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SOCIAL ISOLATION EMANATED PSYCHOLOGICAL EXHAUSTION AND DISCONNECTEDNESS AMONG PHYSICIANS DURING COVID-19 PANDEMIC: RESULTS OF A QUALITATIVE STUDY

Original Research

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ABSTRACT

Background: The COVID-19 pandemic posed unprecedented challenges to global healthcare systems, disproportionately affecting frontline physicians. In Pakistan, where healthcare resources are limited and the physician-to-patient ratio is approximately 1:1,300, many doctors worked under extreme pressure, balancing the demands of clinical care with the risk of infection. Physicians who tested positive were required to isolate, often experiencing psychological distress and social disconnection during quarantine. This study explores the social and psychological implications of isolation on physicians during the COVID-19 crisis in Pakistan.

Objective: To investigate the psychological exhaustion and social disconnectedness experienced by physicians during their mandatory COVID-19 isolation period.

Methods: This qualitative study was conducted between November 2020 and April 2021 at two tertiary care hospitals in Islamabad: Pakistan Institute of Medical Sciences (PIMS) and Polyclinic Hospital. Using a purposive sampling technique, 14 physicians who tested positive for COVID-19 and underwent at least 15 days of isolation were recruited. Data were collected via in-depth telephonic interviews guided by a semi-structured questionnaire. Interviews were transcribed and analyzed using Braun and Clarke's six-phase thematic analysis framework to extract key psychological and social themes.

Results: Among 14 participants (9 males, 5 females), the isolation period extended beyond the standard 15 days for 6 physicians due to ongoing symptoms. Thematic analysis revealed two major themes: psychological exhaustion, with subthemes of depression (reported by 10 physicians), anxiety (12 physicians), and loneliness (9 physicians); and disconnectedness, with subthemes of relational detachment (8 physicians) and lack of interaction (11 physicians). Participants expressed emotional turmoil due to separation from patients, family, and professional roles.

Conclusion: The study highlights the urgent need for integrated psychological support and targeted mental health interventions for physicians during infectious disease outbreaks. Addressing emotional well-being is essential to sustain the healthcare workforce in ongoing and future health emergencies.

Keywords: Anxiety, COVID-19, Depression, Isolation, Mental Health, Physicians, Quarantine.

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INTRODUCTION

The emergence of the COVID-19 pandemic in Pakistan in February 2020, followed by the nationwide lockdown in March, brought an unprecedented burden on the healthcare system. By November 2020, Pakistan had entered a second wave of the pandemic, with confirmed cases nearing 400,000. With a population exceeding 212 million and a physician-to-patient ratio of approximately 1:1,300 (1), the country faced significant challenges in managing the crisis. Healthcare workers, especially physicians, were at the forefront of this battle, deployed in COVID-19 wards, isolation centers, and emergency units, often without adequate resources or respite (2). These professionals bore the brunt of the pandemic, risking their lives, enduring grueling hours, and facing societal fear and, at times, public aggression (3). Tragically, many physicians succumbed to the virus in the early stages, their commitment and sacrifice underscoring both the heroism and the psychological toll of the medical response to the crisis (4,5). This persistent exposure and immense responsibility contributed to high levels of psychological distress and burnout, further aggravated during periods of quarantine and isolation (6,7). Beyond its biomedical impact, the pandemic imposed complex sociological repercussions, particularly in the form of social isolation. Sociological literature emphasizes that social isolation is not merely the absence of physical interaction, but also the result of social, cultural, and institutional factors that shape human behavior and participation (8,9). Defined broadly as the lack or inadequacy of social contact and connectedness (10), social isolation can stem from an individual's inability to integrate into the structures of mainstream society—be it familial, communal, or institutional (11). It is marked by emotional detachment, marginalization, and the erosion of interpersonal relationships, particularly when regular social exchanges are diminished or eliminated (12). For healthcare workers under quarantine, this detachment is compounded by an abrupt withdrawal from professional identity, familial roles, and societal interaction, resulting in profound emotional and mental consequences (13). These experiences often manifest in the form of alienation, low self-worth, and a restricted sense of belonging (14).

The impact of social isolation is not limited to the individual level but resonates throughout the broader social fabric. It erodes trust, impairs emotional well-being, and fosters an environment where exclusion and alienation become normalized (15). As inherently social beings, humans require meaningful interaction to sustain mental and emotional health (16). In its absence, individuals—particularly the elderly, unemployed, or physically impaired—are more susceptible to the adverse consequences of isolation, including depression, cognitive decline, and chronic psychological strain (17). The disruption of social networks, support systems, and daily interaction during the pandemic magnified these risks across all age groups and professions (18). Among physicians, the mandated quarantine and voluntary distancing triggered waves of psychological hardship, including helplessness, denial, and perceived marginalization (19). Several studies conducted during the pandemic have drawn clear connections between enforced isolation and rising cases of anxiety, depression, and distress, particularly among frontline workers (20). Isolation separated individuals from their primary sources of emotional support—families, colleagues, and communities—while simultaneously intensifying the mental burden of professional responsibility (21). This psychological strain was especially pronounced among physicians who, already vulnerable due to chronic stress or pre-existing conditions, faced amplified risks due to poor health infrastructure and limited occupational safeguards (22). The combined effect of occupational hazard and enforced seclusion placed many physicians at the precipice of a psychological crisis, exacerbating feelings of loneliness, anxiety, and despair (23). In light of these considerations, this study aims to investigate the socio-psychological impact of social isolation on physicians who were quarantined during the COVID-19 pandemic. By examining their lived experiences, the research seeks to uncover the psychological consequences of isolation and provide insights into the structural and emotional challenges faced by frontline medical professionals.

METHODS

This study employed a qualitative research design to explore the psychological and emotional experiences of physicians who were quarantined following a positive COVID-19 diagnosis. In line with the guidelines issued by the Government of Pakistan and the World Health Organization (WHO), the study aimed to capture the lived experiences of healthcare professionals during isolation by using an interpretative approach. Data were collected through in-depth interviews guided by a semi-structured, open-ended interview tool, allowing participants to express their personal experiences, emotions, and perspectives with flexibility and authenticity. A total of 14 physicians were recruited using a consecutive sampling strategy (3,4). All participants were briefed about the study objectives and

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procedures prior to enrollment, and written informed consent was obtained. Participation was entirely voluntary. To ensure a focused and representative sample, inclusion criteria required that participants (i) had experienced a minimum of 15 days in isolation following a laboratory-confirmed COVID-19 diagnosis, (ii) were employed solely at designated government hospitals and not engaged in private practice to avoid data redundancy, and (iii) were residing in Pakistan during the onset of the pandemic's first wave, ensuring exposure to its initial psychological and social impact. Although exclusion criteria were not explicitly outlined, individuals unable to provide informed consent or with known pre-existing psychiatric disorders were assumed to be excluded.

Data were collected between November 2020 and April 2021 from two major tertiary care facilities in Islamabad: Pakistan Institute of Medical Sciences (PIMS) and Polyclinic Hospital. Given the constraints of lockdowns, fluctuating health conditions, and demanding schedules of the participants, the data collection process was slow and required adaptation. While in-person interviews were conducted when feasible, the majority of interviews were carried out via telephonic conversations to ensure continuity of data collection without compromising the safety of either participants or the research team. Telephonic interviews also proved effective in enabling participation from physicians who were still recovering or unable to travel due to isolation or post-COVID fatigue. All interviews were manually transcribed, anonymized, and stored securely to maintain participant confidentiality. Ethical approval was obtained from the respective Institutional Review Boards (IRB), and the study was conducted in accordance with the Declaration of Helsinki. Thematic analysis, as outlined by Braun and Clarke, was used to analyze the data in a structured yet flexible manner (24). This six-phase process involved: familiarization with the data, generating initial codes, identifying themes, reviewing those themes, defining and naming them, and finally producing a detailed analytical report. This iterative and reflective approach allowed the researcher to engage deeply with the data and return to earlier stages as needed for further clarification or refinement. The method was particularly suitable for identifying common emotional and psychological patterns across varied personal narratives, providing nuanced insights into the physicians' lived experiences during isolation.

RESULTS

The findings of this qualitative study revealed significant psychological and emotional challenges experienced by physicians during their isolation period following COVID-19 infection. Thematic analysis of the interview data generated two major themes—**Psychological Exhaustion** and **Disconnectedness**, with related subthemes offering a deeper understanding of the lived experiences of the participants. The theme of **Psychological Exhaustion** was central to the responses of most participants. Physicians reported emotional depletion during their isolation, with the mandated 15-day period often extending to 30–35 days due to persistent physical weakness and slow recovery. Many participants described COVID-19 as a threatening and exhausting experience, both physically and psychologically. Even with considerable family support, many physicians felt mentally burdened, fearing potential outcomes such as death, which had already claimed the lives of several of their colleagues. These fears amplified their emotional fatigue. Participants shared that the limitations on outdoor activity and disruption of normal routines contributed to a heightened sense of psychological weariness. Several participants reported experiencing symptoms of stress, anxiety, depression, and even post-traumatic stress due to their isolation. One participant expressed these feelings poignantly, stating:

"*It was very painful for us to let they people die, because of this deadly disease, which was initially untreatable in the whole world because of the muddled health state in the world*." (P3)

Under the subtheme of **Depression and Anxiety**, a majority of physicians described periods of profound sadness and hopelessness. They noted that being removed from their clinical roles caused a sense of helplessness, especially during a time when their services were critically needed. One participant noted:

"*I was in depression, because I was unable to perform my official duties and neither could I join my family because of my isolation period*." (P1)

Another stated:

"*At times, during my isolation period, I was depressed and fearful of dying alone*." (P7)

This inability to fulfill their dual roles—as healers and as family members—was a recurrent source of psychological distress. Participants described feeling trapped between their sense of duty and their personal health concerns. The subtheme of **Loneliness** further highlighted the depth of emotional distress among the physicians. Despite receiving virtual encouragement and moral support, many described a

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profound sense of solitude during their isolation. This feeling stemmed from being detached from family, colleagues, and daily professional routines. One participant remarked:

"*I was lonely during isolation period, because I was no more involved in official duties or in household chores*." (P9)

Another reflected:

"*Even though, I am a physician but I often thought, what would I do if I could not recover from this deadly disease, because I was alone and need emotional support of my parents and family*." (P4)

Despite being socially praised as heroes, participants acknowledged that moral support alone could not mitigate the feeling of physical absence and solitude. As one participant shared:

"*Instated having lot of moral, social and emotional encouragement, I was alone. I was in a dire need of having someone physical present to me to enjoy the normal life*." (P2)

The second major theme identified was **Disconnectedness**, which encapsulated the participants' experiences of social detachment during isolation. Subthemes under this category included **Relational Detachment** and **Lack of Interaction**. Physicians noted that the enforced physical distancing disrupted the core of their social and professional relationships. As COVID-19 was understood to be highly contagious, participants often felt alienated not only from society but also from the patients they used to treat. This detachment was further compounded by technological barriers that affected continuity of care. One physician elaborated:

"*Most of the times, when my patients were advised to connect me through online social networking, it was difficult for them to use those platforms and I could not guide them properly because to their poor knowledge of technology and internet*." (P11)

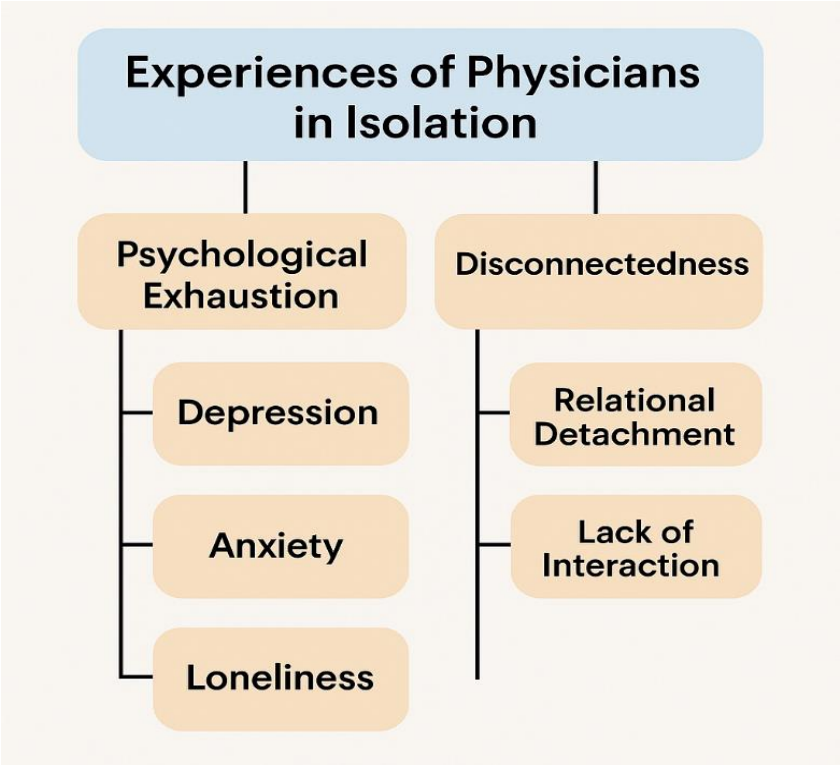
Many elderly and underprivileged patients lacked the digital literacy or access required to engage in online consultations, thereby increasing the physicians' sense of futility and disconnection from their caregiving roles. Under the subtheme of **Lack of Interaction**, participants described the broader disruption to their social networks. Physicians are expected to maintain an intricate balance between professional and personal roles; however, during the pandemic, many had to isolate from their children, spouses, and other family members despite being in the same home. One physician explained:

"*It was very difficult for us to limit our social interaction with others, because we have to mitigate the chronic situation of the pandemic by fighting as frontline workers*." (P13)

Another shared a personal account:

"*I was worried about my children and husband, because I was unable to spend time with them, as working all time in COVID-19 wards for the treatment of patients and then visiting my home where I cannot meet my family directly, because I have to be quarantine for a week*." (P10)

Overall, the results illustrated the multidimensional psychological toll of isolation on physicians. Despite professional resilience and family encouragement, the isolation period induced emotional depletion, anxiety, depression, loneliness, and an overwhelming sense of social disconnection.



DISCUSSION

The findings of this study reinforce the psychological and emotional toll of isolation among physicians during the COVID-19 pandemic, aligning with a growing body of literature highlighting the adverse effects of social detachment during public health crises. The two dominant themes—psychological exhaustion and disconnectedness—underscore the vulnerability of frontline healthcare workers who, while serving as essential personnel during the outbreak, were simultaneously exposed to significant mental health challenges. Isolation, though an essential public health intervention, induced emotional dysregulation and social maladjustment, exacerbating pre-existing pressures faced by physicians during high-risk clinical situations. The broader sociological context of human interaction, solidarity, and connectedness forms the foundation of psychological resilience during crises. Several studies have established that the presence of strong social bonds, a sense of belonging, and continued interpersonal engagement are integral to maintaining emotional equilibrium during pandemics (18-21). However, the necessary restrictions imposed by the government and health authorities, including self-quarantine, social distancing, and enforced isolation, significantly disrupted these psychosocial buffers. The present study found that even in the presence of familial support, physicians experienced loneliness and emotional distress, suggesting that physical separation alone—despite moral support—was sufficient to produce negative psychological outcomes.

These findings correspond with global research indicating that isolation during infectious disease outbreaks can lead to a range of psychological consequences including anger, hopelessness, anxiety, dissatisfaction with life, and a perceived loss of control (22,23). For physicians, these effects were magnified by their unique role within the health system. Not only did they carry the emotional burden of caring for critically ill patients, but they also feared transmitting the virus to their families and colleagues, a concern commonly reported by healthcare workers during the pandemic (24,25). The fear of infecting others, combined with professional guilt for being temporarily removed from service due to infection, contributed to a complex emotional strain. This duality—being both a patient and a caregiver—heightened their susceptibility to mental fatigue and isolation-induced trauma. The shift toward remote patient interactions during the pandemic presented additional challenges for physicians, especially in resource-limited settings such as Pakistan, where patients may lack digital literacy or access to telehealth platforms. This study reflected these barriers, noting how physicians felt professionally helpless when unable to guide their patients through virtual channels due to patients' limited understanding of technology (26,27). As

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clinical relationships are often rooted in face-to-face communication and physical presence, the sudden transition to distanced care diluted their therapeutic capacity and deepened their sense of professional disconnect.

Despite its insights, the study has limitations. The sample was limited to 14 physicians from two hospitals within a single city, restricting the generalizability of findings to broader regional or national contexts. Experiences may vary significantly across urban and rural settings, between public and private healthcare institutions, and among specialties. Additionally, the reliance on self-reported narratives introduces the potential for recall bias or underreporting of distress due to professional identity and social desirability. Nevertheless, the study's strength lies in its ability to present rich, context-specific insights into the lived experiences of frontline physicians during an extraordinary public health emergency. The use of thematic analysis provided an in-depth exploration of psychological patterns and social disruptions with meaningful real-world implications. Future research could benefit from a larger, more diverse sample across multiple geographic regions and levels of healthcare systems. Longitudinal studies tracking the mental health of physicians' post-isolation may also uncover the extended psychological impact of the pandemic and guide interventions for burnout prevention. Moreover, integrating perspectives from other healthcare professionals—such as nurses, paramedics, and administrative staff—could offer a more holistic view of the emotional ecology within healthcare institutions during pandemics. In conclusion, the study highlights the significant psychological burden experienced by physicians in isolation during COVID-19, with emotional exhaustion and social disconnection emerging as dominant stressors. While public health protocols remain vital in mitigating infectious disease spread, the findings underscore the importance of integrating mental health support systems into emergency response frameworks, especially for frontline healthcare workers.

CONCLUSION

This exploratory study concluded that isolation during the COVID-19 pandemic had profound psychological and social implications for physicians, significantly affecting their emotional well-being and professional identity. The participants described intense experiences of depression, anxiety, and loneliness, accompanied by a deep sense of disconnection from their roles as caregivers, family members, and social beings. The absence of physical proximity to patients, colleagues, and loved ones amplified their emotional distress, highlighting the vulnerability of frontline healthcare workers during periods of enforced isolation. These findings emphasize the urgent need for integrating mental health support and structured reintegration strategies into healthcare systems, especially during health crises, to safeguard the well-being of medical professionals and sustain the resilience of healthcare delivery.

AUTHOR CONTRIBUTION

Author	Contribution
Muhammad Abo ul Hassan Rashid*	Substantial Contribution to study design, analysis, acquisition of Data Manuscript Writing Has given Final Approval of the version to be published

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