Inventory (MBI)] was administered on the participants. Each individual took almost 50 minutes to complete the questionnaire. Participants were given proper instructions about how to fill up the questionnaires.

3.8 Data Analysis

The data was subjected to statistical analysis for both accelerated and decelerated stage according to stated hypothesis. The analysis of data began with hypothesis testing at accelerated stage of Pandemic and then at decelerated stage of pandemic. To test the assumptions of main study, linear regression, multiple regression, and moderation analyses were carried.

Linear regression analysis was used to investigate the impact of COVID stress,

Resilience and organizational support on all factors of Burnout (Emotional Exertion, Depersonalization and Personal Accomplishment) at both accelerated and decelerated stage of pandemic among service health providers. To examine the impact of Coping Strategies (Social Support Seeking, Avoidance and Problem Solving) on Burnout (Emotional Exertion, Depersonalization and Personal Accomplishment), multiple regression analyses was computed.

Moderation analysis was performed using Process Macro by Andrew Hayes in SPSS. Finally, paired sample t-test was used to do the comparative analysis of variables at accelerated and decelerated stage of pandemic among service health providers.

3.9 Research ethics

The informed consent was taken from each participant. It was communicated to them that there are no right and wrong answers, the confidentiality of their answers will be made sure of and the data produced for this research will be used for said research purpose only.

3.10 Delimitation of the Research study

At this phase of study, one of the major delimitation of study was possibility of participants to get posted, retired from the jobs till the next phase of study. For possibility of posted cases, detailed biographic information long with contact numbers, and ID ward was taken to minimize as much attrition as possible.

CHAPTER 4

ANALYSIS AND INTERPRETATION OF THE DATA

4.1 Sample characteristics detail at accelerated stage of Pandemic (N=305)

Sample of main study at Accelerated stage of Pandemic comprised of 305 Service Health Providers [males = 175 (57%), Females = 130 (42%)] including Doctors (N = 200) and Nurses (N = 105) with age range 22 and above with M = 17.8 and SD = 2.6. The inclusion criteria of sample include Doctors and Nurses performing eight hours duty COVID wards of civil hospitals and exclusion criteria include other support staff. The sample was taken through convenient sampling technique from various Government hospitals of Abbottabad district. All of the participants were guided and instructed individually about the objectives of study. Participants were assured of their rights of confidentiality, privacy and their right to withdraw from the research at any stage of the research. After giving brief instructions, all the questionnaires were administered. Initially 350 Service Health Providers (males = 200, Females = 150) were approached with an attrition rate of 12% as 45 participants were discarded because of providing incomplete information. Finally, a data of 305 Participants was used to do statistical analysis at accelerated stage of pandemic. The Sample Characteristics are given below.

Table 8

Sample characteristics detail at accelerated stage of Pandemic (N=305)

Sample characteristics	Characteristics	Total Sample (N = 305) *f%*
Gender	Males	175 (57%)
	Females	130 (42%)
Group	Doctors	200 (65%)
	Nurses	105 (45%)

After taking the formal approval from hospital authorities, the process of data collection was started. An informed consent was also sought from the participants and only those individuals were included in the study who agreed to voluntary participation. After the permission was granted, the participants were given instructions about how to fill the questionnaires. They were also given a confidence that information they will give will keep confidential and will be used for the current study only. They were also given a assurance that they can leave the study at any stage. Their readiness was taken through a consent form. The demographic information was taken including their Contact numbers and ID card numbers so that they can be approached for data collection for stage-II i.e. decelerated stage of the study. After that a booklet of questionnaires [i.e. COVID stress Scale (CSS), Brief Resilience Scale (BRS), Organizational Support Scale (OS), Coping Strategy Indicator (CSI) and Maslach Burnout Inventory (MBI)] was administered on the participants. Each individual took almost 50 minutes to complete the questionnaire. Participants were given proper instructions about how to fill up the questionnaires.

Table 9
Means, SDs and t values of Study Variables based on Gender (N=305)

Male (n = 175)			Female (n = 130)		95%CI LL			UL		
Variables	M	SD	M	SD	t	df	p	Cohen's d		
CSS-D	18.20	3.98	20.7	3.7	-3.77	301	.000	-2.40	-.75	.65
CSS-SEC	17.25	4.71	19.1	3.3	-2.75	301	.011	-2.21	-.78	.45
CSS-X	17.5	4.41	20.1	3.38	-4.62	301	.000	-3.07	-1.2	.66
CSS-Con	18.02	4.42	20.1	3.68	-3.26	301	.001	-2.50	-.62	.51
CSS-TS	16.5	4.53	18.3	3.59	-3.73	301	.000	-2.75	-.85	.44
CSS-CC	17.26	4.21	19.0	2.82	-4.09	301	.000	-2.55	-.91	.50
CSI-PS	14.7	4.32	19.5	2.85	2.52	301	.012	.264	2.13	.1.3
CSI-SSS	27.9	4.31	29.1	3.71	-1.12	301	.263	-1.46	.402	.29
CSI-Avo	26.1	4.30	29.5	3.75	-1.91	301	.057	-1.79	.027	.84
BRS	12.1	4.31	29.1	4.31	2.77	301	.006	.315	1.85	3.9
COSS	12.1	3.81	10.7	2.62	2.04	301	.041	.031	1.51	..43
MBI-EE	39.1	9.01	45.7	3.58	-7.84	301	.000	-8.28	-4.96	.0.9
MBI-D	21.9	5.91	26.3	2.19	-7.19	301	.000	-5.06	-2.88	..99
MBI-PA	14.0	4.31	13.1	2.58	2.01	301	.045	.021	1.71	.25

*p<.05, **p<.01

Note: CSS-D=COVID stress scale-Danger subscale, CSS-SEC= COVID stress scale-Socio-economic consequence subscale, CSS-X= COVID stress scale-Xenophobia subscale, CSS-Con= COVID stress scale-Contamination subscale, CSS-TS= COVID stress scale-Traumatic stress subscale, CSS-CC= COVID stress scale-compulsive checking subscale, CSI-PS= Coping strategy indicator-Problem solving subscale, CSI-SSS=Coping strategy indicator-Social support seeking subscale, CSI-Avo=Coping strategy indicator-Avoidance subscale, BRS=Brief Resilience scale, COVID-OSS=COVID Organizational support scale, MBI-EE= Maslach burnout inventory-Emotional exertion subscale, MBI-D= Maslach burnout inventory-Depersonalization subscale, MBI-PA= Maslach burnout inventory-Personal accomplishment subscale

Table 9 below shows group differences on all the study variables based on gender. The results shows that Female service health providers feel more stressed during the peak time of pandemic as compared to males. Moreover, the statistical values shows that level of feeling danger, stress with socio-economic consequence, xenophobia, feeling of contamination, traumatic stress and compulsive checking prevails significantly greater in females as compared to males ($P<.01$). However, use of coping strategies i.e. social support seeking and Avoidance shows non-significant gender wise differences.

On other hand, resilience is more among females as compared to males however effect of organizational support shows non-significant gender wise impact.

Regarding burnout, females service health providers shows higher level of emotional exhaustion and depersonalization in females as compared to males however non-significant difference has been found in level of personal accomplishment.

Table 10
Means, SDs and t values of Study Variables based on Profession (N=305)

	Doctors (n = 200)		Nurses (n = 105)						95%CI	
									LL	UL
Variables	M	SD	M	SD	t	df	p	Cohen's d		
CSS-D	18.71	3.5	19.72	3.9	-1.04	301	.298	-2.40	-1.3	.026
CSS-SEC	17.21	4.2	18.73	4.0	-3.02	301	.003	-2.21	-2.5	-.363
CSS-X	18.14	4.4	18.82	3.5	-1.51	301	.132	-3.07	-1.74	.100
CSS-Con	18.28	4.5	19.43	3.3	-2.32	301	.021	-2.50	-2.1	-304
CSS-TS	16.5	4.5	18.32	3.59	-4.07	301	.000	-2.75	-3.0	.44
CSS-CC	17.26	3.8	19.54	3.14	-5.27	301	.000	-2.55	-3.1	.066
CSI-PS	14.37	3.70	13.96	4.84	.821	301	.412	.264	-.57	.093
CSI-SSS	27.57	3.64	29.20	4.68	-3.13	301	.002	-1.46	-2.4	.411
CSI-Avo	28.25	3.40	29.9	4.91	-1.48	301	.149	-1.79	.1.65	.403
BRS	12.91	2.87	13.01	4.21	1.39	301	.164	.315	-.235	.056
COSS	14.07	2.96	12.98	3.69	2.77	301	.006	.031	.314	.336
MBI-EE	43.01	8.71	40.25	8.71	1.06	301	.288	-8.28	-.870	.321
MBI-D	24.18	4.35	22.65	6.28	2.47	301	.041	-5.06	.314	.281
MBI-PA	13.95	3.31	12.08	4.36	1.95	301	.051	.021	.-.004	.469

*p<.05, **p<.01

Note: CSS-D=COVID stress scale-Danger subscale, CSS-SEC= COVID stress scale-Socio-economic consequence subscale, CSS-X= COVID stress scale-Xenophobia subscale, CSS-Con= COVID stress scale-Contamination subscale, CSS-TS= COVID stress scale-Traumatic stress subscale, CSS-CC= COVID stress scale-compulsive checking subscale, CSI-PS= Coping strategy indicator-Problem solving subscale, CSI-SSS=Coping strategy indicator-Social support seeking subscale, CSI-Avo=Coping strategy indicator-Avoidance subscale, BRS=Brief Resilience scale, COVID-OSS=COVID Organizational support scale, MBI-EE= Maslach burnout inventory-Emotional exertion subscale, MBI-D= Maslach burnout inventory-Depersonalization subscale, MBI-PA= Maslach burnout inventory-Personal accomplishment subscale

Table 10 below shows group differences on all the study variables based on profession. Among various dimensions of COVID stress, the values depicts that fear of secio-economic consequence, traumatic stress, and compulsive checking is more prevailing among nurses as compared to doctors.

Furthermore, the statistical values shows that nurses use more social support seeking coping strategy as compared to doctors (P<.01). However, COVID organizational support effect is more effective on Doctors as compared to Nurses during the peak time of pandemic.

4.2 Linear Regression Analysis of variables at accelerated stage

The linear Regression Analysis and Multiple Regression Analysis on data at accelerated stage of pandemic among service health providers is given in the tables below.

Table 11

Regression Analysis on Burnout by COVID stress at accelerated stage of pandemic (N=305)

COVID stress	*B*	*SE*	B	*t*	*P*	95% CI *LL*	*UL*
Emotional Exhaustion							
	.93	.028	.88	33.6	.000	.87	.98
R = .88, R^2= .78, ΔR^2= .78 (F = 1132.8***)							
Depersonalization							
	.81	.023	.89	35.6	.000	.77	.86
R = .89, R^2= .80, ΔR^2= .80 (F = 1267.9***)							
Personal Accomplishment							
	-.94	.008	-.98	-116.2	.000	-.95	-.92
R = .98, R^2= .97, ΔR^2= .97 (F = 13507.4***)							

**p<.001

Table 11 gives an analysis that Emotional exhaustion and depersonalization are the two dimensions of burnout that are changing by the change in level of COVID stress. The statistical values depicts that increased COVID stress boosts up emotional exhaustion and depersonalization among service health providers whereas it lowers down their capacity of personal accomplishment.

For emotional exertion, the increased COVID stress explained 78% of variability with significant F ration (ΔR^2 = .78, F = 1132.8, p < .001) at accelerated stage of pandemic among service health providers. By analyzing the value of beta, the results shows that single unit increase in the experience of COVID stress will increase emotional exhaustion by .88 units (B = .93, β = .88, p < .001). The value of Adjusted R^2 (ΔR^2 = .80) for depersonalization specify that experience of COVID stress elucidated up to 80% variability in experience of

depersonalization among service health providers with significant F ratio (F = 1267.9, p < .001). Furthermore, the value of beta explains that one unit increase in COVID stress experience will lead to .89 units increase in depersonalization as burnout (B = .81, β = .89, p < .000). For personal accomplishment the ratio goes inversely proportional to COVID stress. About 97% of variance (ΔR^2 = .97, F = 13507.4, p < .001) was explained by the experience of personal Accomplishment to the COVID stress.

Table 12

Regression Analysis of Burnout by Resilience at accelerated stage of pandemic (N=305)

						95% CI	
Resilience	*B*	*SE*	B	*t*	*p*	*LL*	*UL*
	Emotional Exhaustion						
	-.67	.039	-.70	-17.4	.000	-.74	-.59
	R = .62, R^2= .39, ΔR^2= .39 (*F* = 193.6***)						
	Depersonalization						
	-.66	.041	-.68	-16.1	.000	-.74	-.58
	R = .68, R^2= .46, ΔR^2= .46 (*F* = 261.83***)						
	Personal Accomplishment						
	.65	.047	.62	13.9	.000	.56	.74
	R = .62, R^2= .39, ΔR^2= .39 (*F* = 193.6***)						

***p*<.001

The regression analysis of Table 12 probes out that increased resilience have negative impact on emotional exhaustion and depersonalization and they get decreased when service health providers gets more resilient. On other hand, residence have positive impact on personal accomplishment in a way that resilient service health providers showed higher level of personal accomplishment.

Table 12 shows the impact of resilience on both negative factors of the burnout i.e. emotional exhaustion and depersonalization as well as on positive factor of burnout i.e. personal Accomplishment among service health providers during the accelerated stage of pandemic. Findings indicate that resilience emerged as significant factor of reducing emotional exhaustion (ΔR^2= 39, β = -.70, F = 193.6, p < .001) and depersonalization (ΔR^2=

.46, β = -.68, F = 261.83, p < .001) by contributing 39% of variability in emotional exhaustion and 46% variance in depersonalization respectively. However, results indicate the resilience as significant predictor of personal Accomplishment. The Beta values specified that one unit increase in resilience will lead to .62 units increase in personal Accomplishment (B = .65, β = .62, p < .001). For personal accomplishment 39% of variance (ΔR^2 = .39, F = 193.6, p < .000) was explained by the use the resilience among service health providers during accelerated stage of pandemic.

Table 13

Regression Analysis of Burnout by Organizational support at accelerated stage of pandemic (N=305)

Organizational support	*B*	*SE*	β	*t*	*p*	95% CI *LL*	95% CI *UL*
	Emotional Exhaustion						
	-.77	.053	-.64	-14.6	.000	-.87	-.66
	R = .64, R^2= .41, ΔR^2= .41 (*F* = 213.2***)						
	Depersonalization						
	-.79	.053	-.65	-14.9	.000	-.90	-.69
	R = .65, R^2= .42, ΔR^2=.42 (*F* = 223.8***)						
	Personal Accomplishment						
	.77	.062	.58	12.6	.000	.65	.89
	R = .58, R^2= .34, ΔR^2= .34 (*F* = 159.1***)						

***p*<.001

Table 13 of this study shows the impact of organizational support and it suggests that increased organizational support lowers down emotional exhaustion and depersonalization whereas it increases personal accomplishment among service health providers.

The Table 13 interpreted the impact of organizational support on all factors of burnout among service health providers during accelerated stage of pandemic. For emotional exhaustion, the presence of organizational support explained 41% of inconsistency with significant F ratio (ΔR^2 = .41, F = 213.2, p < .001). By analyzing the beta value, the results shows that one unit increase in the availability of organizational support will decrease

emotional exhaustion by .64 units (B = -.77, β = -.64, p < .001). The value of Adjusted R^2 (ΔR^2 = .42) for depersonalization shows that the availability of organizational support explicated up to 42% inconsistency in depersonalization among service health providers during the accelerated stage of pandemic with important F ratio (F = 223.8, p < .001). Beta values indicated that one unit increase in availability of organizational support will decrease .65 units in depersonalization (B = -.79, β = -.65, p < .001). On the other hand, the presence of organizational support predicted the increase level of personal accomplishment among service health providers. For personal accomplishment 34% of variance (ΔR^2 = .34, F = 159.1, p < .001) was explained by the presence of organizational support among service health provider

4.3 Multiple regression at Accelerated stage of pandemic

Table 14

Multiple Regression Analysis on Coping Strategies and Burnout at Accelerated stage of pandemic (N=305)

	Emotional exhaustion						Depersonalization						Personal Accomplishment					
					95% CI						95% CI						95% CI	
V-A	*B*	*SE*	B	*P*	*LL*	*UL*	*B*	*SE*	B	*P*	*LL*	*UL*	*B*	*SE*	β	*P*	*LL*	*UL*
SSS	-.38	-.05	-.25	.000	-.48	-.27	-.36	.06	-.24	.000	-.49	-.32	.41	.05	.27	.05	.31	.51
Avoi	.14	.10	.17	.14	-.05	.34	.11	.12	.13	.35	-.12	.35	-.04	.09	-.04	.65	-.22	.13
PS	-.76	.09	-.87	.000	-.91	-.52	-.66	.12	-.80	.000	-.90	-.42	.62	.09	.75	.000	.44	.80
	R = .91, R^2= .84, ΔR^2= .84 (F = 547.5***)						R = .87, R^2= 76, ΔR^2=.76 (F=328.3***)						R = .93, R^2= .87, ΔR^2=.87 (F=694.4***)					

***p<.001,

Note: SSS= Social Support Seeking, Avoi = Avoidance, PS=Problem Solving

The results of Table 14 shows that the Avoidance did not account for significant variance in personal Accomplishment as a burnout. Overall findings supports that the social support seeking and problem solving are the coping strategies that showed positive associations with personal Accomplishment as a factor of burnout. Increase in use of social support seeking and problem solving will increase the personal accomplishment among service health providers at accelerated stage of pandemic, whereas both of these positive coping strategies will reduce the negative factors of burnout i.e. emotional exhaustion and depersonalization. And in contrast to these two, avoidance show a positive insignificant impact on emotional exhaustion and depersonalization, whereas it showed negative insignificant impact on personal accomplishment among service health providers at accelerated stage of pandemic.

The table 14 show the impact of all coping strategies i.e. Social support seeking, Avoidance and Problem solving on all factors of burnout i.e. emotional exhaustion, Depersonalization, and Personal Accomplishment. Findings indicate that use of coping strategies jointly accounted for 84% of variance in the emotional exhaustion dimension of burnout among service health providers with a significant F ratio ($\Delta R^2 = .84$, $F = 547.5$, $p < .001$). Findings highlighted problem solving as the negative predictor ($B = -.76$, $\beta = -.87$, $p < .001$) of emotional exhaustion suggesting that one unit increase in the use of problem solving as a coping strategy will result in .87 units decrease in emotional exertion. On the other hand, one unit increase in social support seeking as a coping strategy ($B = -.38$, $\beta = -.25$, $p < .001$) will increase emotional exhaustion by .25 units. On contrary, Avoidance as a coping strategy show insignificant impact on emotional exhaustion among service health providers.

To predict depersonalization among service health providers, the values $\Delta R^2 = .76$ discovered important overall relationship ($F = 328.3$, $p < .001$) by contributing 76% of modification in depersonalization. Beta values indicate that problem solving was the sturdiest negative predictor ($B = -.66$, $\beta = -.80$, $p < .001$) of depersonalization suggesting that single unit increase in the use of problem solving as a coping strategy will result in .80 units decrease in depersonalization. The Social Support seeking coping strategy was another significant negative predictor ($B = -.36$, $\beta = -.24$, $p < .001$) suggesting that one unit increase in use of social support seeking as a coping strategy will decrease depersonalization by .24 units.

For personal Accomplishment as a factor of burnout, the coping strategies jointly elucidated up to 87% of variance ($\Delta R^2 = .87$, $F = 694.4$, $p < .001$). Again problem solving was the strongest yet the positive predictor ($B = .62$, $\beta = -.75$, $p < .001$) of personal Accomplishment and specified that by single unit rise in use of problem solving as coping strategy will increase personal accomplishment as a burnout by .75 units. The social support seeking as a coping strategy was also significant positive predictors of personal accomplishment. Beta weights for Social Support seeking ($B = .41$, $\beta = .27$, $p < .001$) reflect that increasing the use of social support seeking as a coping strategy by one unit will result in .27 units increase of personal accomplishment among service health providers.

4.4 Moderation Analysis of Variables

Table 15

Moderating effect of Resilience, organizational support, and coping strategies on depersonalization (N = 305)

					Depersonalization	
Variable		*B*	*SE*	*t*	*P*	*95%CI*
Constant		-58.7	13.3	-4.4	.000	[-84.9, -32.5]
CSS		.59	.18	6.0	.000	[.46, 87]
BRS		-1.01	.67	-1.7	.083	[-2.27, .13]
CSS × BRS		-.008	.004	-1.96	.062	[.016, -.03]
R^2	.81					
F	436.5				.000	
Constant		-64.3	11.1	-5.8	.000	[-86.3, -42.4]
CSS		.64	.08	7.9	.000	[.48, .78]
OS		-2.3	1.15	-2.9	.047	[-4.6, .03]
CSS × OS		-.02	.01	-2.03	.043	[.033, -.001]
R^2	.81					
F	429.4				.000	
Constant		-31.8	17.9	-2.6	.076	[-67.03, 3.5]
CSS		.49	.13	3.1	.002	[.14, .65]
SSS		-3.8	1.4	-2.7	.008	[-.66, .97]
CSSS × SSS		-.03	.010	-2.8	.006	[-.048, 008]
$R^{2/*}$	.81					
F	444.3				.000	
Constant		-32.8	14.2	-2.3	.021	[-60.7, 5.7]
CSS		.40	.11	3.7	.000	[.21, .69]
CSIAvoi		2.6	.65	3.9	.003	[.67, 3.6]
CSS × CSIAvoi		.01	.004	3.2	.001	[.005, .021]
R^2	.81					
F	450.6				.000	
Constant		-30.1	14.2	-2.1	.037	[-57.8, 1.9]
CSS		.36	.11	3.4	.001	[.15, .66]
CSIPS		-1.5	.56	-2.7	.007	[-2.6, .41]
CSS × CSIPS		-.01	.004	-3.0	.003	[-.020, -.004]
R^2	.82					
F	457.4				.000	

***p < .001

Note: CSS = COVID Stress Scale, BRS = Brief Resilience Scale, OS = Organizational Support Scale, CSI_SSS = Coping Strategy Indicator-Social Support Seeking, CSI-Avoi = Coping Strategy-Avoidance, CSI-PS = Coping Strategy-Problem Solving

MogGraph for moderating effect of resilience, organizational support, and coping Strategies on depersonalization at accelerated stage of Pandemic

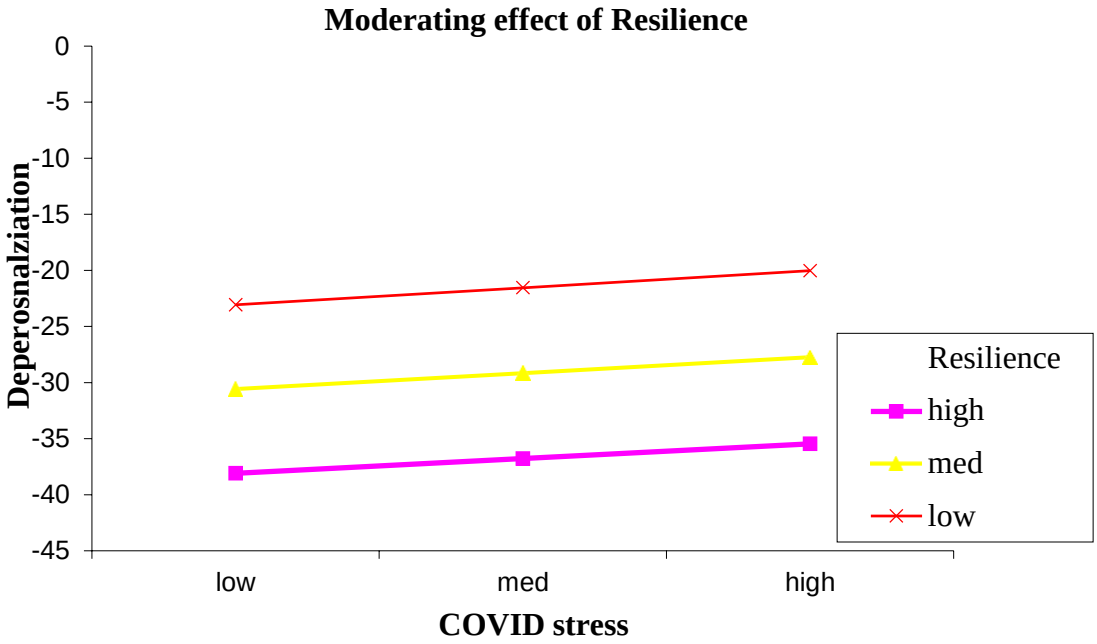


Fig. 2

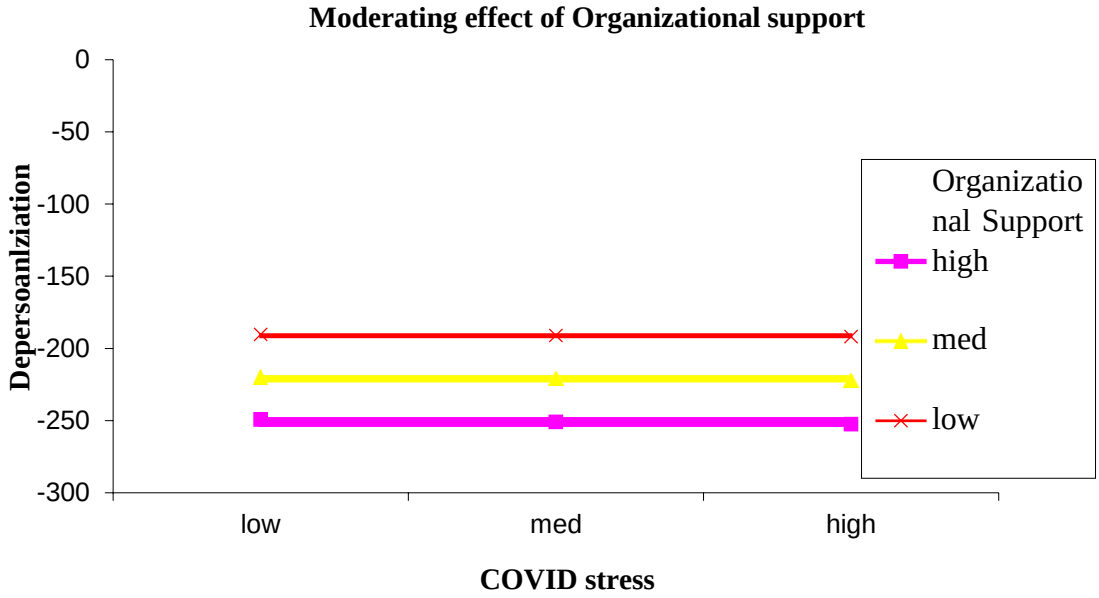


Fig. 3

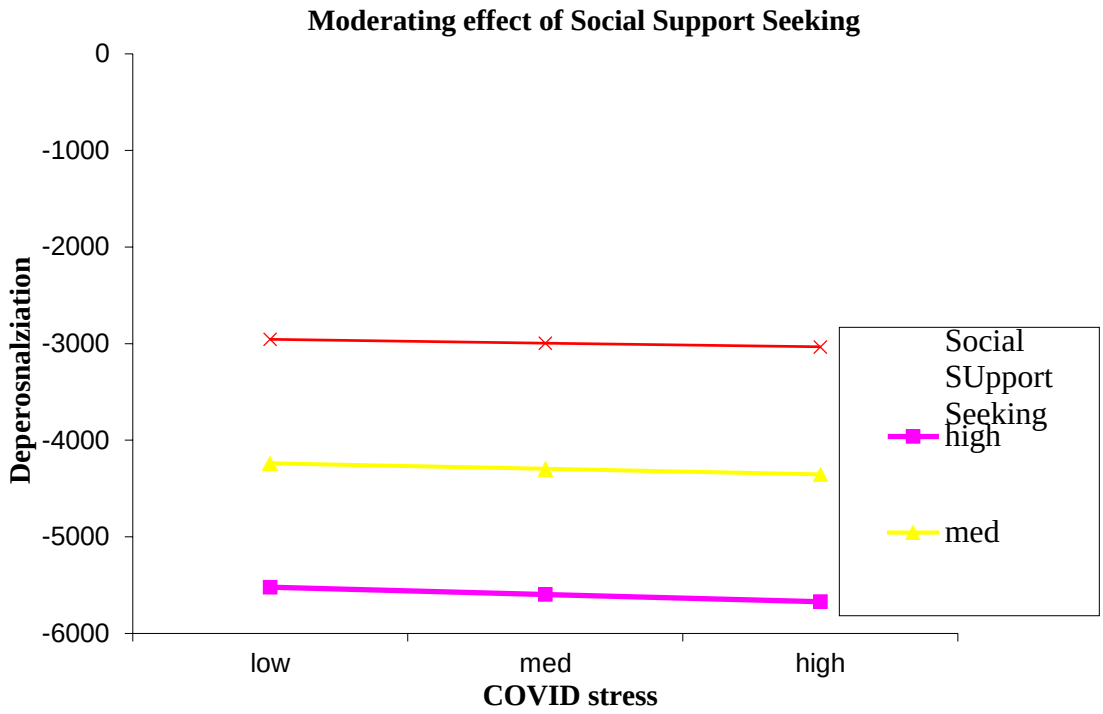
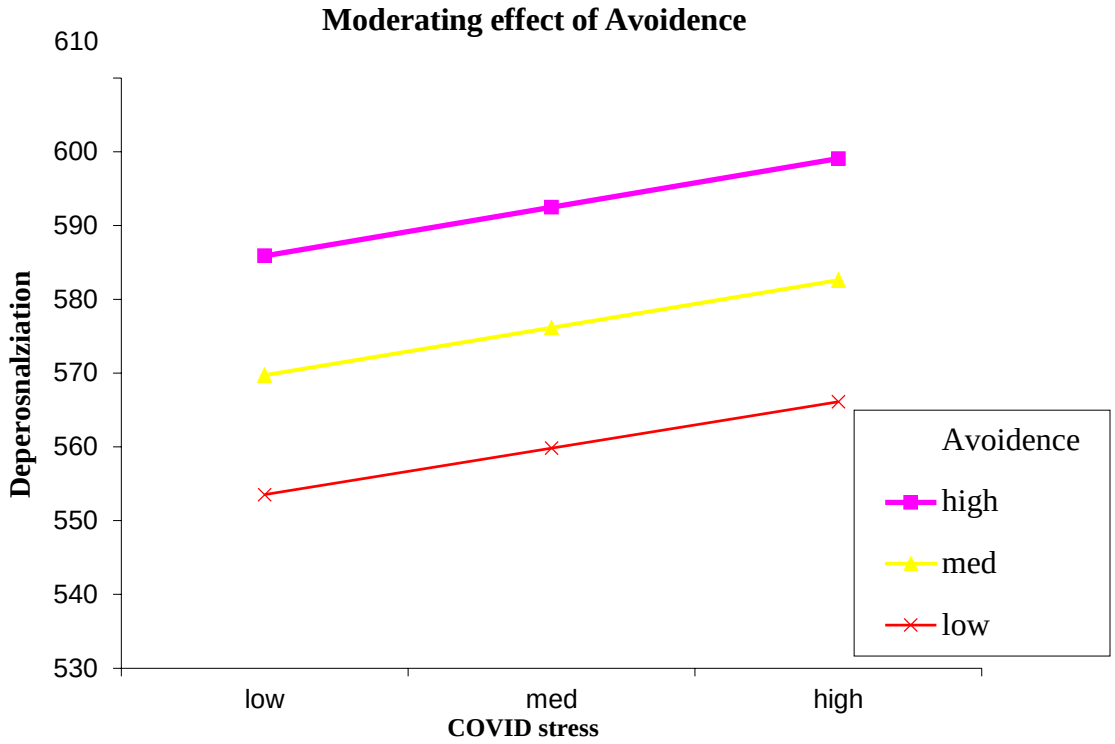

Moderating effect of Social Support Seeking
0
-1000
-2000
-3000
-4000
-5000
-6000
Deperosnalziation
low
med
high
COVID stress
Social SUpport Seeking
high
med

Fig. 4


Moderating effect of Avoidence
610
600
590
580
570
560
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540
530
Deperosnalziation
low
med
high
COVID stress
Avoidence
high
med
low

Fig. 5

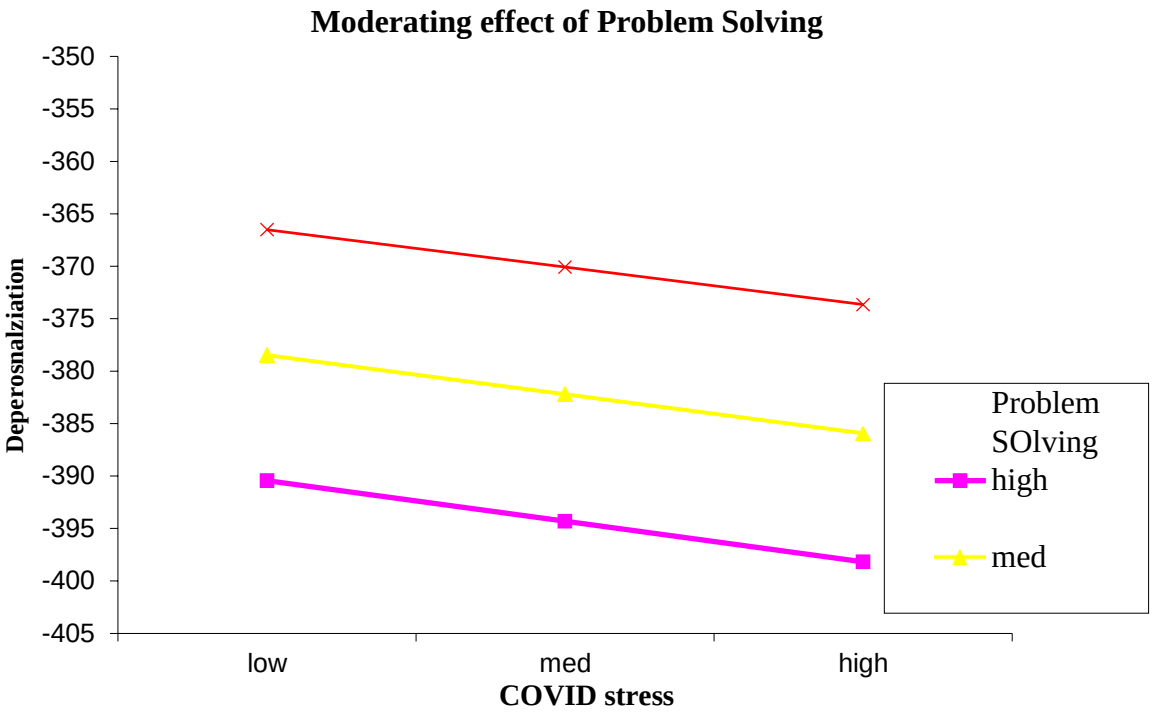


Fig. 6

Results displayed in Table 15 show the moderating role of verbal resilience, organizational support and coping strategies (including social support seeking, Avoidance and Problem solving) in the relationship between experience of COVID stress and depersonalization as a factor of burnout among service health providers at accelerated stage of pandemic.

The resilience as a moderator is shown by Model 1. The values have proved resilience as a strong moderator in explaining the effect of COVID stress on depersonalization among service health providers. The interaction effect of resilience and COVID stress was statistically insignificant with values ($B = -.008$, $\Delta R^2 = .81$, $F = 436.5$, $p < .001$) by accounting for 81% of variance in depersonalization among service health providers. The model revealed that the increased use of resilience as a coping strategy insignificantly reduces the COVID stress and depersonalization. The same results are

supported by mod graph of figure by indicating that medium and low levels of resilience does not have a significant impact on relationship between COVID stress on depersonalization.

The organizational support as a moderator is explained by Model 2. The results ($B = -.02$, $\Delta R^2 = .81$, $F = 429.4$, $p < .001$) reveals that availability of organizational support significantly moderated the impact of COVID stress experience on depersonalization along with explaining 81% of variance. The model elucidates the results by demonstrating that more availability of organizational support buffered the effect of COVID stress and decreases the depersonalization among service health provider. The Figure 3 further explained the same results and depicts that organizational support buffers the effect of experience of COVID stress on depersonalization among Service Health Providers. Increase in organizational support has negative consequence on the relationship between the COVID stress and depersonalization.

Moderating effect of social support seeking as a coping strategy is accessible in Model 3 of the table which shows a substantial interaction effect of social support seeking and COVID stress ($B = -.03$, $\Delta R^2 = .81$, $F = 444.3$, $p < .001$) on level of depersonalization among service health providers. The results shows that use of social support seeking coping strategy exacerbated the effect of COVID stress and moderated depersonalization along with explaining 81% of variance. The Model evaluated that social support seeking has moderated the depersonalization at time of COVID stress among service health providers.

These facts are further explained by Figure 4 mod graphs and the slopes shows that social support seeking defended the influence of COVID stress on depersonalization among

service health providers. Patterns of slopes indicate that high, medium as well as lower level of social support seeking weakened the effect of COVID stress on depersonalization.

The Model 4 explains the moderating effect of Avoidance A noteworthy interaction has shown and the results depicts that Avoidance significantly moderated ($B = .01$, $\Delta R^2 = .81$, $F = 450.6$, $p < .001$) the relationship between COVID stress and depersonalization among service health providers at accelerated stage of pandemic along with account for 81% of variance. The Figure 5 give a back to the statistical findings and suggested that Avoidance intensified the effect of COVID stress on Depersonalization. It suggested that the use of Avoidance increased in level it strengthened the impact of COVID stress experiences on Depersonalization.

The last Model 5 depicts the moderating effect of problem solving. The results predicts a significant interaction effect of problem solving and COVID stress ($B = -.01$, $\Delta R^2 = .82$, $F = 457.4$, $p < .001$) on level of depersonalization among service health providers. The results shows that use of problem solving coping strategy decreases the effect of COVID stress and moderated depersonalization along with explaining 82% of variance. Making these findings more obvious, mod graph (Figure 6) shows that using the problem solving as a coping strategy buffered the relationship between COVID stress and depersonalization among service health providers. Slopes of the plot suggest that as use of problem solving coping strategy increased, it palliated the effect of COVID stress on depersonalization.

Table 16

Moderating effect of Resilience, organizational support, and coping strategies on Personal Accomplishment among service health providers during accelerated stage of pandemic (N = 305)

		Personal Accomplishment				
Variable		*B*	*SE*	*T*	*p*	*95%CI*
Constant		30.1	14.2	2.1	.037	[-57.8, 1.9]
CSS		-.36	.11	-3.4	.001	[-.15, -.66]
BRS		1.5	.56	2.7	.007	[-2.6, .41]
CSS × BRS		-.01	.004	-3.0	.003	[-.020, -.004]
R^2	.82					
F	457.4				.000	
Constant		31.8	17.9	2.6	.076	[-67.03, 3.5]
CSS		-.49	.13	-3.1	.002	[-.14, -.65]
SSS		3.8	1.4	2.7	.008	[-.66, .97]
CSSS × SSS		-.03	.010	-2.8	.005	[-.048, -008]
$R^{2/*}$	.81					
F	444.3				.000	
Constant		104.9	5.7	18.3	.000	[93.6, 116.1]
CSS		-.68	.04	-16.4	.000	[-.76, -.61]
CSI-SSS		2.1	.45	4.41	.000	[1.1, 2.9]
CSS × CSI-SSS		-.02	.003	-4.8	.000	[-.02, -.009]
R^2	.98					
F	5767.7				.000	
Constant		-48.7	12.3	-3.9	.000	[-84.9, -32.5]
CSS		.49	.10	4.0	.000	[.46, 87]
CSI-Avoi		-.91	.57	-1.4	.063	[-2.27, .13]
CSS× CSI-Avoi		-.006	.003	-1.20	.052	[.026, -.06]
R^2	.69					
F	444.5				.000	
Constant		-29.1	13.2	-2.0	.036	[-56.8, 1.7]
CSS		.34	.09	3.2	.001	[.15, .61]
CSI-PS		-1.5	.59	-2.5	.006	[-2.4, .39]
CSS × CSI-PS		-.01	.002	-2.7	.003	[-.018, -.002]
R^2	.72					
F	447.4				.000	

***$p < .001$

Note: CSS = COVID Stress Scale, BRS = Brief Resilience Scale, OS = Organizational Support Scale, CSI_SSS = Coping Strategy Indicator-Social Support Seeking, CSI-Avoi = Coping Strategy-Avoidance, CSI-PS = Coping Strategy-Problem Solving

ModGraph showing moderating effect of resilience, organizational support, and coping strategies' on personal accomplishment at accelerated stage of pandemic

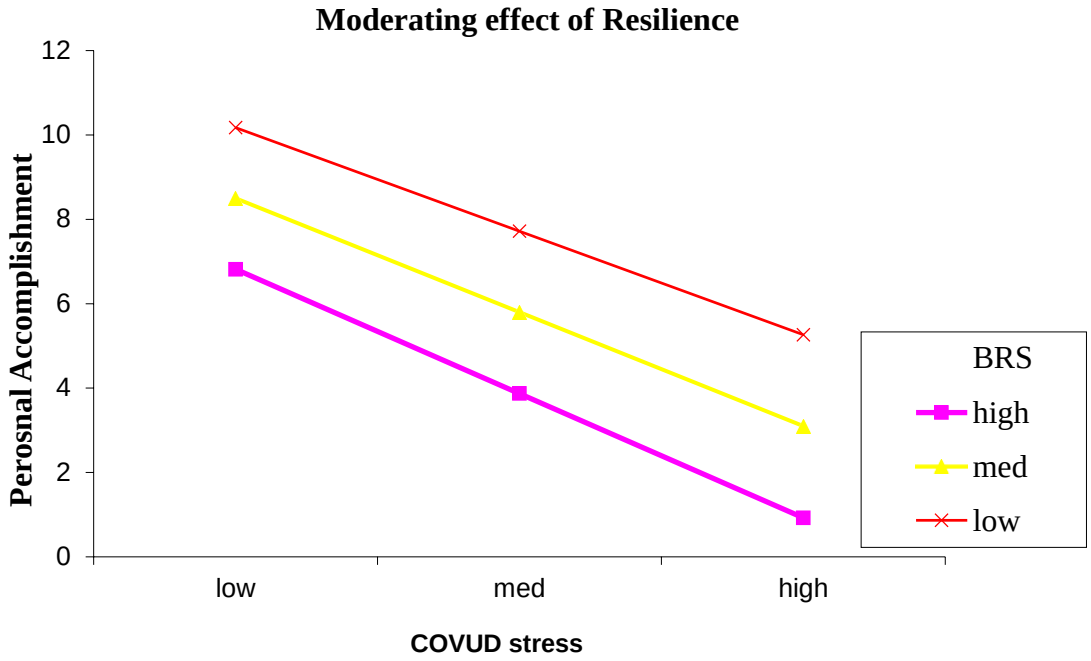


Fig. 7

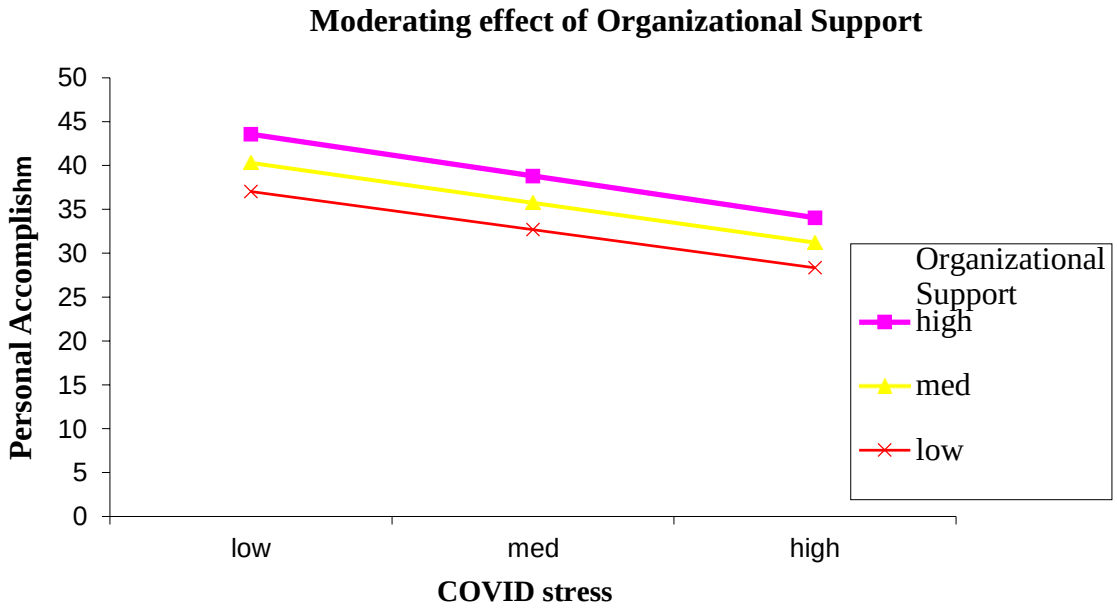


Fig. 8

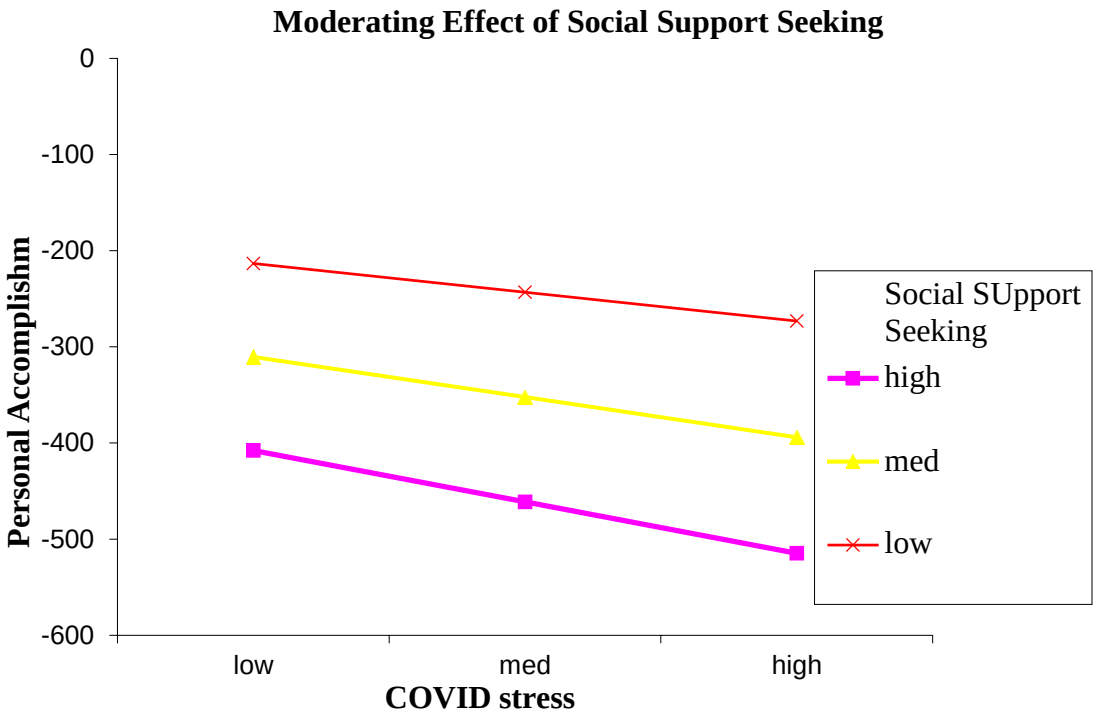
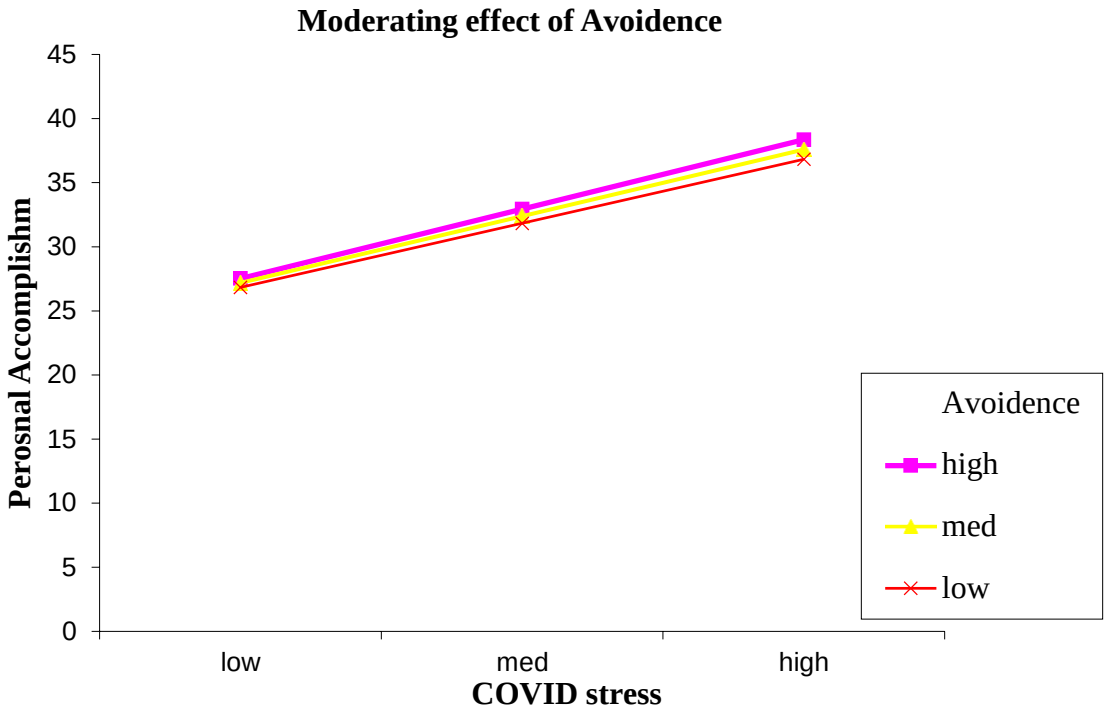

Moderating Effect of Social Support Seeking
0
-100
-200
-300
-400
-500
-600
Personal Accomplishm
low
med
high
COVID stress
Social SUpport Seeking
high
med
low

Fig. 9


Moderating effect of Avoidence
45
40
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Perosnal Accomplishm
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COVID stress
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high
med
low

Fig. 10

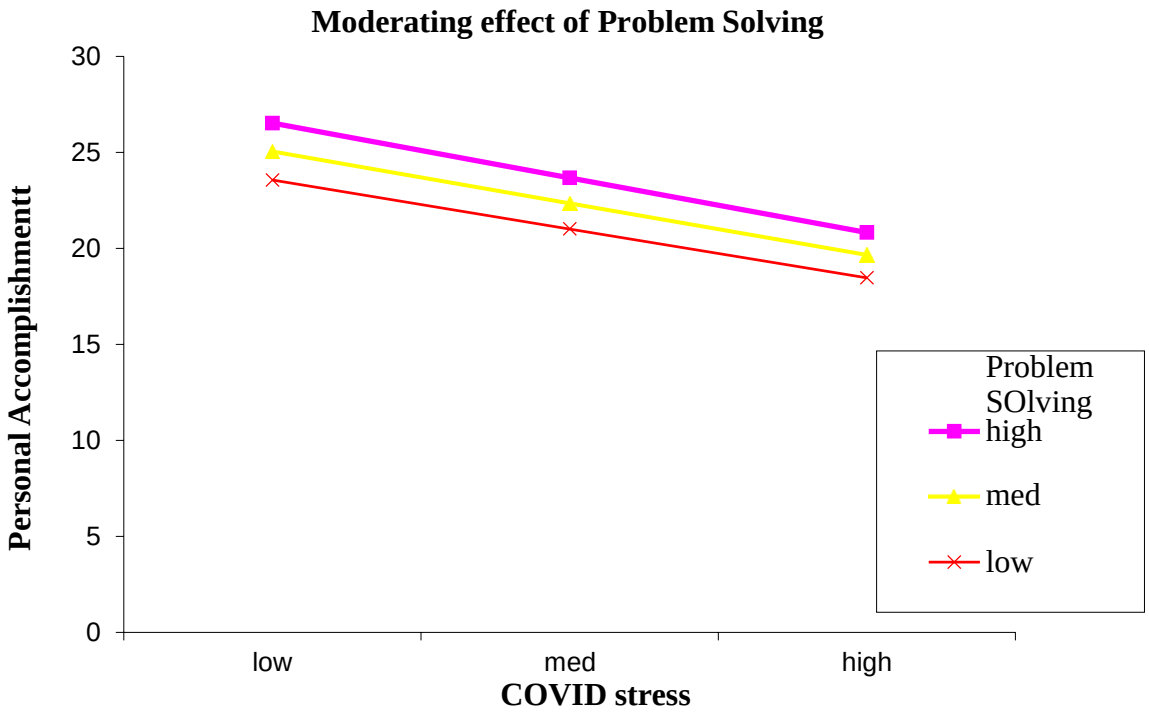

Fig. 11

Results presented in Table (16) demonstrate the moderating role of resilience, organizational support and coping strategies (i.e. Social support seeking, Avoidance, and Problem solving) in the association between experience of COVID stress and Personal Accomplishment as a factor of burnout among Service health providers. Model 1 illustrates the interaction effect of resilience and COVID stress on Personal Accomplishment among Service health providers. Findings suggest that use of resilience and COVID stress interactively produced 88% ($B = -.01$, $F = 457.4$, $\Delta R^2 = .82$, $p < .001$) of variance in explaining Personal Accomplishment as a positive burnout. The resilience is suggested to be a protective factor of the model by decreasing the effect of COVID stress and thus by increasing personal Accomplishment among service health providers. The Model suggested that increase in use of resilience will decrease COVID stress and will have a positive moderating effect on

personal Accomplishment among service health providers during accelerated stage of pandemic. The results are further elaborated by Figure 7 with mod graph and these findings are made obvious by showing that an increase in resilience (i.e. high, medium and lower levels) weakened the effect of COVID stress on Personal Accomplishment among Service health providers.

The moderating effect of organization support are demonstrated through Model 2. The worthy interaction effects are shown by the values ($R2 = .81$, $F = 444.3$, $p < .001$) and the results shows that availability of organizational support and experience of COVID stress explaining 88% of modification in the level of personal accomplishment among service health providers. The model suggested that availability of organizational support deceases the experience of COVID stress and increases the level of personal Accomplishment among service health providers. The statistical findings are further supported by mod graph from Figure 8 that explains the same moderation effects at three levels including high, medium and low levels of availability of organizational support. The pattern of the lines show that all three levels of organizational support weakened the effect of COVID stress experiences on Personal Accomplishment.

The moderating effects of use of social support seeking are revealed by Model 3. The interaction term revealed significant interaction effect ($B = -.02$, $\Delta R^2 = .98$, $F = 5767.9$, $p < .001$) of social support seeking and experience of COVID stress on personal Accomplishment. The Model suggested that increased use of social support seeking as a coping strategy will decrease the experience of COVID stress and will increase the level of personal Accomplishment among service health providers during accelerated stage of pandemic. The findings are supported by the Figure 9 Mod Graph showing the moderating

effects at three levels. The graphs shows that social support seeking had a negative effect in the relationship and palliated the effect of COVID stress on personal accomplishment at all three levels i.e. higher, medium and lower levels.

Model 4 shows moderating role of Avoidance as a coping strategy in the association between experience of COVID stress and Personal Accomplishment among service health providers. Interaction term revealed significant interaction effect ($B = .014$, $\Delta R^2 = .69$, $F = 8375.7$, $p < .001$) of Avoidance and experience of COVID stress on personal Accomplishment. Further Figure 10 shows that Avoidance exacerbated the effect of COVID stress experiences on Personal Accomplishment among Service health providers. It shows that as the use of Avoidance coping strategy increases, it increases the impact of COVID stress experiences on Personal Accomplishment.

Showing the moderating role of problem solving Model 5 depicts significant interaction effect of problem solving and experience COVID stress ($B = -.01$, $\Delta R^2 = .72$, $F = 447.4$ ~~8964.6~~, $p < .001$) in explaining personal accomplishment. Serving as a protective factor, the use of problem solving as a coping strategy reduces the impact of COVID stressexperience and thus increase the level of personal accomplishment. Figure 11 vividly clarify this moderation effect by signifying that high, medium and low levels of Problem Solving coping strategy buffered the impact of COVID stress on Personal Accomplishment among service health providers.

Table 17

Moderating effect of Resilience, organizational support, and coping strategies on emotional exhaustion (N = 305)

					Emotional Exertion	
Variable		*B*	*SE*	*t*	*P*	*95%CI*
Constant		-79.6	16.3	-4.9	.000	[-111.7, -47.4]
CSS		.922	.12	7.7	.000	[.69, 1.2]
BRS		-.02	.72	-.03	.975	[-1.43, 1.45]
CSS × BRS		-.000	.005	.042	.966	[-.010, .010]
R^2	.78					
F	375.2				.000	
Constant		-69.7	-13.67	-5.13	.000	[-96.4, -43.0]
CSS		.85	.19	8.6	.000	[.65, 1.04]
OS		-.98	1.4	-.64	.522	[-3.7, 2.6]
CSS × OS		-.007	.010	-,67	.503	[-.027, .013]
R^2	.79					
F	377.2				.000	
Constant		-46.5	22.1	-2.11	.036	[-89.9, 3.12]
CSS		.69	.16	4.3	.000	[.37, 1.8]
SSS		-2.7	1.7	-2.2	.127	[-6.1, .77]
CSS × SSS		-.019	-.012	1.5	.124	[-.044, .05]
R^2	.79					
F	379.1				.000	
Constant		-59.6	17.6	-3.3	.001	[-93.3,-24.2]
CSS		-.77	.13	-5.8	.000	[-1.03, -.51]
CSIAvoi		-.86	.67	-1.3	.217	[-2.2, .506]
CSS × CSIAvoi		.006	.005	1.3	.207	[-.004, .016]
R^2	.79					
F	377.7				.000	
Constant		-57.6	17.8	-3.2	.001	[-95.5, -22.6]
CSS		.76	.13	5.7	.000	[.49, 1.02]
CSIPS		-.86	.67	-1.2	.217	[-2.2, .51]
CSS × CSIPS		-.006	.005	-1.3	.203	[-.016, .003]
R^2	.79					
F	377.9				.000	

***$p < .001$

Note: CSS = COVID Stress Scale, BRS = Brief Resilience Scale, OS = Organizational Support Scale, CSI_SSS = Coping Strategy Indicator-Social Support Seeking, CSI-Avoi = Coping Strategy-Avoidance, CSI-PS = Coping Strategy-Problem Solving

Table 17 displays results for the moderating role of resilience, organizational support and coping strategies (Social support seeking, Avoidance and Problem solving in the association between experience of COVID stress and emotional exertion as a feature of burnout.

The moderating effect of resilience are depicted by Model 1 and the results shows that an insignificant moderation effect of resilience (B = -.000, p = .966) in the relationship between experience of COVID stress and level of emotional exhaustion among service health providers. Similarly, the model 2, 3, 4 and 5 did not participated for statistically noteworthy moderation (p > .05) in the model. The overall table 18 depicts that none among resilience, organizational support and coping strategies either positive or negative significantly moderates the emotional exhaustion among service health providers as shown by values (B = .007, p = .503) for organizational support, (B = .007, p = .503) for social support seeking (B = .019, .124), for Avoidance (B = .006, p = .207) and for problem solving (B = .006, p = .203).

Phase II – Decelerated Stage

4.5 Sample characteristics detail at accelerated stage of Pandemic (N= 292)

The Phase-II of this research is the part of main study that is conducted to observe the Role of Psychosocial Factors in relationship between COVID-19 stress and burnout among service health providers at decelerated stage i.e. the time when there was decrease in diagnosed Corona and cases and when sufferer started to heal out too from contagious virus.

Sample of Main study at decelerated stage of Pandemic comprised of 292 Service Health Providers [males = 167 (57.1%), Females = 125 (42.8%)] with (M = 2.1, SD = .59) from two groups (Doctors = 191, Nurses = 101) with age 22 years above. The inclusion criteria of sample include Doctors and Nurses and exclusion criteria include other support staff. The selected sample was performing eight hours duty per day in COVID ward. The sample was taken through convenient sampling technique from various Government hospitals of Abbottabad district. Every participants were attended individually in order to brief them and guide them wherever needed. The objectives of the study were shared. After that a booklet containing all the questionnaires of the current study was administered with clear briefing about items. The sample at accelerated stage was 305 but due to several reasons including transfer issues, the sample we finally get was 292 with an attrition rate of 4.2%. Finally data of 292 Participants was used to do statistical analysis at decelerated stage of pandemic.

The Sample Characteristics are given below in the table below

Table 18

Sample characteristics detail at accelerated stage of Pandemic (N=292)

Sample characteristics	Characteristics	Total Sample (N = 292) *f%*
Gender	Males	167 (57.1%)
	Females	125 (42.8%)
Group	Doctors	191 (65%)
	Nurses	101 (45%)

Procedure

Permission was taken from Directorate of Health and concerned authorities including DHO and Deputy DHO of Abbottabad Health sector and after the permission was granted data collection was started. The concerned personals were elaborated the instructions about the type and nature of study and the objectives of the study were explained. They were assured that all steps of research will be conducted while keeping in account the research ethics. During data collection phase, the participants were approached and the researcher explained about the objectives of research to the participants as well. The research requested for the approval of research participation by the participants and ensured them about the confidentially of their responses. They were allowed to leave the participation at any phase when they feel uncomfortable. For keeping a written record, their willingness was taken on a consent form and their biographic information was also taken along with demographic information including their names, Contact numbers and ID card numbers so that they can be matched with the previously collected data which was collected at accelerated stage of pandemic. After that a booklet of questionnaires [i.e. COVID stress Scale (CSS), Brief Resilience Scale (BRS), Organizational Support Scale (OS), Coping Strategy Indicator (CSI) and Maslach Burnout Inventory (MBI)] was handed over to the participants. Each individual

took almost 50 minutes to complete the questionnaire. Participants were given proper instructions about how to fill up the questionnaires.

4.6 Linear Regression Analysis of Variables

Predictive Role of Study Variables for Burnout

Linear regression analysis was used to investigate the impact of COVID stress, Resilience and organizational support on all factors of Burnout (Emotional exhaustion, Depersonalization and Personal Accomplishment) at decelerated stage of pandemic among service health providers. To examine the impact of Coping Strategies (Social SupportSeeking, Avoidance and Problem Solving) on Burnout (Emotional exhaustion, Depersonalization and Personal Accomplishment), multiple regression analyses was computed. The linear Regression Analysis and Multiple Regression Analysis on data gatheredat decelerated stage of pandemic is given in the tables below.

Linear regression at Decelerated stage of pandemic

Table 19

Regression Analysis of Burnout by COVID stress at decelerated stage of pandemic (N=292)

COVID stress	*B*	*SE*	β	*t*	*P*	95% CI *LL*	*UL*
Emotional Exhaustion							
	.38	.029	.60	13.1	.000	.32	.44
	R = .60, R^2= .36, ΔR^2= .36 (*F* = 172.7***)						
Depersonalization							
	.24	.027	.46	9.07	.000	.19	.30
	R = .46, R^2= .21, ΔR^2= .21 (*F* = 82.4***)						
Personal Accomplishment							
	-.53	.029	-.73	-18.5	.000	-.47	-.58
	R = .73, R^2= .53, ΔR^2= .53 (*F* = 345.4***)						

****p* < .001

Table 19 reflects that increased COVID stress increases the level of emotional exhaustion and depersonalization and its intensity is less then accelerated stage of pandemic.

Similarly, it decreases the personal accomplishment but has lesser impact as compared to accelerated stage.

In Table 19, the results show that the increased COVID stress leads to .36% of variability with significant F ration ($\Delta R^2 = .36$, $F = 172.7$, $p < .001$) at decelerated stage of pandemic among service health providers. Analyzing the value of beta shows that a single unit increase in the COVID stress will upsurge emotional exhaustion by .60 units ($B = .38$, $\beta = .60$, $p < .001$). the value of $\Delta R^2 = .21$ for depersonalization directed that COVID stress experience leads to 21 percent of unpredictability in experience of depersonalization among service health providers with values of $F = 82.4$, $p < .001$. Here, the values of Beta elaborated that a single unit increase in COVID stress will increase the depersonalization up to .46 units ($B = .24$, $\beta = .46$, $p < .001$). For personal accomplishment the ratio goes inversely proportional to COVID stress. About 53% of discrepancy ($\Delta R^2 = .53$, $F = 345.4$, $p < .001$) was explicated by the involvement of personal Accomplishment to the COVID stress.

Table 20

Regression Analysis Burnout by Resilience at decelerated stage of pandemic (N=292)

						95% CI	
Resilience	*B*	*SE*	β	*t*	*p*	*LL*	*UL*
	Emotional exhaustion						
	-.67	.047	-.63	-14.3	.000	-.77	-.58
	R = .63, R^2= .40, ΔR^2= .40 (*F* = 206.1***)						
	Depersonalization						
	-.61	.051	-.57	-12.0	.000	-.71	-.51
	R = .57, R^2= .32, ΔR^2= .32 (*F* = 146.0***)						
	Personal Accomplishment						
	.69	.048	.64	14.6	.000	.60	.78
	R = .64, R^2= .41, ΔR^2= .41 (*F* = 214.2***)						

****p* < .001

Table 20 depicts resilience as a factor with a significant positive impact on personal accomplishment. It shows that service health providers with more use of resilience tends to have more peroneal accomplishment. The table also predicts that increased resilience buffers

the emotional exhaustion and depersonalization but its level of impact is less as compared to accelerated stage of pandemic.

Table 20 shows the impact of resilience on both negative factors of the burnout i.e. emotional exhaustion and depersonalization as well as on positive factor of burnout i.e. personal Accomplishment among service health providers during the decelerated stage of pandemic. Findings indicate that resilience emerged as significant factor of reducing emotional exertion (ΔR^2= 40, β = -.63, F = 206.1, p < .001) and depersonalization (ΔR^2= .32, β = -.57, F = 146.0, p < .001) by contributing 40% of variability in emotional exhaustion and 32% variance in depersonalization respectively. However, results indicate the resilience as significant predictor of personal Accomplishment. Moving forward, the value of beta predicts that one unit increase in resilience will increase personal accomplishment up to .64 units (B = .69, β = .64, p < .001). For personal accomplishment 41% of discrepancy (ΔR^2 = .41, F = 214.2, p < .001) was explained by the use the resilience among service health providers during decelerated stage of pandemic.

Table 21

Regression Analysis of Burnout by Organizational support at decelerated stage of pandemic (N=292)

Organizational support	*B*	*SE*	β	*t*	*p*	95% CI *LL*	95% CI *UL*
	Emotional exhaustion						
	-.38	.026	.63	-14.4	.000	-.43	-.32
	R = .63, R^2= .40, ΔR^2= .40 (*F* = 209.5***)						
	Depersonalization						
	-.35	.028	.58	-12.5	.000	-.40	-.29
	R = .58, R^2= .34, ΔR^2= .34 (*F* = 157.6***)						
	Personal Accomplishment						
	.38	.027	.63	14.3	.000	.33	.43
	R = .63, R^2= .40, ΔR^2= .40 (*F* = 206.4***)						

****p* < .001

Table 21 results supports that organizational support can be a very prominent factor in controlling burnout among frontline staff members. The increased organizational support decreases the emotional exhaustion and depersonalization and it increases personal accomplishment. However, the level of impact is comparatively less than accelerated stage of pandemic.

The Table 21 show the impact of organizational support on all factors of burnout among service health providers during decelerated stage of pandemic. For emotional exhaustion, the presence of organizational support explained 40% of inconsistency with significant F ratio with values as ($\Delta R^2 = .40$, $F = 209.5$, $p < .001$). While analyzing the values of beta, the results shows that one unit increase in the availability of organizational support will decrease emotional exhaustion by .63 units ($B = -.38$, $\beta = -.63$, $p < .001$). The values $\Delta R^2 = .34$ for depersonalization shows that the availability of organizational support elucidated up to 34% unpredictability in depersonalization among service health providers during the decelerated stage of pandemic with significant F ratio ($F = 157.6$, $p < .001$). Furthermore, the values of beta indicated that one unit increase in availability of organizational support will decrease .58 units in depersonalization ($B = -.35$, $\beta = -.58$, $p < .001$). On the other hand, the presence of organizational support predicted the increased level of personal accomplishment among service health providers. For personal accomplishment 40% of variance ($\Delta R^2 = .40$, $F = 206.4$, $p < .001$) was explained by the presence of organizational support among service health providers.

4.7 Multiple regression at Decelerated stage of pandemic

Table 22

Multiple Regression Analysis on Burnout by coping strategies at Decelerated stage of pandemic (N=292)

	Emotional exhaustion						Depersonalization						Personal Accomplishment					
					95% CI						95% CI						95% CI	
V-A	*B*	*SE*	β	*p*	*LL*	*UL*	*B*	*SE*	β	*P*	*LL*	*UL*	*B*	*SE*	β	*p*	*LL*	*UL*
SSS	-.60	.08	-.59	.000	-.76	-.43	-.45	.08	-.51	.000	-.62	-.29	.55	.10	.49	.000	.75	.35
Avoi	.04	.06	.048	.49	-.08	.16	.006	.06	.008	.92	-.12	.13	-.01	.07	-.01	.87	-.16	.13
PS	-.21	.04	-.28	.000	-.29	-.13	-.14	.04	-.21	.001	-.22	-.06	.22	.05	.26	.000	.12	.32
	R = .79, R^2= .63, ΔR^2= .62 (F = 169.4***)						R = .70, R^2= 49, ΔR^2=.48 (F=96.6***)						R = .73, R^2= .54, ΔR^2=.53 (F=117.2***)					

***p < .001

Note: SSS= Social Support Seeking, Avoi = Avoidance, PS=Problem Solving

Overall findings of Table 22 suggested that the social support seeking and problem solving are the coping strategies that showed positive associations with personal Accomplishment as a factor of burnout. Increase in use of social support seeking and problem solving will increase the personal accomplishment among service health providers at decelerated stage of pandemic, whereas both of these positive coping strategies will reduce the negative factors of burnout i.e. emotional exertion and depersonalization. And in contrast to all, avoidance show a positive insignificant impact on emotional exertion and depersonalization, whereas it showed negative insignificant impact on personal accomplishment among service health providers at decelerated stage of pandemic.

Results in table 22 shows the impacts of coping strategies on all factors of burnout. Findings indicate that joined use of all coping strategies participated for 63% of modification in the emotional exhaustion aspect of burnout among service health providers with important values of F ratio ($\Delta R^2 = .63$, $F = 169.4$, $p < .001$). Conclusions highlighted problem solving as an undesirable predictor ($B = -.21$, $\beta = -.28$, $p < .001$) of emotional exertion signifying that one unit increase in the use of problem solving as a coping strategy will result in .28 units decrease in emotional exertion. On the other hand, one unit increase in social support seeking as a coping strategy ($B = -.60$, $\beta = -.59$, $p < .001$) will increase emotional exertion by .59 units. On contrary, Avoidance as a coping strategy show insignificant impact on emotional exertion among service health providers.

To predict depersonalization among service health providers, the values ($\Delta R^2 = .48$) shows the extent of the model fit and discovered significant overall relationship ($F = 96.6$, $p < .001$) by subsidizing 48% of variance in depersonalization. The social support seeking is suggested as a strongest negative predictor by the beta values ($B = -.45$, $\beta = -.51$,

$p < .001$) of depersonalization signifying that one unit rise in the use of social support seeking as a coping strategy will result in .51 units decrease in depersonalization. The problem solving coping strategy was another noteworthy negative predictor ($B = -.14$, $\beta = -.21$, $p < .001$) by signifying that one unit escalation in use of problem solving as a coping strategy will decrease depersonalization by .21 units. For personal Accomplishment as a factor of burnout, the coping strategies together clarified up to 53% of variance ($\Delta R^2 = .53$, $F = 117.2$, $p < .001$). Here, the social support seeking was the strongest positive predictor ($B = .55$, $\beta = -.49$, $p < .001$) of personal Accomplishment and specified that by one unit upsurge in use of use of social support seeking as coping strategy will increase personal accomplishment as a burnout by .49 units.

The problem solving a scoping strategy was also significant positive predictors of personal accomplishment. Beta weights for problem solving ($B = .22$, $\beta = .26$, $p < .001$) reflect that increasing the use of problem solving as a coping strategy by one unit will result in .26 units increase of personal accomplishment among service health providers. Insignificant variance has been shown in personal accomplishment by the use of Avoidance.

4.8 Moderation Analysis of Variables at Decelerated stage of Pandemic

Table 23

Moderating effect of Resilience, organizational support, and coping strategies on depersonalization at decelerated stage of Pandemic (N = 292)

					Depersonalization	
Variable		*B*	*SE*	*t*	*P*	*95%CI*
Constant		-2.7	2.5	-1.1	.32	[-7.6, 2.4]
CSS2		-.13	.07	-2.2	.069	[-.011, 28]
BRS2		.65	.25	2.6	.009	[-.167, 1.1]
CSS2 × BRS2		-.008	.005	-1.5	.117	[-.012, .002]
R^2	.24					
F	32.4				.000	
Constant		-63.3	9.1	-3.8	.000	[-76.3, -32.4]
CSS2		.54	.04	4.7	.000	[.38, .61]
OS2		-1.3	1.0	-2.1	.027	[-3.6, .01]
CSS2 × OS2		-.01	.002	-2.0	.033	[-.023, .001]
R^2	.79					
F	389.4				.043	
Constant		-24.9	5.2	4.7	.000	[-35.3, -14.6]
CSS2		-.72	.13	5.3	.000	[-.99, -.45]
SSS2		2.5	.38	2.3	.000	[.89, 2.4]
CSSS2 × SSS2		-.05	.010	-5.9	.000	[-.077, -.04]
$R^{2/*}$	.51					
F	93.1				.000	
Constant		24.4	4.4	5.5	.000	[15.7, 33.2]
CSS2		-7.1	.12	-57	.000	[-.95, -.47]
CSIAvoi2		-.90	.17	-5.2	.003	[-1.2, -.56]
CSS2 × CSIAvoi2		.03	.005	6.8	.001	[.002, .040]
R^2	.41					
F	70.1				.001	
Constant		-25.8	4.3	-6.7	.000	[-34.4, -17.2]
CSS2		-7.6	.12	-6.2	.000	[-.99, -.51]
CSIPS2		.94	2.1	5.5	.000	[.61, 1.2]
CSS2 × CSIPS2		-.033	.005	-7.1	.003	[-.42, -.24]
R^2	.42					
F	73.4				.000	

***$p < .001$

Note: EALE = Experience of Adverse Life Event, CATA = Catastrophizing, PERS = Personalization, SA = Selective Abstraction, OG = Over Generalization

Moderating effect of resilience, organizational support, and coping strategies on depersonalization at decelerated stage of pandemic

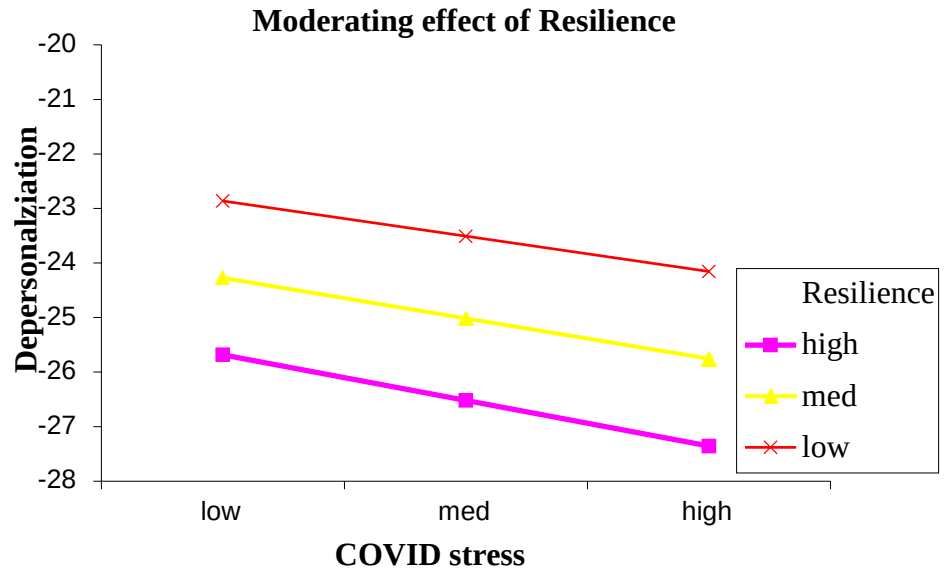

Fig. 12

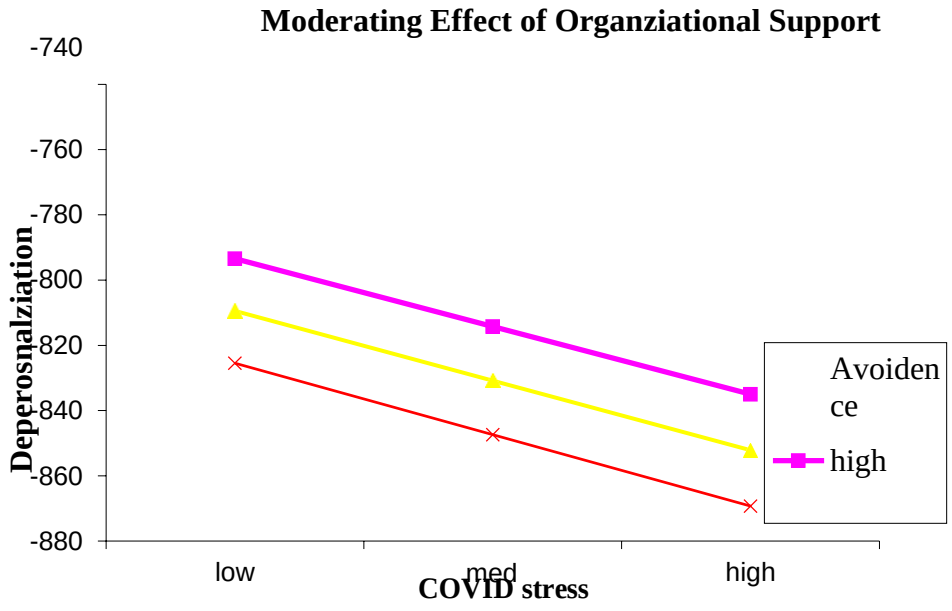

Fig. 13

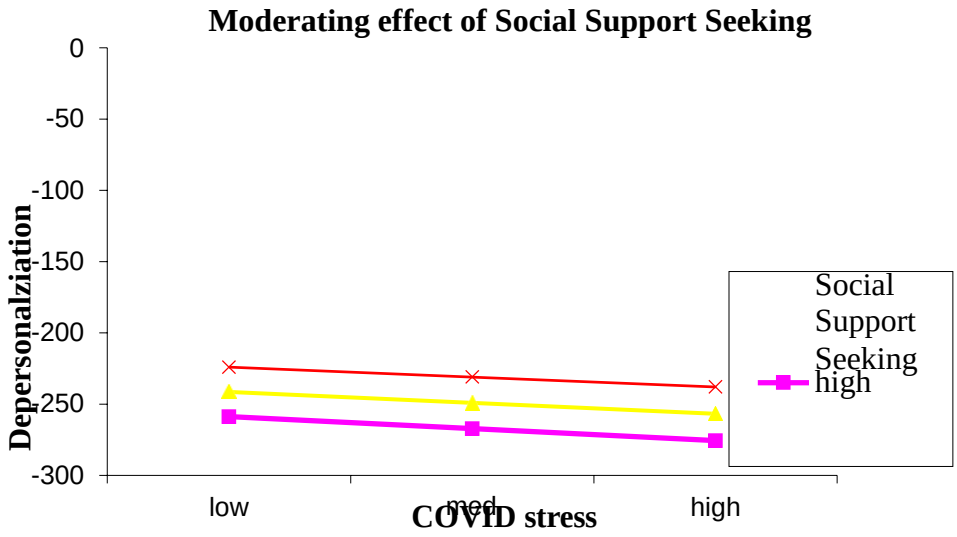
Moderating effect of Social Support Seeking
0
-50
-100
-150
-200
-250
-300
Depersonalziation
low
med
high
COVID stress
Social Support Seeking
high

Fig. 14

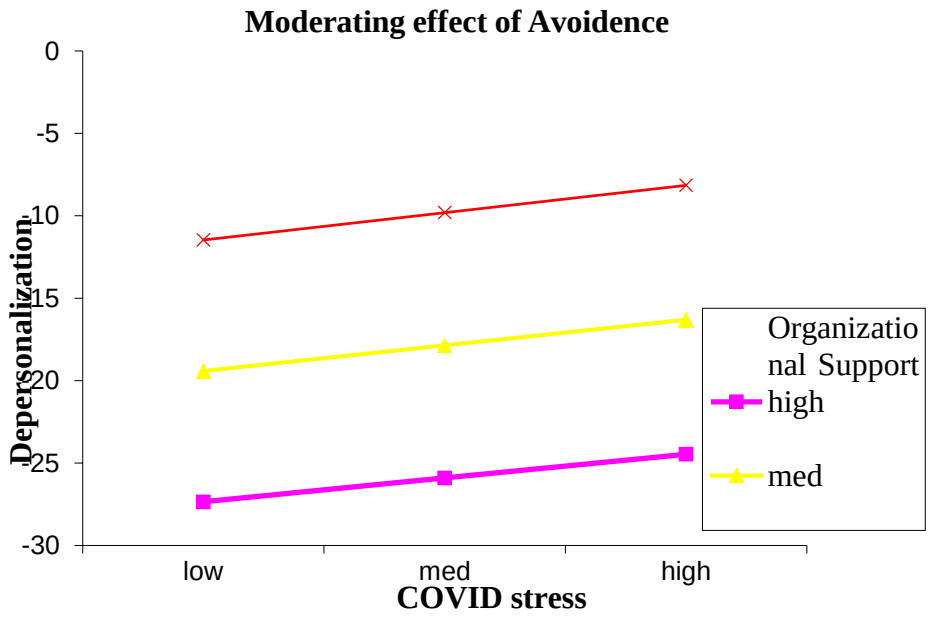
Moderating effect of Avoidence
0
-5
-10
-15
-20
-25
-30
Depersonalization
low
med
high
COVID stress
Organizational Support
high
med

Fig. 15

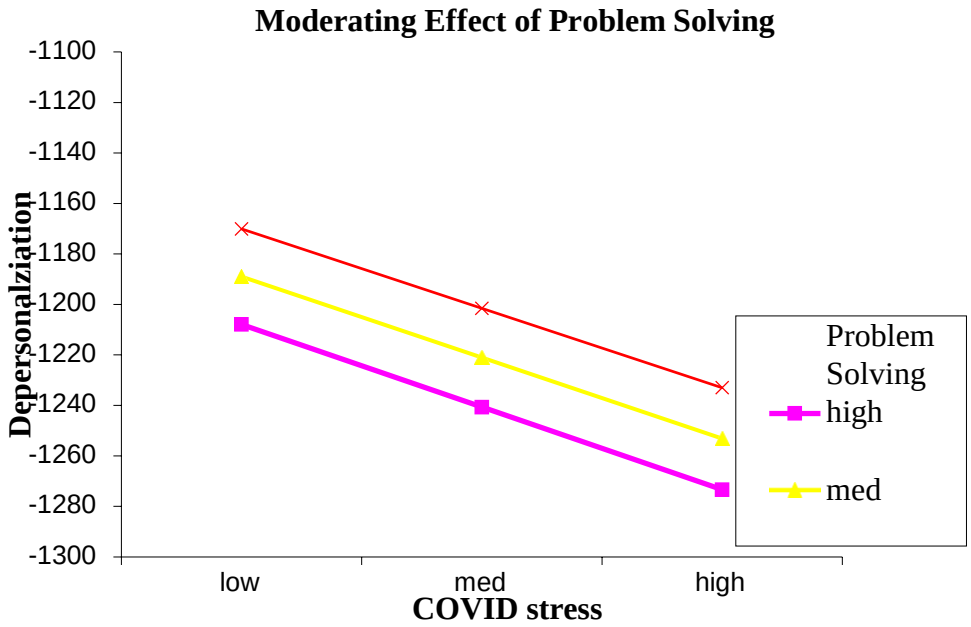

Fig. 16

Results displayed in Table 23 show the moderating role of verbal resilience, organizational support and coping strategies (including social support seeking, Avoidance and Problem solving) in the relationship between experience of COVID stress and depersonalization as a factor of burnout among service health providers at decelerated stage of pandemic.

The effects of resilience as a moderator are shown in Model 1. The results shows that resilience is a strong moderator while elucidating the effect of COVID stress on depersonalization among service health providers. The interactive effect of resilience and COVID stress are insignificant with values ($B = -.008$, $\Delta R^2 = .24$, $F = 32.4$, $p < .117$) by accounting for 24% of variance in depersonalization among service health providers. The model revealed that the increased use of resilience as a coping strategy insignificantly reduces the COVID stress and depersonalization. These results are further supported by the Mod Graph given in Figure 12 and the results discloses that resilience cushioned the

relationship between experience of COVID stress and depersonalization among Service health providers. The polts of the figure shows that increased use of resilience minimizes the effect of COVID stress at decelerated stage of pandemic among service health providers.

The moderating effects of organizational support are shown by Model 2. By analyzing the values, ($B = -.01$, $\Delta R^2 = .79$, $F = 389.4$, $p < .001$) the significant interaction term reveals that availability of organizational support significantly moderated the impact of COVID stress experience on depersonalization along with explaining 79% of variance. The model elucidates the results by demonstrating that more availability of organizational support buffered the effect of COVID stress and decreases the depersonalization among service health provider. The Figure 13 further supported the results and the Mod Graph of the figure defines the moderation effect at three different levels i.e. higher, medium and at lower levels. The trends in the lines of graph shows that at all three levels, the presence of organizational support deteriorated the effect of COVID stress experiences on Depersonalization among service health providers.

Moderating effect of social support seeking as a coping strategy are analyzed in Model 3

And the results shows a significant interaction outcome of social support seeking and COVID stress ($B = -.05$, $\Delta R^2 = .51$, $F = 93.1$, $p < .001$) on level of depersonalization among service health providers. The results shows that use of social support seeking coping strategy exacerbated the effect of COVID stress and moderated depersonalization along with explaining 51% of variance. The Model evaluated that social support seeking has moderated the depersonalization at time of COVID stress among service health providers. These findings are further extended through graphical presentation (Figure 14) which depicts that

social support seeking minimized the impact of COVID stress and depersonalization among service health providers at decelerated stage of pandemic.

The effects of Avoidance as a coping are shown by the Model 4. The results showed that Avoidance significantly moderated ($B = .03$, $\Delta R^2 = .41$, $F = 70.1$, $p < .001$) the relationship between COVID stress and depersonalization among service health providers along with account for 41% of variance. The figure 15 shows that use of Avoidance as a coping boosts the connection between experience of COVID stress and Depersonalization at decelerated stage of pandemic among service health providers.

The last Model 5 depicts the moderating effect of problem solving. The results predicts a significant interaction effect of problem solving and COVID stress ($B = -.003$, $\Delta R^2 = .42$, $F = 73.4$, $p < .001$) on level of depersonalization among service health providers. The results shows that use of problem solving coping strategy decreases the effect of COVID stress and moderated depersonalization along with explaining 42% of variance. The graph from Figure 16 reveals that problem solving safeguards the relationship between experience of COVID stress and depersonalization among service health providers during decelerated stage of pandemic. The plot of the figure shows that higher use of problem solving will lessen the effects of COVID-19 stress

Table 24

Moderating effect of Resilience, organizational support, and coping strategies on Personal Accomplishment among service health providers during decelerated stage of pandemic (N = 292)

					Personal Accomplishment	
Variable		*B*	*SE*	*t*	*p*	*95%CI*
Constant		30.1	14.2	2.1	.037	[-57.8, 1.9]
CSS2		-.36	.11	-3.4	.001	[-.15, -.66]
BRS2		1.5	.56	2.7	.007	[-2.6, .41]
CSS2 × BRS2		-.09	.008	-3.5	.002	[-.020, -.004]
R^2	.84					
F	462.4				.000	
Constant		31.8	17.9	2.6	.076	[-67.03, 3.5]
CSS2		-.49	.13	-3.1	.002	[-.14, -.65]
SSS2		3.8	1.4	2.7	.008	[-.66, .97]
CSSS2 × SSS2		-.03	.010	-3.2	.004	[-.048, -008]
$R^{2/*}$	.83					
F	454.3				.000	
Constant		-5.1	4.5	-1.1	.261	[-13.9, 3.7]
CSS2		-.84	.12	-7.2	.000	[-1.1, -.61]
CSI2-SSS2		3.4	.33	7.6	.000	[2.8, 3.2]
CSS2 × CSI-SSS2		-.04	.008	-5.5	.000	[-.06, -.03]
R^2	.79					
F	387.9				.000	
Constant		8.1	3.9	3.8	.006	[-2.4, 13.7]
CSS2		-.42	.08	-5.2	.000	[-.57, -.26]
CSI2-Avoi2		-.94	.11	-8.4	.000	[-1.7, -72]
CSS2× CSI-Avoi2		.009	.003	3.5	.003	[.003, .015]
R^2	.86					
F	636.6				.000	
Constant		9.3	2.7	3.4	.001	[3.8, 14.6]
CSS2		-4.3	.16	-5.1	.000	[-.52, -.22]
CSI-PS2		.92	.12	8.6	.000	[.72, 1.3]
CSS2 × CSI-PS2		-.008	.003	-3.6	.006	[-.013, .002]
R^2	88					
F	737.4				.000	

***$p < .001$

Note: CSS = COVID Stress Scale, BRS = Brief Resilience Scale, OS = Organizational Support Scale, CSI_SSS = Coping Strategy Indicator-Social Support Seeking, CSI-Avoi = Coping Strategy-Avoidance, CSI-PS = Coping Strategy-Problem Solving

ModGraph showing moderating effect of resilience, organizational support, and coping strategies' on personal accomplishment at decelerated stage of pandemic

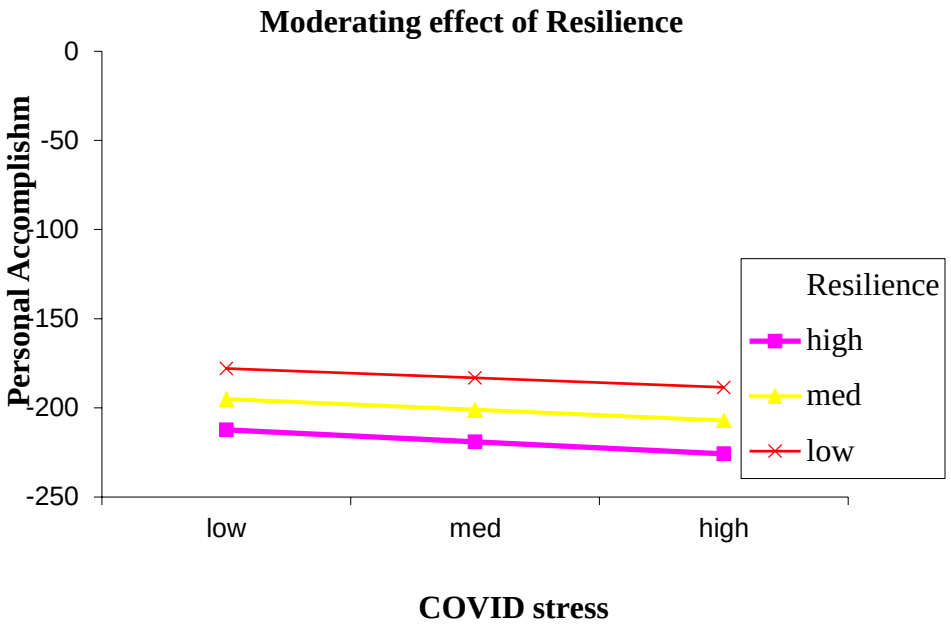

Fig. 17

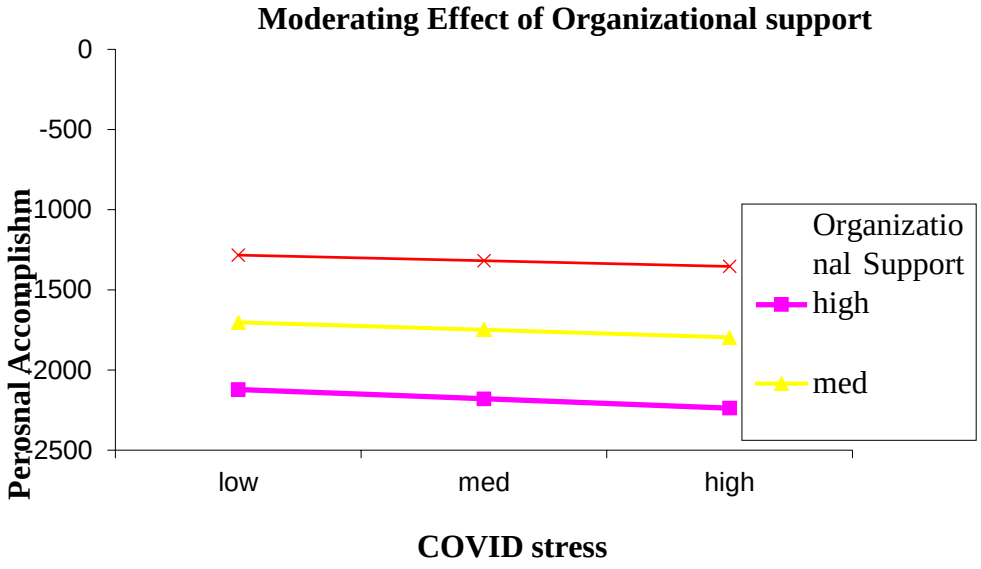

Fig. 18

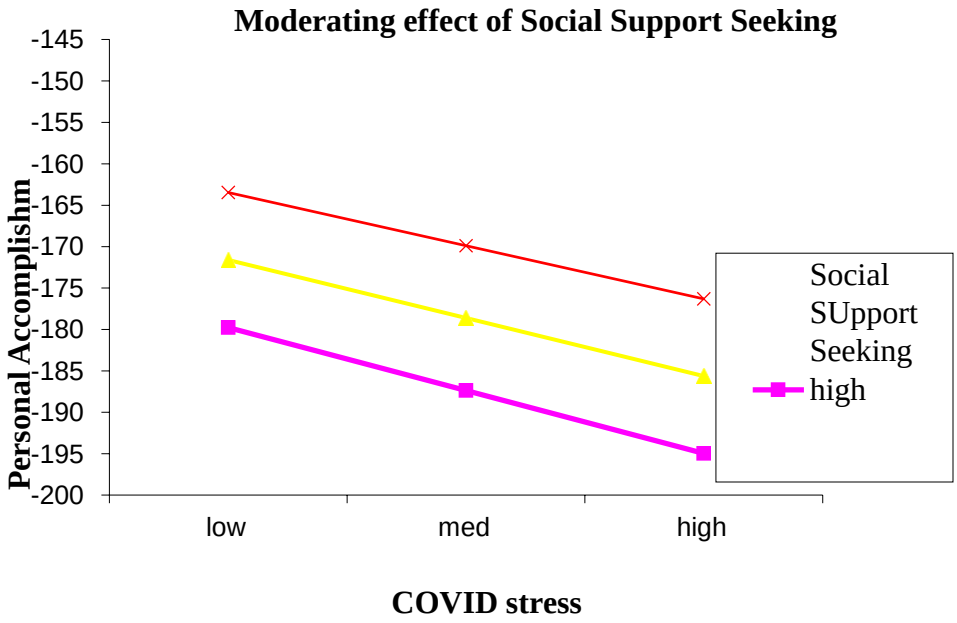
Moderating effect of Social Support Seeking
-145
-150
-155
-160
-165
-170
-175
-180
-185
-190
-195
-200
Personal Accomplishm
low
med
high
COVID stress
Social SUpport Seeking
high

Fig. 19

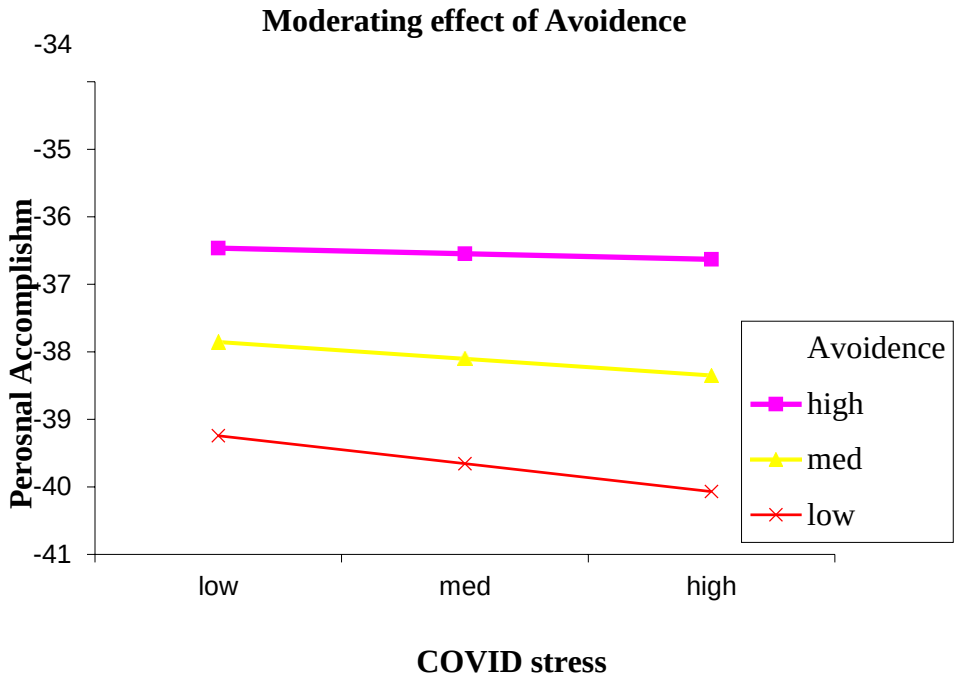
Moderating effect of Avoidence
-34
-35
-36
-37
-38
-39
-40
-41
Perosnal Accomplishm
low
med
high
COVID stress
Avoidence
high
med
low

Fig. 20

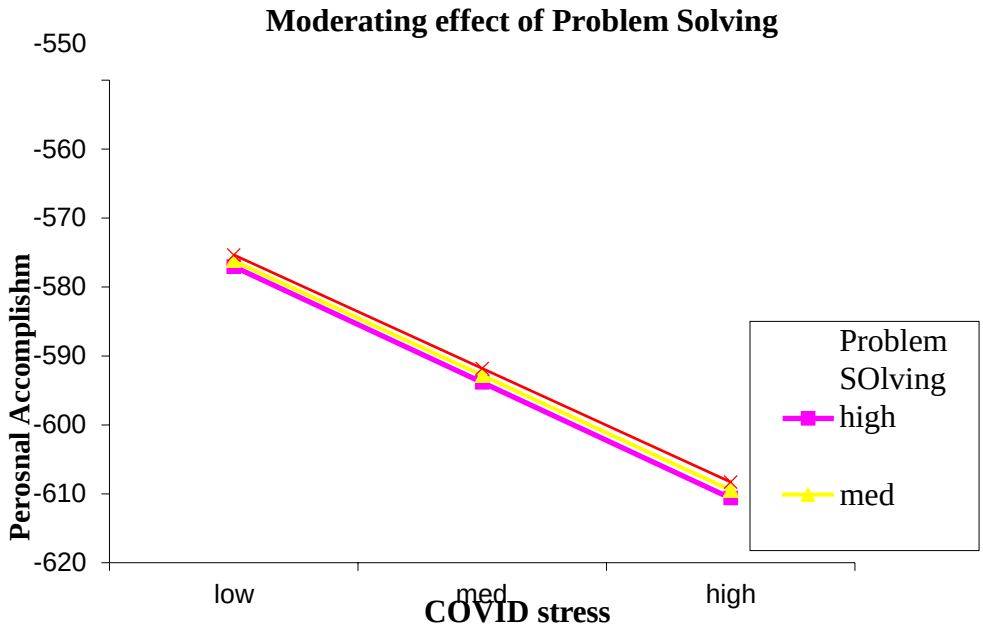

Fig. 21

Results presented in Table 24 demonstrate the moderating role of resilience, organizational support and coping strategies in the association between experience ofCOVID stress and Personal Accomplishment as a factor of burnout among Service health providers. Model 1 illustrates the interaction effect of resilience and COVID stress on Personal Accomplishment among Service health providers. Findings suggest that use of resilience and COVID stress interactively produced 84% (B = -.09, F = 462.4, ΔR^2 = .84, p < .005) of variance in explaining Personal Accomplishment as a positive burnout. The personal accomplishment as a defensive factor had an inverted effect in the model by decreasing the outcome of COVID stress and thus by increasing personal Accomplishment among service health providers. The Model suggested that increase in use of resilience will decrease COVID stress and will have a positive moderating effect on personal Accomplishment. These findings are supported by Mod Graph of Figure 17 by showing that increased level of resilience will decreases the association between COVID stress and

personal accomplishment. The rise and drop of plot suggests that as resilience increases it diminishes the effect of COVID stress.

The moderating effects of organizational support are demonstrated by the results of Model 2. The values probe out a significant interaction effect ($R2 = .83$, $F = 454.3$, $p < .005$) of organizational support and of COVID stress explaining 79% of variance in the level of personal accomplishment among service health providers. The model suggested that availability of organizational support deceases the experience of COVID stress and increases the level of personal Accomplishment among service health providers. A graphical presentation from Figure 18 illustrates these results and reveals that organizational support shields out the relationship between experience of COVID stress and personal accomplishment. By analyzing the graph, the slopes predicts that an increased organizational support can minimize the negative effects of COVID-19 stress.

Model 3 shows results for the moderating effect of social support seeking as a coping strategy. The interaction term revealed significant interaction effect ($B = -.02$, $\Delta R^2 = .98$, $F = 5767.9$, $p < .001$) of social support seeking and experience of COVID stress on personal Accomplishment. The Model suggested that increased use of social support seeking as a coping strategy will decrease the experience of COVID stress and will increase the personal Accomplishment among service health providers during decelerated stage of pandemic. While validating the results, the Mod Graph from Figure 19 suggested that social support seeking as a coping will reduces the association between Personal accomplishment and COVID-19 stress.

Model 4 shows moderating role of Avoidance as a coping strategy in the association between experience of COVID stress and Personal Accomplishment among service health

providers. Interaction term revealed significant interaction effect (B = .009, ΔR^2 = .86, F = 636.6, p < .001) of Avoidance and experience of COVID stress on personal Accomplishment. Mod graph (Figure 20) further illustrates the moderating effect of Avoidance at three levels i.e. high, medium and low. It suggests that that high level of Avoidance exacerbated the effect of COVID stress and personal Accomplishment whereas, medium and low level of Avoidance show negative yet little effect on relationship between COVID stress and Personal Accomplishment.

Showing the moderating role of problem solving Model 5 depicts significant interaction effect of problem solving and experience COVID stress (B = -.008, ΔR^2 = .88, F = 737.4, p < .001) in explaining personal accomplishment. Serving as a protective factor, the use of problem solving as a coping strategy reduces the impact of COVID stress experience and thus increase the level of personal accomplishment. The Mod Graph from the figure 21 exemplifies these results and shows that Problem Solving cushioned the effect of COVID stress and personal Accomplishment. The graphical presentation shows that an increase in use of problem solving as coping strategy will decrease the effects of COVID-19 stress.

Table 25

Moderating effect of Resilience, organizational support, and coping strategies on emotional exertion at Decelerated Stage of Pandemic (N = 292)

					Emotional Exertion	
Variable		*B*	*SE*	*T*	*p*	*95%CI*
Constant		-18.3	2.4	-7.6	.004	[-23.0, -13.5]
CSS2		-.55	.07	-7.7	.001	[-.69, -.41]
BRS2		2.4	.24	10.2	.001	[2.6, 2.9]
CSS2 × BRS2		-.04	.005	-9.4	.002	[-.065, -.037]
R^2	.53					
F	111.4				.000	
Constant		-19.2	3.16	-6.1	.005	[-24.3, -13.0]
CSS		-.64	.09	-7.4	.001	[-.81, -.47]
OS		2.5	.27	6.1	.000	[1.1,2.2]
CSS × OS		-.034	.007	-5.1	.000	[-.05, -.02]
R^2	.45					
F	78.2				.000	
Constant		9.2	4.1	2.2	.003	[1.1, 17.3]
CSS		-.42	.12	-3.3	.001	[-.60,-.15]
SSS		-.21	.16	-1.3	.20	[-.52, .11]
CSS × SSS		-.019	.004	-4.4	.002	[-.027, -.010]
R^2	.64					
F	184.3				.000	
Constant		-5.6	5.3	-1.06	.29	[-16.1,4.8]
CSS		.06	.13	.46	.64	[-.21, .33]
CSIAvoi		.61	.39	1.5	.12	[-.15, 1.4]
CSS × CSIAvoi		.006	.010	.61	.54	[-.013, .026]
R^2	.63					
F	173.2				.000	
Constant		-9.2	4.1	-2.2	.027	[-17.3, 1.1]
CSS		-38	12	-3.3	.001	[-.60, -.15]
CSIPS		.21	.16	.12	.201	[-.53, .11]
CSS × CSIPS		-.019	-.004	-4.4	.000	[-.027, -.010]
R^2	.65					
F	184.3				.000	

***$p < .001$

Note: CSS = COVID Stress Scale, BRS = Brief Resilience Scale, OS = Organizational Support Scale, CSI_SSS = Coping Strategy Indicator-Social Support Seeking, CSI-Avoi = Coping Strategy-Avoidance, CSI-PS = Coping Strategy-Problem Solving

ModGraphs showing moderating effect of resilience, organizational support, and coping strategies on emotional exertion at decelerated stage of pandemic

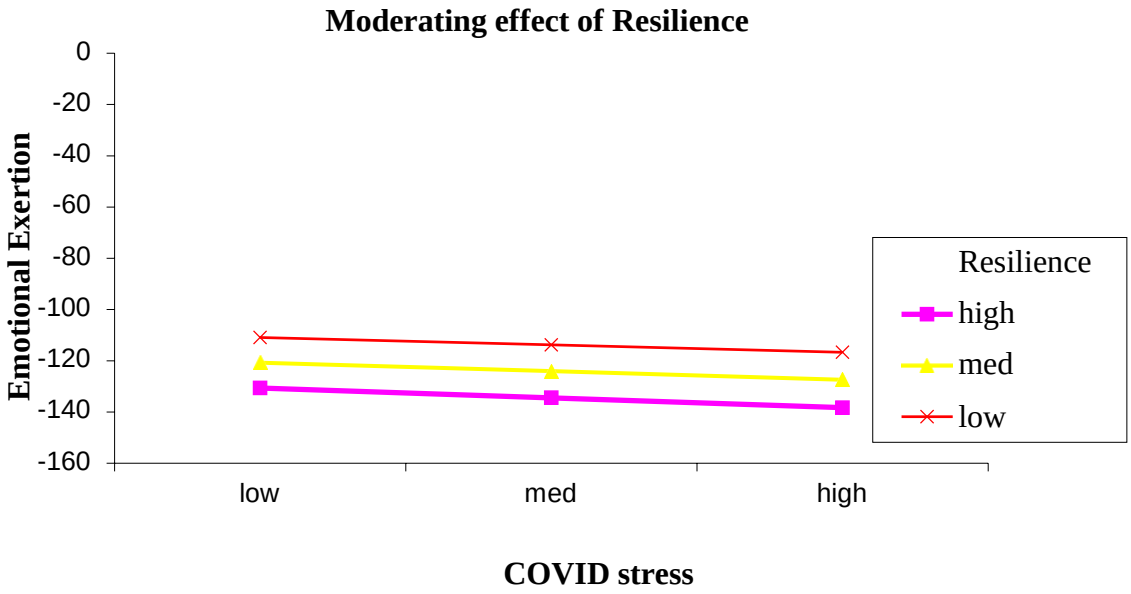

Fig. 22

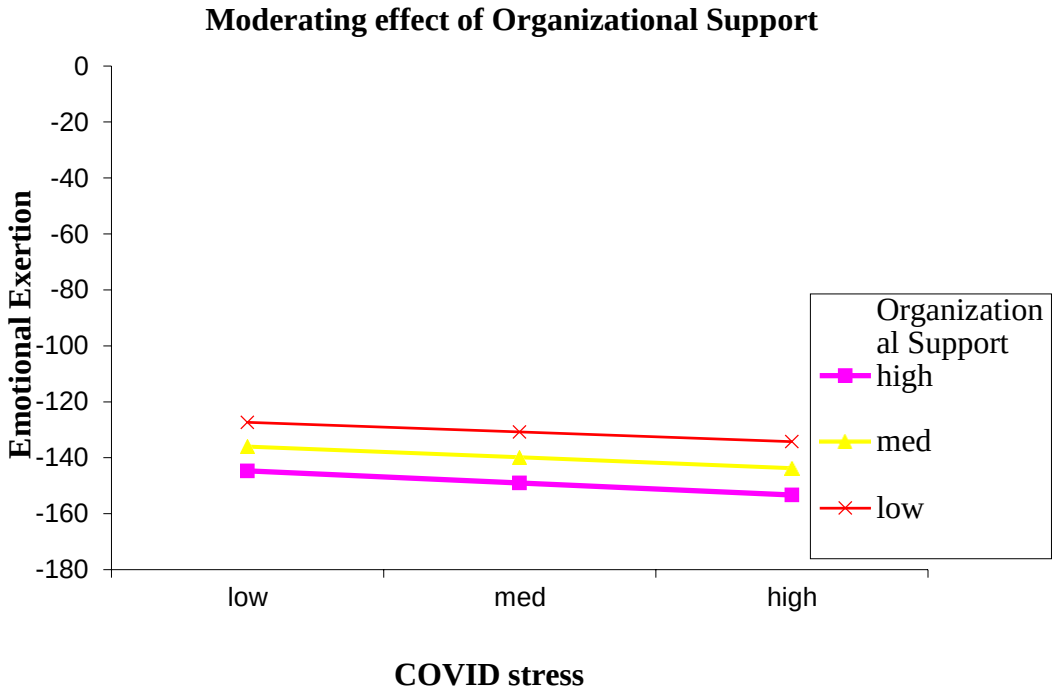

Fig. 23

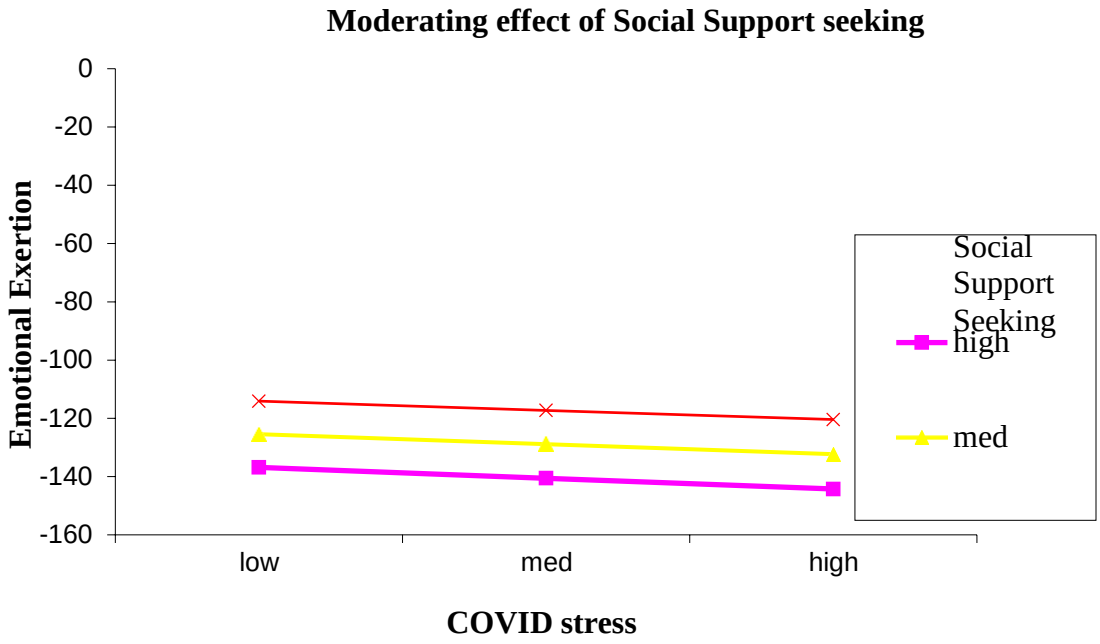
Moderating effect of Social Support seeking
Emotional Exertion
0
-20
-40
-60
-80
-100
-120
-140
-160
low
med
high
COVID stress
Social Support Seeking
high
med

Fig. 24

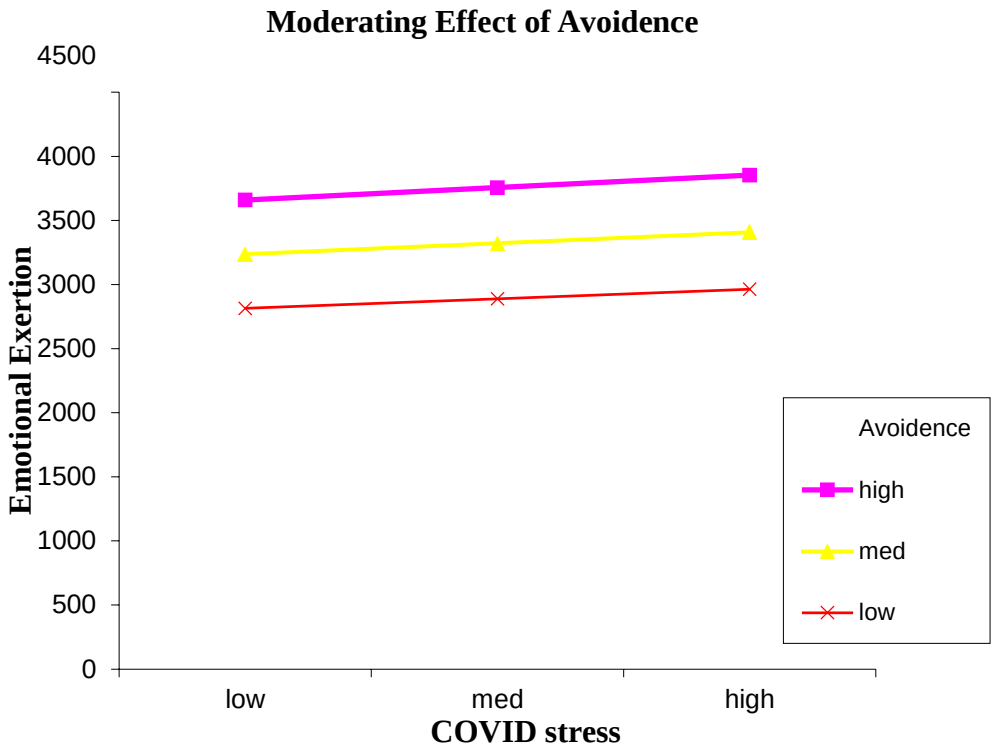
Moderating Effect of Avoidence
Emotional Exertion
4500
4000
3500
3000
2500
2000
1500
1000
500
0
low
med
high
COVID stress
Avoidence
high
med
low

Fig. 25

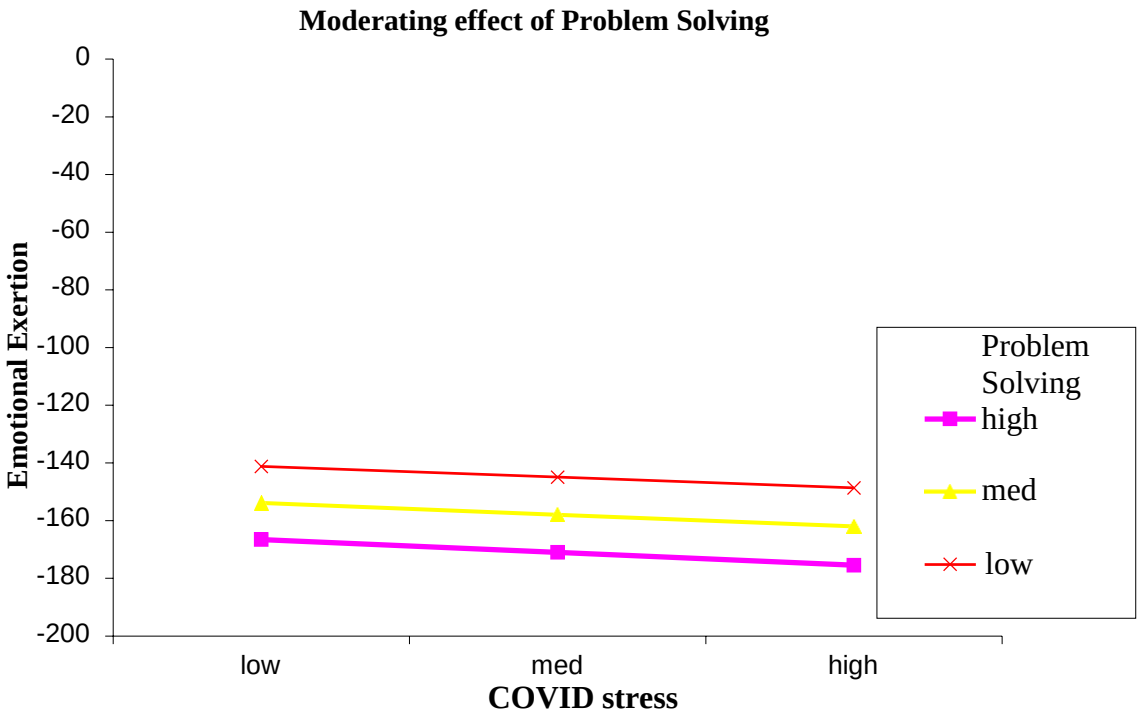

Fig. 26

Results displayed in Table 25 show the moderating role of verbal resilience, organizational support and coping strategies (including social support seeking, Avoidance and Problem solving) in the relationship between experience of COVID stress and emotional exertion as a factor of burnout among service health providers at decelerated stage of pandemic.

The moderating effects of resilience are shown in Model 1. The results supported that resilience is a strong moderator while elucidating the effect of COVID-19 stress on depersonalization. The analyses elaborated the interaction effect of resilience and COVID stress was significant with values ($B = -.04$, $\Delta R^2 = .53$, $F = 111.4$, $p < .005$) by accounting for 53% of variance in emotional exertion among service health providers. The model revealed that the increased use of resilience as a coping strategy insignificantly reduces the COVID stress and emotional exertion. Mod graph (Figure 22) elucidates these results by

suggesting that resilience somehow buffered the relationship between experience of COVID stress and emotional exertion.

The moderating effects of organizational support are displayed in the Model 2. There is a significant interaction term and the results ($B = -.034$, $\Delta R^2 = .45$, $F = 78.2$, $p < .001$) reveals that availability of organizational support significantly moderated the impact of COVID stress experience on emotional exertion along with explaining 45% of variance. The model elucidates the results by demonstrating that more availability of organizational support buffered the effect of COVID stress and decreases the emotional exertion among service health provider. These results are being supported by the Mod Graph's presentation of data and the results showed that as the level of organizational support is increased it decreases the effects of COVID stress.

Moderating effect of social support seeking as a coping strategy has been depicted by Model 3. The results showed a significant interaction effect of social support seeking and COVID stress ($B = -.019$, $\Delta R^2 = .64$, $F = 184.3$, $p < .005$) on level of emotional exertion among service health providers. The results shows that use of social support seeking coping strategy exacerbated the effect of COVID stress and moderated emotional exertion along with explaining 64% of variance. The Model evaluated that social support seeking has moderated the emotional exertion at time of COVID stress among service health providers. The results are supported by the mod graph figure 24 by suggesting that social support seeking shielded the association between COVID stress and emotional exertion at decelerated stage of pandemic among service health providers.

Moving forward, the model 4 displays the moderation effect of Avoidance. The results suggests that Avoidance significantly moderated ($B = .006$, $\Delta R^2 = .63$, $F = 173.2$, $p <$

.001) the relationship between COVID stress and emotional exertion among service health providers along with account for 63% of variance. The figure 25 mod graph further expands the current findings by suggesting that Avoidance boosted the effect of COVID stress on Emotional Exertion. Angles of the graph specify that an increased level of Avoidance will have an increased effect of COVID stress on somatic emotional exertion intensified.

The last Model 5 depicts the moderating effect of problem solving. The results predicts a significant interaction effect of problem solving and COVID stress ($B = -.019$, $\Delta R^2 = .65$, $F = 184.3$, $p < .001$) on level of depersonalization among service health providers. The results shows that use of problem solving coping strategy decreases the effect of COVID stress and moderated emotional exertion along with explaining 65% of variance. The mod graph extended the statistical findings as figure 26 showed that problem solving buffered the relationship between COVID stress and emotional exertion.

4.9 Paired Samples t-test Results Presentation

Table 26

The t-test Results along with Descriptive Statistics for COVID stress, coping strategies, resilience, institutional support and burnout of both Accelerated and Decelerated stage of pandemic among service health providers

		Accelerated stage		Decelerated stage		95% CI for Mean			
	Outcome	M	SD	M	SD	Difference	*r*	*t*	*Df*
Pair1	CSS	138.3	3.6	39.0	4.8	-99.7,-99.0	-.74	-529.6***	304
Pair2	CSI-SSS	545.1	163.7	28.2	4.1	-534.9,-498.8	-.95	-56.3***	304
Pair3	CSI-PS	139.4	4.2	39.8	5.4	-99.9,-99.1	-6.5	-447.3***	304
Pair4	CSI-Avoi	139.0	4.1	39.0	5.1	-100.2,-99.2	-.61	-401.4***	304
Pair5	BRS	24.6	3.6	9.5	3.3	-15.4,-14.6	-.45	-71.9***	304
Pair6	OS	48.4	5.9	10.9	3.0	-38.0,-37.0	-.53	-131.3***	304
Pair7	PA	9.6	3.5	40.4	4.3	-31.6,-30.0	-.94	-76.8***	304
Pair8	EE	48.20	4.4	9.7	3.4	-39.3,-37.7	-.82	328.9***	304
Pair9	Dep	24.6	3.3	9.6	3.5	-15.7,-14.2	-8.2	-40.3***	304

** p< .001.*

Note: CSI-SSS = Coping Strategy Indicator-Social Support Seeking, CSI-PS = Coping Strategy Indicator-Problem Solving, CSI-Avoi = Coping Strategy Indicator-Avoidance, BRS = Brief Resilience, OS = Organizational Support, PA = Personal Accomplishment, EE = Emotional Exertion, and Dep = Depersonalization

As displayed in Table, there are statistically significant differences, at the .000 significance level, in accelerated stage of COVID to decelerated stage of COVID scores for stress and for positive coping strategies, Avoidance as coping strategy, resilience, organizational support, and personal accomplishment, emotional exertion and depersonalization of burnout.

After analyzing the paired-samples t-test, results showed that mean COVID stress differs at accelerated stage of pandemic (M = 138.3, SD = 3.6) as compared to decelerated stage of pandemic (M = 39.0, SD = 4.8) at the .000 level of significance (t = -529.6, df = 304, n = 305, p < .001, 95% CI for mean difference 3.02 to 15.98, r = -.74). On average COVID stress was more at accelerated stage of pandemic among service health providers and it get lowered at decelerated stage of pandemic.

Moreover, mean use of social support seeking, problem solving and Avoidance as a coping strategy differs at accelerated stage of pandemic (M = 545.1, M= 139.4, M = 139.0) with (SD = 163.7, SD = 4.2, SD = 4.1) as compared to decelerated stage of pandemic (M = 28.2, M = 39.8, M = 39.0) with (SD = 4.1, SD = 5.4, SD = 5.1) at the .000 level of significance with (t = -56.3, t = -447.3, t = 401.4) for df = 304, n = 305, p < .001, 95% CI for mean difference 3.02 to 15.98, and r = -.95, r = -.65, r = -.61). At average level, under the higher level of COVID stress at accelerated stage of pandemic, the service health providers showed to have more use of all positive and negative coping strategies as compared to decelerated stage.

The mean score of resilience also varied from accelerated stage of pandemic (M = 24.6, SD = 3.6) as compared to decelerated stage of pandemic (M = 9.5, SD = 3.3) at the .000 level of significance with (t = -71.9, df = 304, n = 305, p < .001, 95% CI for mean difference 3.02 to 15.98, and r = -.45). The results evaluated that services health providers tended to be more resilient at accelerated stage of pandemic as compared to decelerated stage of pandemic.

The results of the paired-samples t-test show a clear difference in the levels of burnout with higher levels of emotional exertion, depersonalization and personal accomplishment at accelerated stage of pandemic (M = 48.20, M = 24.6) with (SD = 4.4, SD = 3.3) as compared to decelerated stage of pandemic (M = 9.7, M = 9.6) and with (SD = 3.4, SD = 3.5) at the .000 level of significance (t = -329.9, t = 40.3) and (df = 304, n = 305, p < .001, 95% CI for mean difference 3.02 to 15.98, r = -.82, r = -.82). Whereas, the results show an inverse results of personal accomplishment as burnout among service health providers. The table show the higher level of personal accomplishment as a burnout during

decelerated stage (M = 40.4, SD = 4.3) as compared to accelerated stage of pandemic (M = 9.6, SD = 3.5) at the .000 level of significance (t = -76.8, df = 304, n = 305, $p < .001$, 95% CI for mean difference 3.02 to 15.98, r = -.94). The statistical analysis show the higher level of emotional exertion and depersonalization as burnout during accelerated stage of pandemic, whereas higher level of personal accomplishment at decelerated stage of pandemic among service health providers.

Chapter 5

SUMMARY, FINDINGS, DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The main idea of current study grabbed my attention when I just finished my MPhil academic course and found how the world being caught by a contagious virus. This virus not only effected a single area or a single population rather almost every population was effected by this viral disease. It's immediate spread, easy pathways of transmission, increased cases and high death rate brought a lot of fear and stress among all. As Doctors and Nurses were those agents that had an obligation to work in Corona wards and thus were more vulnerable to develop psychological symptoms. This emerging situation motivated me to work on Pakistani Doctors and Nurses to check the impact of psychosocial factors in relationship between COVID-19 stress and burnout. COVID stress was taken as independent variable, Burnout was taken as dependent variable and resilience, coping strategies and organizational support were taken as moderators of the current study. For taking further steps, standardized psychological instruments were chosen to analyze the impact of independent variable on dependent variable and to find out the moderating effects of moderators. The sample was approached through higher authorities and an informed consent was taken. The participants were given detailed instructions about the purpose of study, type of questionnaires and were assured that their information will remain confidential. After informed consent, the selected instruments were administered on the sample and data was collected.

The study was conducted at two phase's i.e. accelerated and decelerated stage. The data was then entered in SPSS 21 and statistical analysis was done.

The results showed that increased COVID stress lead to higher level of burnout among service health providers at accelerated stage of pandemic as compared to decelerated stage of pandemic and ratio was more among female service health providers than males.

Resilience, coping strategies and organizational support are the moderators of stress. In context of current study, resilient service health providers moderated the impact of COVID stress and showed less burnout as compared to non-resilient one. Moreover, the problem solving & social support seeking were shown to be the coping strategies which moderated the impact of COVID stress on burnout whereas coping strategy of Avoidance showed an insignificant impact.

5.3 Discussion

The main study was a panel study where the data was taken at stages of COVID-19 Pandemic i.e. the Accelerated stage of pandemic and Decelerated stage of Pandemic. The longitudinal research design was of great need in context of COVID-19 pandemic as it's not the virus that has come and gone. It came up with different waves, differential symptomology and with different variants as well. The literature also supported the importance of longitudinal research design as this is design in which different individuals with the same characteristics are compared. The panel studies are the longitudinal studies where the same people are being observed at two or more than two different time points. It takes out the doubt of cultural differences effects. Such type of studies can depict the observing changes more accurately and precisely (Carlson et al., 2009).

Main study was purported to examine the relationship between COVID stress, resilience, Organizational Support, Coping Strategies and Burnout among Service Health Providers. An ample of literature inspects the relation between stress and burnout along with other psychological outcomes among service health providers. The psychological issues faced by service health providers at the time of COVID-19 pandemic include the high risk of getting the infection, an inadequate availability of resources to get protection from contamination and virus catch, frustration and discrimination, negative emotions and isolation. These psychological issues gives a base of burnout. These evidences compiles up the psychological consequences of COVID-19 as seen during the other pandemics leaving a remarkable psychological impact on the mental health of service health providers (Kang, Li, Hu, Chen, Yang, & Yang, et al., 2019).

The study also aimed to find the impact of COVID stress on Burnout among Service Health Providers as the literature also addressed this impact in different researches like the excessive flow of in-patients and out-patients reaching to the hospitals goes beyond the institutional capacities resulting in work related stress. The overload at emergency places at time when social distancing is mandatory leads to a state of confusion and frustration. Working hard at emergencies, giving extra duty hours and multi-responsibilitiesleads to stressful outcome with sleep deprivation and increased burnout tendencies (Gavidia,2020). The study also find the differences in level of COVID stress, Resilience, Organizational Support, coping strategies and Burnout among Service Health Providers across accelerated and decelerated stage of Pandemic. The current study also examined themoderating role of Resilience, Organizational Support, and Coping Strategies on the relationship between COVID stress and Burnout among Service Health Providers.

The first Hypothesis of the current study assumed that "COVID stress has a positive relationship with Burnout and Avoidance Coping Strategy among Service Health Providers". The literature provides an extensive support to the assumptions. Burnout is considered to be a significant global concern among service health providers (Gavidia, 2020). The reason of burnout among service health providers include higher level of work load, strict rules and regulations of organization, and time constraint to fulfil the goals within time as they would be beyond the limit of the employee, and a lack of interpersonal support either from organization or from personal life of an employee (Simone, Vargas, & Servillo, 2020). All of these challenges brought about by the stressors can produce emotional exhaustion among the service health providers. The service health providers start feeling overwhelmed and can have lack of energy and enthusiasm to work leading to state of depersonalization. The depersonalization is a state where the service health providers start dealing the patients as objects with lack of interest. It also diminishes the sense of self efficacy leading to a sense of confusion. All the three factors of burnout i.e., emotional exestuation, depersonalization and personal accomplishment are of global concern for the service health providers community (Woo, Ho, Tang, & Tam, 2020). The literature also supported the other part of hypothesis i.e. the use of negative coping strategies like Avoidance boosts up the COVID stress among service health providers. Ahn et al. (2020) reported the presence of depression, anxiety and stress among all service health providers and they tend to get isolated to overcome the stress. Isolation is considered to be an negative strategy of coping and thus increase the stress instead of reducing it. There is another study that has given the statistical analysis about the prevalence of negative coping strategies used by service health providers during COVID 19. The negative coping strategies include (1)

being self-critical (64.7%), use of denying reality as an negative coping strategy (47.1%), reporting humoring of serious situations (5.9%) (Kahambing, 2021) and the use of negative coping strategies usually increases the stress instead of reducing it.

The second Hypothesis of the current study addressed that "COVID stress and Burnout are negatively correlated with Resilience, Organizational Support, and positive Coping Strategies". The previous studies gives a supportive background about how resilience reduces the effects of COVID stress. The resilient person do two things i.e. better planning and allocation of resources to overcome the stress. By planning in right way and by allocating the resources to overcome the stress help the individual to overcome the negative consequences of pandemic (Walensky & Del, 2020) which are obviously expected to impact mental health (Holmes et al., 2020). The deleterious mental health consequences can be seen among service health providers as they remains the frontline staff members (Lai et al., 2019) thus they tend to engage in gauging the resilience to overcome the stress. It is a global concern and the findings indicate a real need of facilitating the service health providers regarding the use of resilience. It is obligatory to share what is already known about resilience, its importance and the various evidence based recommendations for using the resilience to overcome the negative consequences of COVID-19 pandemic (Holmes et al., 2020). Besides individual resilience, the organizational resilience is also of great importance. The effective organizational resilience can not only shield out the servicehealth providers but also the patient's mental health. Rangachari and Woods (2020) arguedand confirmed the importance of organizational resilience. The organizational support thatmust be provided to the employees are to provide the essential material supplies to the healthcare providers. The proper kits should be given to lower the risk of infection. Moreover, the

organizations are also responsible to establish the various learning systems to assist the frontline staff members. The current pandemic remained so vague that even the service health providers themselves do not know exactly that how to treat with it. The learning system can put all the service health providers at the same page. The learning trainings can also help in reducing the uncertainty among the service health providers. The third very important organizational support is to provide a good climate of work. Organizational support can be in form of instrumental support or emotional support. All the types and ways of organizational support have been linked with the better mental health of service health providers at the times of pandemics (Chan, 2004; Lancee et al., 2008; Marjanovicet al., 2007; Maunder et al., 2003, 2008). Just like organizational support, the positivecoping strategies also buffers the effect of COVID stress on the burnout among service health providers. The social support seeking can reduce the anxiety and also the symptomsof depression. At the time of epidemic and pandemic, the right seeking of social support can help the individuals to overcome the stress and to get a better healthy life. It act like a protective measure against the negative mental health consequences (Cao, Fang, Hou, Han, Xu, & Dong et al., 2020). The social support seeking coping strategy is also linked with high self-efficacy and is negatively correlated with anxiety and stress (Xiao, Zhang, Kong, Li, & Yang, 2020).

The third Hypothesis presumed that "COVID stress leads to burnout among Service Health Providers". A through back to literature gives a back to this assumption as well. The literature quotes that a high level of burnout is more likely to increase during the current situation i.e. during COVID-19 pandemic when the service health providers face a lot of work load. The media reports also highlighted the extensive nature of challenges arising this

time which may affect the norms and values of service health providers thus requiring ethical discourse on burnout among them (Eadie, 2020).

The fourth Hypothesis assumed that "Service health provider have higher level of COVID stress and Burnout at accelerated stage as compared to decelerated stage of Pandemic". The hypothesis is partially supported by one of the research based on psychosocial distress amongst Canadian intensive care unit healthcare workers during the acceleration phase of the COVID-19 pandemic. The study conducted on nearly two third service health providers of Canadian Intensive care units. The results reported that service health providers feel more distress and suppressed at accelerated stage of pandemic irrespective of whether they catch the virus or not. Nurses get more vulnerable to the stress and burnout as compared to all other health care providers. Anxiousness and stress are the main factors seen among them and should be the focus of intervention at the accelerated stage of pandemic (Alexandra, Moura, Aragon, & Jennifer, 2021).

The fifth hypothesis addressed the moderating role of resilience and was "Resilience buffers the effect of COVID stress on Burnout among Service Health Providers". A massive literature is available that supports the idea of reliance as a moderating factor of Burnout. The current scenario of COVID-19 opened a lot of doors to give birth to the various issues that can exceedingly consequence the mental health of health care specialists. Robertson et al. (2016), suggested that health care service health providers can get overwhelmed by different challenges like clinical difficulties, conflicts with necessities required and given and because of organizational issues. Here, the resilient health care service health providers tends to overcome stress despite of the facts that many challenges stops them to do so. They try at their level best to keep a positive point of view

and to keep on doing their duties at fullest (Stevenson et al. 2011). The wider bulk of literature proved resilience as a predictor of excellence in one's life (Tecson et al. 2019) and can help a person to enhance a psychosocial well-being and to have a better mental health (Yıldırım 2019).

The sixth Hypothesis addressed that "Organizational Support buffers the effect of COVID stress on Burnout among Service Health Providers". The studies probe out the various organizational factors like increased work load, imbalanced distribution of duties, lack of incentives given and discrimination to cause emotional exhaustion, sleep problems, stress and burnout among employees (Gavin et al. 2020; Lai et al. 2020). In such conditions, a better institutional support has been identified as the stimuli for the better mental health of employees. The institutional support include the supportive responses given by any organization and can be in form of physical support, emotional support, financial support or psychosocial support (Shanafelt, Ripp, & Trockel, 2020; Zhang, Sun, Jahanshahi et al., 2020]. The institutional support of any kind is positively correlated with the better mental health of service health providers (Dugani, Afari, Hirschhorn et al, 2018; Bronkhorst, Tummers, Steijn, Vijverberg, 2015).

A healthy amount of literature supports the hypothesis seven and eighth of the current study i.e. "Positive Coping Strategies buffers the effect of COVID stress on Burnout among Service Health Providers" and "Avoidance Coping Strategy boosts the effect of COVID stress on Burnout among Service Health Providers". Coping strategies acts like a moderator in lowering the psychological symptoms. The risk of post-traumatic stress disorder can even be reduced by the right use of coping strategies at time of pandemics (Cho & Kim, 2014; Kerai, Khan,; Islam, Asad, Razzak, & Pasha, 2017; Witt; Stelcer; &

Czarnecka-Iwanczuk, 2018). Chesney et al., (2006) reported that one can halt out the undesirable emotions and negative thoughts and can enhance the positive state of mind by using the right type of coping strategy. Among various coping strategies, the avoidance is the one that boosts up the level of stress (Brown, Mulhern, & Joseph, 2002; Chang, Lee, Connor, Davidson, Jeffries, & Lai, 2003) and also increases the probability of showing post traumatic symptoms (Loo, DiMaggio, Gershon, Canton, Morse, & Galea, 2016). On the other hand, problem solving coping strategy is a healthy way of getting rid of stress (Watson; Deary, Thompson, & Li, 2008; Howlett, Doody, Murray, LeBlanc-Duchin, Fraser, & Atkinson, 2015) during the emergency timings too (Brown, Mulhern, & Joseph, 2002). Active coping strategies also shields out the effect of stress (Cai, Tu, Ma, Chen, Fu, Jiang, & Zhuang, 2019; Salman, Raza, Mustafa, Khan, Asif, Tahir, Shehzadi, & Hussain, 2020).

5.3 Conclusion

The current study concluded that COVID stress can leads to burnout and Service Health Providers feel more COVID stress and Burnout at accelerated stage as compared to decelerated stage of Pandemic. Presence of more COVID stress and higher use of Avoidance coping strategy is positively correlated to the Burnout, whereas more use of Resilience, more availability of Organizational Support, and higher use of positive Coping Strategies is negatively correlated with Burnout among Service Health Providers. Among moderators; Resilience, positive Coping Strategies, and Organizational Support buffers the effect of COVID stress on Burnout among Service Health Providers. It predicts that by providing organizational support, the institutions can participate in helping Service Health Providers overcoming their COVID stress and thus Burnout at time of Pandemics. By using resilience and by using positive coping strategies Service Health Providers overcome their

COVID stress and can shields out the effect of COVID stress on Burnout among Service Health Providers and

5.4 Limitations & Suggestions

The limitation is the sample population was Doctors and Nurses only though there are number of other Service Health Providers participating as frontline staff members. The current study can get a better dimension for future research by not confiding sample population to Doctors and Nurses only. Another limitation of the study is the cross-lag analysis was ideal because of unavailability of expertise were unable to do that. The study can be made better by doing cross-lag analysis with Mplus Software. Moreover, in present study the data was collected only from Abbottabad District. For the future research, the effectiveness and generalization of current study can be made better by taking data from different hospitals of various cities.

3.5 Implications

The current study has both theoretical as well practical implications. The theoretical implications include the Current study added up the literature and the findings are confirming the Lazarus theory of stress as the findings are in line with a theory to which this research is based. On the other hand, the practical implications include that the study can help clinicians and psychologist in determining about the outputs of COVID stress among Service Health Providers and to help them enhancing their Mental Health conditions even under the stressful situations. Another practical implication of the current study is it can help Health Care Sector to determine the need of Organizational Support in order to reducethe level of Burnout. It has also given an assumption that by using the coping strategies

which are positive and with the availability of organizational support employees can overcome their stress and can avoid to have burnout.

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APPENDIX A

Full name: _____
ID card Number: _____
Contact No: _____
Address: _____

Consent form & demographic information

It is to request you that please fill the form below and the questionaries' attached carefully and honestly. The aim of this survey is to analyze about your psychological well-being and the support you are getting in maintaining it. And it is to assure you that your information will remain confidential. So, please give the responses deliberately truthfully.

Name: _____

Age: _____

Gender: _____

Designation: _____

Marital status: _____

Family members: _____

No of children: _____

Monthly income: _____

Family system: a. nuclear b. Joint

Work shift: a. Day shift b. Night shift c. Both

Job status: a. Permanent b. Contract

Corona victimization status: a. personally victimized

b. any member of your family being victimized

c. any friend or colleague of yours being victimized

d. Both you & family member being victimized

Any respiratory issue: _____

Any pre-morbid history: _____

The COVID Stress Scales

The following asks about various kinds of worries that you might have experienced. While keeping in mind the current situation of COVID-19, Show how much stress you feel.
Please note: "**self-isolation**" refers to ***voluntary*** separation from others.

	Not at all	Slightly	Moderately	Very	Extremely
1. I am worried about catching the virus	0	1	2	3	4
2. I am worried that I can't keep my family safe from the virus	0	1	2	3	4
3. I am worried that our healthcare system won't be able to protect my loved ones	0	1	2	3	4
4. I am worried our healthcare system is unable to keep me safe from the virus	0	1	2	3	4
5. I am worried that basic hygiene (e.g., handwashing) is not enough to keep me safe from the virus	0	1	2	3	4
6. I am worried that social distancing is not enough to keep me safe from the virus	0	1	2	3	4
7. I am worried about grocery stores running out of food	0	1	2	3	4
8. I am worried that grocery stores will close down	0	1	2	3	4
9. I am worried about grocery stores running out of cleaning or disinfectant supplies	0	1	2	3	4
10. I am worried about grocery stores running out of cold or flu remedies	0	1	2	3	4
11. I am worried about grocery stores running out of water	0	1	2	3	4
12. I am worried about pharmacies running out of prescription medicines	0	1	2	3	4
13. I am worried that foreigners are spreading the virus in my country	0	1	2	3	4
14. If I went to a restaurant that specialized in foreign foods, I'd be worried	0	1	2	3	4

about catching the virus					
15. I am worried about coming into contact with foreigners because they might have the virus	0	1	2	3	4
16. If I met a person from a foreign country, I'd be worried that they might have the virus	0	1	2	3	4
17. If I was in an elevator with a group of foreigners, I'd be worried that they're infected with the virus	0	1	2	3	4
18. I am worried that foreigners are spreading the virus because they're not as clean as we are	0	1	2	3	4
19. I am worried that if I touched something in a public space (e.g., handrail, door handle), I would catch the virus	0	1	2	3	4
20. I am worried that if someone coughed or sneezed near me, I would catch the virus	0	1	2	3	4
21. I am worried that people around me will infect me with the virus	0	1	2	3	4

22. I am worried about taking change in cash transactions	0	1	2	3	4
23. I am worried that I might catch the virus from handling money or using a debit machine	0	1	2	3	4
24. I am worried that my mail has been contaminated by mail handlers	0	1	2	3	4

	Never	**Rarely**	**Sometimes**	**Often**	**Almost Always**
25. I had trouble concentrating because I kept thinking about the virus	0	1	2	3	4
26. Disturbing mental images about the virus popped into my mind against my will	0	1	2	3	4
27. I had trouble sleeping because I worried about the virus	0	1	2	3	4
28. I thought about the virus when I didn't mean to	0	1	2	3	4
29. Reminders of the virus caused me to have physical reactions, such as sweating or a pounding heart	0	1	2	3	4
30. I had bad dreams about the virus	0	1	2	3	4

	Never	Rarely	Sometimes	Often	Almost Always
31. Searched the Internet for treatments for COVID-19	0	1	2	3	4
32. Asked health professionals (e.g., doctors or pharmacists) for advice about COVID-19	0	1	2	3	4
33. Checked YouTube videos about COVID-19	0	1	2	3	4
34. Checked your own body for signs of infection (e.g., taking your temperature)	0	1	2	3	4
35. Sought reassurance from friends or family about COVID-19	0	1	2	3	4
36. Checked social media posts concerning COVID-19	0	1	2	3	4

Found in: Taylor, S., Landry, C. A., Paluszek, M. M., Fergus, T. A., McKay, D. & Asmundson, G. J. G. (2020). Development and initial validation of the COVID Stress Scales. Journal of Anxiety Disorders. doi.org/10.1016/j.janxdis.2020.1

COPING STRATAGY INDICATOR

We are interested in how people cope with the COVID-19 stress in their lives. Here the term problem means the COVID-19 stress that you are facing since last few months.

Listed below are several possible ways of coping. We would like you to indicate to what extent you, yourself, used each of coping methods. All of your responses will remain anonymous (Secrete).

Keeping COVID-19 stress in mind, indicate to what extent you are:

1. Let your feelings out to a friend
   a. A lot b. A little c. Not at all
2. Rearranged things around you so that your problem had the best chance of being resolved
   a. A lot b. A little c. Not at all
3. Brainstormed all possible solutions before deciding what to do
   a. A lot b. A little c. Not at all
4. Tried to distract yourself from the problem
   a. A lot b. A little c. Not at all
5. Accepted sympathy and understanding from someone
   a. A lot b. A little c. Not at all
6. Did all you could to keep others from seeing how bad things really were
   a. A lot b. A little c. Not at all
7. Talked to people about the situation because talking about it helped you to feel better
   a. A lot b. A little c. Not at all
8. Set some goals for yourself to deal with the situation
   a. A lot b. A little c. Not at all
9. Weighed your opinion very carefully
   a. A lot b. A little c. Not at all
10. Daydreamed about better times
    a. A lot b. A little c. Not at all
11. Tried different ways to solve the problem until you found the one that worked
    a. A lot b. A little c. Not at all
12. Confided your fears and worries to a friend or relative
    a. A lot b. A little c. Not at all
13. Spent more time than usual alone
    a. A lot b. A little c. Not at all
14. Told people about the situation because just talking about it helped you to come up with the solutions
    a. A lot b. A little c. Not at all
15. Thought about what needed to be done to straighten things out
    a. A lot b. A little c. Not at all
16. Turned your full attention to solving the problem
    a. A lot b. A little c. Not at all
17. Formed a plan of action in your mind
    a. A lot b. A little c. Not at all
18. Watched television more than usual
    a. A lot b. A little c. Not at all
19. Went to someone (friend or professional) in order to help you feel better
    a. A lot b. A little c. Not at all
20. Stood firm and fought for what you wanted in the situation
    a. A lot b. A little c. Not at all

21. Avoided being with people in general
    a. A lot b. A little c. Not at all
22. Buried yourself in a hobby or sports activity to avoid the problem
    a. A lot b. A little c. Not at all
23. Went to friend to help you feel better about the problem
    a. A lot b. A little c. Not at all
24. Went to friend for advice on how to change the situation
    a. A lot b. A little c. Not at all
25. Accepted sympathy and understanding from friends who had the same problem
    a. A lot b. A little c. Not at all
26. Slept more than usual
    a. A lot b. A little c. Not at all
27. Fantasized about how things could have been different
    a. A lot b. A little c. Not at all
28. Identified with characters in novels and movies
    a. A lot b. A little c. Not at all
29. Tried to solve the problem
    a. A lot b. A little c. Not at all
30. Wished that people would just leave you alone
    a. A lot b. A little c. Not at all
31. Accepted help from a friend or relative
    a. A lot b. A little c. Not at all
32. Sought reassurance from those who know you best
    a. A lot b. A little c. Not at all
33. Tried to carefully plan a course of action rather acting on impulse
    a. A lot b. A little c. Not at all

Brief Resilience Scale (BRS)

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I tend to bounce back quickly after hard times	1	2	3	4	5
2	I have a hard time making it through stressful events	5	4	3	2	1
3	It does not take me long to recover from a stressful event	1	2	3	4	5
4	It is hard for me to snap back when something bad happens	5	4	3	2	1
5	I usually come through difficult times with little trouble	1	2	3	4	5
6	I tend to take a long time to get over setbacks in my life	5	4	3	2	1

The measure of COVID-19 Organizational Support (COVID-OS)

Below are statements about YOUR OPINIONS. Please rate (1 to 7)

		Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Some what agree	Agree	Strongly agree
1.	I have access to appropriate personal protective equipment (PPE) (e.g., hand gloves or face masks)	1	2	3	4	5	6	7
2.	I am exposed to the risk of getting COVID-19 at work and taking the virus home to my family	1	2	3	4	5	6	7
3.	I can get tested for COVID-19 rapidly if I need to	1	2	3	4	5	6	7
4.	I am uncertain my organization would take care of my own needs (e.g. personal and family) if I get COVID-19	1	2	3	4	5	6	7
5.	People in my organization have access to childcare during increased work hours and school closures	1	2	3	4	5	6	7
6.	As work demands increase, I can get support for other personal and family needs (e.g. food, lodging, transportation)	1	2	3	4	5	6	7
7.	My organization can provide me competent medical care if I am deployed to a new area (e.g., from non-ICU to ICU)	1	2	3	4	5	6	7
8.	I feel I lack access to up-to-date information and communication from the healthcare system	1	2	3	4	5	6	7

MBI-Educators Survey

How often:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

S#	Statements						
1.	I feel emotionally drained.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
2.	I feel used up at the end of the day.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
3.	I feel fatigued when I get up in the morning and have to face another day on the job.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
4.	I can easily understand how my recipients feel about things.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
5.	I feel I treat some recipients as if they were impersonal “objects”.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
6.	Working with people all day is really a strain for me.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
7.	I deal very efficiently with the problems of my recipients.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
8.	I feel burned out from my work.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
9.	I feel I am positively influencing other people’s lives through my work.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
10.	I have become more callous towards people since I took this job.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
11.	I worry that this job is hardening me emotionally.	**0**	**1**	**2**	**3**	**4**	**5**	**6**

12.	I feel very energetic.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
13.	I feel frustrated by my job.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
14.	I feel I am working too hard on my job.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
15.	I don't really care what happens to some recipients.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
16.	Working directly with people puts too much stress on me.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
17.	I can easily create a relaxed atmosphere with my recipients.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
18.	I feel exhilarated after working closely with my recipients.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
19.	I have accomplished many worthwhile things in this job.							
20.	I feel like I am at the end of my rope.							
21.	In my work I deal with emotional problems very calmly.							
22.	I feel recipients blame me for some of their problems.							