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Biopsychosocial Experiences of Home-isolated COVID-19 Patients: A Qualitative Study

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ABSTRACT

Objectives: This study is conducted to explore the biopsychosocial experiences, challenges, and coping strategies of home-isolated patients with coronavirus disease-19 (COVID-19) during their recovery process.

Methods: The present study utilized a phenomenological research design. A purposive sampling technique was used to recruit 20 home-isolated mild symptomatic COVID-19 patients from an urban area in India. In-depth telephonic interviews were conducted between the 18th and 25th of August 2020. Interviews were transcribed verbatim, and thematic analysis was carried out to explore major themes.

Results: Four overarching themes were identified: (1) Bio-psycho-social experiences, (2) challenges encountered, (3) coping strategies used, and (4) recommendations to address issues. Fever, dry cough, severe body pains and tiredness were the common biological symptoms felt by the participants. The common negative feelings experienced were fear, anxiety, guilt, and worry. Economic issues, being humiliated by their neighbors, and stigma were the major challenges faced by the participants. Positive thinking, becoming aware of COVID-19 facts, and practising meditation and yoga were the common coping strategies used by participants. Regular digital monitoring of home-isolated patients by medical professionals, creating web portals to clarify illness-related issues, and need to sensitizing the neighbors were some of the recommendations made by participants.

Conclusion: Biopsychosocial issues are associated with COVID-19 infection. Mental healthcare professionals are in a unique position to address the psychosocial concerns arising out of the pandemic.

Keywords: Biopsychosocial models, coronavirus disease-19, patient isolation



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INTRODUCTION

The coronavirus disease-19 (COVID-19) pandemic, as a rapidly spreading disease, has given rise to a series of negative cognitive responses and emotions in the population at risk.^[1,2] In addition to the adverse effects on physical health, the COVID-19 pandemic is likely to result in psychological manifestations such as depression, anxiety, panic disorder, and psychosomatic symptoms. Asian countries like India are currently burdened by the exponential growth in the spread of transmission of severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2).^[3]

Fever, cough, and shortness of breath are some common manifestations of COVID-19, others being sore throat, fatigue, body pains, loss of smell, diarrhea, and abdominal pain.^[4] While most cases report mild symptoms, some may progress to viral pneumonia and multi-organ failure. The time from exposure to onset of symptoms is typically around 5 days but may range from 2 to 14 days. In persons with the new coronavirus infection, physical health was hurt,

negative emotions experienced, and social connections reduced.^[5] This affects all aspects of life (physical, mental, and social) and negatively impacts their health.

In India, the first and foremost response to the pandemic has been fear and imminent danger in most people.^[6] COVID-19 positivity-induced anxiety in patients, their family members, healthcare professionals, and the general population due to its infective potential, the uncertainty of manifestations and prognosis, and restrictions imposed by the Government leading to social, occupational, psychological, familial dysfunction, economic, and other domains. Previous studies have revealed that individuals exposed to the risk of infection may develop pervasive fears about their health and worries about infecting others and family members.^[7-10] Isolated patients may experience anxiety due to uncertainty in their health status and develop obsessive-compulsive symptoms such as repeated temperature checks and sterilization.^[11]

The COVID-19 pandemic poses a great challenge to the public healthcare system in India.^[12] In view of the large number of mild and asymptomatic cases being detected, the need to reduce the burden on the existing healthcare system and overcome the shortage in availability of health professionals, the Indian Government issued guidelines for home isolation of COVID-19 patients. Patients eligible for home isolation should be clinically mild/asymptomatic, assigned to a medical officer, and have the requisite facility at their residence for self-isolation and quarantining the family members. With an increasing number of people going into home isolation to battle the contagion, it is vital to assess psychosocial issues and ensure psychosocial intervention.

The vast impact of the COVID-19 pandemic and the general uncertainty associated with it has resulted in severe psychological reactions among the affected, which may vary depending on whether they are housed in a home or hospital set-up.^[12-16] Prior researches have highlighted the psychological problems among frontline medical staff nurses fighting against COVID-19 and the general public. However, no qualitative studies have been published on the biopsychosocial experiences of home-isolated mild symptomatic COVID-19 patients in India. The present study, therefore, aimed to understand the bio-psychosocial experiences and coping strategies of home-isolated mild symptomatic COVID-19 patients through semi-structured phone call interviews.

METHOD

The present study adopted an exploratory qualitative research approach with a phenomenological research design

to understand the biopsychosocial experiences of home-isolated patients with COVID-19. The study employed a purposive sampling technique and included 20 home-isolated subjects from an urban area in Karnataka state, India. Data were collected between 18 and 29 August 2020. The inclusion criteria were home-isolated patients with mild COVID-19 infection diagnosed with real-time reverse transcription-polymerase chain reaction test in the same period, willing to participate in research and patients between the 7th and 14th day isolation period. Variations in age, occupation, and type of family were considered to obtain diverse narrations relating to COVID-19 infection. Our institution, a state-run tertiary mental health-care center, has been designated as a counselling center for home-isolated COVID-19 patients. The institution has been receiving the list of such patients from the district authority for the purpose of counselling on a daily basis. Patients fulfilling the inclusion criteria were recruited for the study.

Interview Outline

Interviews were conducted using an interview guide consisting of open-ended questions developed for the study. The interview outline was determined by reviewing relevant literature, seeking expert opinions and pre-interviews with two COVID-19 patients. Questions posed in the interview included: (1) *"What was your initial reaction to testing positive for COVID-19?"* (2) *"What physical symptoms did you have, and how long did they last?"* (3) *"What are the psychological feelings you are experiencing?"* (4) *"How did the neighbors react to getting to know your positive result?"* (5) *"What are your common thoughts about the present sickness?"* (6) *"What physical, psychological, and spiritual changes did you make to cope with this illness?"* (7) *"What challenges did you encounter?"* (probing questions regarding access to daily needs, medical facilities, family separation, stigma, and economic challenges) (8) *"How did you overcome those challenges?"* (9) *"What external support did you receive in the present situation?"* (10) *"What would you most like to share about the present illness and recommend for resolving the present challenges and related psychosocial issues?"*

Data Collection

The first and second researchers, with a doctorate in psychiatric nursing having experience in psychological consultation and scientific research, collected the data between the 18th and 29th of August 2020. Semi-structured and in-depth one-to-one telephone interviews spanning over 40–45 min were conducted in either local (Kannada) or English language for each patient at a time convenient to them. The interviews were audio recorded with participant permission. Information on participants' age, education, occupa-

tion, marital status, type of family, comorbid illnesses, and the number of days of home isolation was obtained at the beginning of the interview.

The researchers remained neutral and established a good rapport with the participants while collecting the data. Techniques such as unconditional acceptance, active listening, and clarification to promote the authenticity of the data were employed to avoid bias. A minimum of two telephonic interviews were arranged for each patient at multiple time points so as to ensure adequate data collection.

Participants who expressed distress during the interviews were provided brief support by way of sharing techniques to cope with negative thoughts, manage overwhelming emotions, and accept their present feelings. Contact information on available clinical services was shared, and participants were encouraged to seek professional help where required. After 2 days, follow-up calls were made to get an update on their current status.

Data Analysis

Data analysis was carried out concurrently during the data collection process. The audio recordings were transcribed verbatim within 24 h of the conduct of the interview and reviewed by the interviewers for accuracy. The original transcriptions were in the local language, which was later translated into the English language. A thematic analysis was carried out to explore the major themes. The analysis included reading the transcript several times to understand better the meaning conveyed. Significant phrases were identified and restated in general terms. Meanings were formulated and validated through research team discussions, and a consensus was reached. The recognized meanings were categorized into themes with their description. In-depth interviews followed by peer debriefing were used to ensure credibility. Two researchers analyzed the transcript independently by bracketing it on preconceived ideas to ensure trustworthiness. The findings were compared and a consensus on themes arrived through team discussions. Transferability was established by including patients with different characteristics, such as variation in age, occupation, family type, and location.

RESULTS

In this qualitative study, 20 home-isolated mild symptomatic COVID patients participated. Thematic redundancy was achieved with the 17th participant. Further, three more participants were interviewed to confirm thematic redundancy. The sociodemographic features of participants are summarized in Table 1.

Table 1. Sociodemographic features of participants

	Mean±SD
Age (years)	44.5±12.8
Duration of isolation (days)	9.9±1.8
	n (%)
Gender	
Male	14 (70.0)
Female	6 (30.0)
Level of education	
No formal education	1 (5.0)
Up to 10th standard	2 (10.0)
Pre-university course	4 (20.0)
Graduation	11 (55.0)
Post-graduation	2 (10.0)
Occupation	
Farmer	1 (5.0)
Private employee	8 (40.0)
Government employee	2 (10.0)
Business	7 (35.0)
Housewife	1 (5.0)
Student	1 (5.0)
Type of family	
Nuclear	15 (75.0)
Joint	5 (25.0)
Marital status	
Single	6 (30.0)
Married	14 (70.0)
Co-morbid illness	
Yes	7 (35.0)
No	13 (65.0)
Habits of smoking and alcoholism	
Smoking	3 (15.0)
Alcoholism	2 (10.0)
No	15 (75.0)

SD: Standard deviation.

Based on the data collection and thematic analysis, four overarching themes were identified bio-psychosocial experiences, challenges encountered, coping strategies used, and recommendations to address issues.

**Theme 1: Bio-psychosocial Experiences
Biological Experiences**

Most participants (16/20) complained of mild temperature, dry cough, and loss of appetite for 2 days. The remaining 4/20 patients though initially admitted to Corona Care Center for 3–4 days with high temperatures, were later discharged and isolated at home. All the patients complained of severe body pains and tiredness for 7–10 days. None of the patients reported symptoms of pneumonia. Seven pa-

tients had sleep disturbances due to nightmares and feared the complications might lead to mortality. One participant (P8, male, 50 years) acknowledges that he had never been sicker than this in his adult life.

Psychological Experiences

Most of the participants (17/20) said that their initial response was fear, anxiety, and surprise. Fear was due to possible death, infecting family members, isolation from friends and family members and inability to perform important and urgent tasks. Anxiety was due to an uncertain treatment regimen and lack of definite outcomes. Five participants were astonished as they tested positive despite taking adequate precautions. Three participants informed that they were not perturbed on hearing of the positive result as their family members had very recently tested positive for COVID-19.

The reported experiences revealed that most participants (17/20) experienced negative feelings while few reported positive ones. The common negative feelings experienced were fear, anxiety, guilt and worry. Three participants had palpitations, nervousness, and shaky hands for a week. One person complained of fear due to isolation and loneliness. One of the participants (P17, male, 57 years) recalled his feeling of guilt for having transmitted the infection to his family members. In most of the participants (17/20), negative feelings continued for a week though the physical symptoms had subsided. They also reported that psychological experiences were worse than physical symptoms. Three participants reported being calm and relaxed.

Sharing their experiences, most of the participants informed becoming more stable and hopeful while moving into the 2nd week of sickness. Two participants were happy to be spending quality time with family. The majority (16/20) said that they felt loved and encouraged by their family members to overcome the illness.

Two participants had thoughts related to their co-morbid illness. They kept checking their blood sugar levels daily, fearing they could go up. One participant (P9, male, 52 years) said that he called his family doctor frequently to get reassurance. Two participants were preoccupied with thoughts of COVID death. One participant (P8, male, 50 years) said that he could not control his negative thoughts.

Social Experiences

Most participants (10/20) were informed of being humiliated by their neighbors. It was reported that in many cases, neighbors demanded the patient be shifted to a hospital

or corona care center, fearing contracting of infection. As the law-enforcing authorities had sealed down the area adjoining their houses, the neighbors held them responsible for the inconvenience caused. However, some neighbors extended their help in procuring groceries and vegetables and providing food to the isolated families. About 50% of the participants (10/20) expressed loneliness and seclusion in the absence of social contact. The statements by the participants are summarized in Table 2.

Theme 2: Challenges Encountered

Half of the participants (10/20) faced difficulty procuring groceries and vegetables due to complete family isolation. For five participants, stigma was the major challenge. One of the participants (P4, female, 48 years) informed that no proper guidelines were conveyed regarding medication, repeat tests, and resuming regular duties. Economic issues were a major concern for 15/20 participants. All the family members testing positive simultaneously was a major challenge for one of the participants, while being alone was the most challenging part for another participant (P7, male, 26 years).

Theme 3: Coping Strategies Used

Physical Coping Strategies

Most participants (17/20) were informed that they were under complete rest during the 1st week of infection. Most participants (15/20) said that they took to drinking warm water, "*Kashaya*" (an ayurvedic preparation) twice daily, breathing exercises, and consuming nutritious food and lemon water.

Psychological Coping Strategies

One week after the acute symptoms subsided, three participants began performing meditation for 30 min twice daily. Three participants performed yoga and *pranayama* regularly to divert themselves from illness-related thoughts. One of the participants (P19, male, 46 years) nurtured hope by regularly reading the success stories of COVID-19 patients in newspapers/the internet. Three participants got hopeful of recovery by regularly following the improvement in recovery rate statistics of COVID-19-infected patients. Six participants said that they developed positive thinking by checking facts from reliable sources. Two participants ignored derogatory comments from their neighbors. Their fear and anxiety reduced following the recovery of sick friends and family members without complications. Five patients opined that everyone would be infected some day or the other, just that we were infected earlier.

Table 2. Statements by the participants

Statements related to physical experiences	Statements related to psychological experiences	Statements related to social experiences	Personal reflections
<ol style="list-style-type: none"> 1. "I had severe fatigue which incapacitated me from carrying out even the regular chores." 2. "Such body aches were never experienced by me before." 3. "I could not get any sleep as I was having terrible nightmares." 	<ol style="list-style-type: none"> 1. "I was scared about the arising of complications and lost sleep" 2. "My hands were trembling and not able to focus on any activity. There is persistence of unexplained fear" 3. "I was afraid that I may die during the isolation period" 4. "I was overwhelmed by guilt for having transmitted the infection to family members" 5. A few common thoughts encountered during the sickness period were: 6. "Something must really be wrong with me.." 7. "How did I get infected despite taking all the precautions?" 8. "I may transmit infection to my family members" 	<ol style="list-style-type: none"> 1. "My family felt humiliated by the sarcastic behavior of the neighbors." 2. "I had to come out of my home for making the hospital visit amidst the isolation period. On seeing me coming out, all the neighbours went inside and shut their doors making me feel humiliated." 	<ol style="list-style-type: none"> 1. Many participants said that they were blessed to get wonderful support from friends and family, which they believed was the key to recovery. 2. The body needed to build up stamina after the symptoms had dissipated as it had fought the deadly virus. 3. Listening to the body and reacting to each response is the solution to physical problems. 4. With the recovery percentage improving there is greater hope for those patients who are in the recovery path. 5. Though the symptoms are more severe than the regular flu, recovery is quite possible with adequate rest and family support. 6. Fighting the infection helped to develop antibodies. I can now donate plasma and help others in their recovery. 7. Rest and drinking plenty of fluids is the best regimen during the acute phase.

Religious/Spiritual Coping Strategies

Most participants (17/20) worshipped/prayed regularly to combat illness; two also read spiritual books; one blamed God for the infection, while the remaining did not practice any religious activity.

Theme 4: Recommendations to Address Issues

The majority (14/20) felt that during home isolation, the health authorities need to sensitize the neighbors regarding myths and facts about the transmission of COVID-19 disease. Three participants said that the doctors must regularly monitor the progress and give advice through audio or video calls. Some participants (5/20) preferred to receive medication and isolation guidelines over the phone through messages. The participants also suggested the creation of web portals enabling private chats with medical professionals for seeking illness-related clarifications.

DISCUSSION

This study aims to explore bio-psychosocial experiences and coping strategies of home-isolated COVID-19 patients during their recovery process. It highlighted four themes, such as biopsychosocial experiences, challenges faced coping strategies used, and recommendations to address issues. Fever, dry cough, severe body pains, and tiredness were among the common symptoms reported by participants.^[12,17,18] These biological experiences are consistent with the data on clinical manifestations of SARS-CoV-2 infection.

The common negative feelings experienced were fear, anxiety, guilt, and worry.^[19,20] This could be due to the uncertainty about the disease, isolation, and disturbing viral health misinformation. Evidence from the previous studies related to SARS survivors' negative psychological experiences further corroborates present study findings. Similar evidence was found in Hawryluck et al. study to support the negative impact of quarantine on patients during the SARS disease outbreak.^[21] Negative emotions and

other challenges should be recognized early and appropriate interventions implemented to reduce symptoms to improve the mental health resilience of COVID-19 patients.

In the present study, most participants informed that economic issues, being humiliated by their neighbors, and stigma were their major challenges. Des Jarlais et al. 2006 study stated that SARS patients were shunned and stigmatized.^[22] Basrur et al. study revealed that SARS patients and their family members encountered various complex issues such as physical illness, psychological stress, financial hardship, and social stigma.^[23] As stigma grows, those affected become fearful of seeking testing or care or even revealing their symptoms. This leads to increased suffering and transmission. It is, therefore, important to provide psychological support and factual information to reduce the risk perception among COVID-19 patients to improve mental well-being. Isolation and quarantine hinder family support which may worsen the negative psychological experiences of COVID-19 survivors if not timely managed.^[24]

Positive thinking, becoming aware of COVID-19 facts, and practicing meditation and yoga were the common coping strategies used by the present study participants. Studies have shown that positive emotions and optimism play an important role in recovery and reducing psychological trauma.^[25] Positive coping styles are crucial to promoting mental health among COVID-19 patients.

Regular digital monitoring of home-isolated patients by medical professionals, creating web portals to clarify illness-related issues, and the need to sensitizing neighbors were some of the recommendations made by the participants. With a potentially large population carrying the virus, digital health technologies to measure physiologic parameters can be leveraged to help monitor non-severe COVID-19 patients either from their homes or dedicated hospitals.^[26] Knowing the bio-psychosocial experiences of home-isolated COVID-19 patients will help mental healthcare professionals to provide appropriate psychological support and alleviate the associated impact on their mental health.

The study has some limitations. First, prevention and control were the measures to manage the outbreak, but we could not conduct face-to-face interviews. The study was limited to an isolation period only. Long-term experience with the research subjects would be a valuable avenue to conduct similar research in the future. Despite the limitations, the study data were collected from participants over time through multiple interviews. This led to a deep understanding of their experiences resulting in the development of comprehensive and authentic data.

CONCLUSION

This study provided a comprehensive and in-depth understanding of the biopsychosocial experiences, challenges encountered, and coping strategies of home-isolated COVID-19 patients through a phenomenological approach. Negative emotions were predominant among home-isolated patients. Patients were stigmatized by their neighbors. Adaptive coping strategies are essential for COVID-19 patients to maintain their mental health. This study provided necessary data for the further development of a comprehensive intervention.

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