

Health Status and Management Practices of Home Isolated COVID-19 Adult Patients

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ABSTRACT

Background: The worldwide containment strategy for COVID-19 outbreak includes laboratory-confirmed cases, and their isolation and management in health care institutions or at home. The spread of the COVID-19 virus has mandated home isolation for mild cases, as recommended by the Government of Nepal. Isolation is a situation that can have a substantial influence on physical and mental health of isolated people. This study is aimed to assess physical and mental well-being of COVID-19 home isolated patients, and their home management practices.

Methods: A descriptive cross-sectional research using quantitative methods was carried out. Purposive sampling was used to select COVID-19 patients. Total 536 COVID-19 home isolated patients were included in this study. Telephonic interview was conducted to obtain the data. Descriptive analysis was done and interpreted.

Results: About 34 % of the participants were symptomatic. The most common symptoms experienced were fever (22.6%), followed by cough (19.4%) and cold (16.1%). About 20 % indicated having difficulties isolating at home due to lack of separate room. Furthermore, 4 percent of the participants didn't have anyone to take care of them at home. Also almost 2 percent of participants didn't get family support when infected. Moreover, majorities of individuals had normal stress, depression and anxiety level.

Conclusions: Most of the participants' physical and mental health was found to be normal though some of them experienced difficulties for management during home isolation. Hence, Interventions should focus resilience building by improving communication to address fears and concerns, encouraging routines and physical activities, and taking measures to reduce loneliness.

Keywords: COVID-19; home isolation; mental; physical; social.

INTRODUCTION

Public health concerns are developing in Nepal as the number of COVID-19 cases increases. Nepal was under some forms of lockdown to combat the pandemic, encouraging people to practice social distancing in order to reduce interactions between people. This could lower the chance of new infections, but it may have an adverse effect on people's overall physical, mental, and social health.¹ The outbreak of the 2019 novel coronavirus (2019-nCoV) in China began in January 2020 and quickly expanded to other countries prompting WHO to declare it a Public Health Emergency of International Concern.²⁻⁴ spread of the novel corona virus had caused plenty of psychological issues among Nepalese. The Patients with the disease were also subjected to stigma and discrimination from their own family, friends,

and neighbors, leading to feelings of isolation, fear, worry, anxiety, and depression.⁵⁻⁷ This might also lead to harmful risk behaviors such as smoking, drinking, poor eating habits, lack of physical activity, and other lifestyle choices.^{8,9} The aim of this study was to assess self-reported health status of COVID-19 patients who were in home isolation in terms of their physical and mental well-being, as well as their home management procedures.

METHODS

A descriptive cross sectional study was adopted using quantitative methods and was conducted in all seven provinces. The survey was conducted from 1-20 November 2020. Considering the limited number of studies on the topic and to ensure representativeness from all seven

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provinces, data were ultimately collected from 536 participants making it nationally representative data and generalizable among Nepalese population.

The list of COVID-19 home isolated patients were obtained from Epidemiology and Disease Control Division (EDCD), The list of both symptomatic and asymptomatic patients from February 2020 to October 2020 were made available and patients were selected purposively from the available list.

Among the selected COVID-19 home isolated patient within a time frame, one eligible participant aged 18 years and above, able to comprehend, received the call and interested to answer the relevant questions were included in this study and hence the sample size was determined. A total of 536 COVID-19 home isolated individuals were included in the study. In order to elicit experience as a COVID-19 patient in home isolation in terms of physical and mental wellness and management practices, a structured questionnaire was designed in English then translated into the local language (Nepali).

DAAS-21 Scale, which measures anxiety, stress, and depression levels, was used to examine the mental health status of home isolated patients.¹⁰

Data was collected via telephone interview. Pretesting was carried out in similar setting with three COVID-19 home isolated patients and Experts were consulted to address the issues that needed clarification or exploration.

For analysis, data were entered on Statistical Package for the Social Sciences (SPSS) version (21) and descriptive statistics were used.

Ethical approval was obtained from the Nepal Health Research Council Ethical Review Board (ERB) (NHRC) and verbal consent was obtained from every participants.

RESULTS

Table 1. Socio-demographic Characteristics of study participants.

Socio-demographic Characteristics	Frequency (n=536)	Percent
Gender		
Male	310	57.8
Female	226	42.2

Table 1. Socio-demographic Characteristics of study participants.

Socio-demographic Characteristics	Frequency (n=536)	Percent
Marital status		
Married	410	76.5
Unmarried	122	22.8
Separated	4	0.7
Ethnicity		
Brahmin	227	42.4
Chhetri	90	16.8
Dalit	6	1.1
Newar	100	18.7
Janajati	89	16.6
Other Terai caste	15	2.8
Muslim	2	0.4
Other	7	1.3
Religion		
Hindu	507	94.6
Buddhist	23	4.3
Muslim	2	0.4
Christian	4	0.8
Educational status		
Illiterate	40	7.5
Literate but no formal education	26	4.9
Primary level	57	10.6
Secondary level	96	17.9
Higher secondary level	317	59.1
Travel History		
Travelled between countries	3	0.6
Travelled between provinces	45	8.4
Travelled between districts	43	8.0
Travelled between municipalities/rural municipalities	102	19.0
No travel history	343	64.0

The socio-demographic characteristics of the study participants are illustrated in Table 1 which showed, more than half (57.8%) of the participants were male.

Comparatively, married participants were higher (76.5%). Moreover, majorities (42.2%) were Brahmin and almost 95% of the participants were following Hinduism. More than half of participants (59.1%) had completed secondary level educational qualification. In terms of travel history, 64 percent of the participants had never traveled before. However, 19 percent of those surveyed have traveled between municipalities/rural municipalities.

Table 2. Health Status.

Current health status	Frequency (n=536)	Percent
Symptomatic	183	34.1
Asymptomatic	353	65.9
Clinical Manifestation (n=183)		
Fever	121	22.6
Cold	86	16.1
Cough	104	19.4
Muscle pain	44	8.2
Loss of taste	56	10.4
Loss of smell	53	9.9
Chest pain	20	3.7
Weakness	61	11.4
Difficulty in breathing	28	5.2
Diarrhea	9	1.7
Nausea	9	1.7
Headache	39	7.3
Irritation	2	0.4
Sore throat	15	2.8
Stomach ache	2	0.4
Joint pain	13	2.4
Others	5	0.9
Multiple response*		

Majority (65.9%) of the participants were asymptomatic. Among 34.1% symptomatic patients, the most common symptoms experienced were fever (22.6%), followed by cough (19.4%) and cold (16.1%).

More than half of the participants (58.4%) didn't experience much discomfort. And almost 35 percent felt as usual though they had the symptoms.

Majorities (67.7%) of individuals reported eating an excessive amount of nutritious food. In addition, more than half (53.5%) of individuals said that they had an

excessive amount of liquid food. However, 43.7 percent of the participants were consuming normal diet.

A total of 113 (21.1%) COVID-19 patients had any form of co-morbidity. Diabetes and postnatal problems were found in the most of the participants accounting 46 percent for each of the co-morbid condition. Likewise, 26.4 percent of them had heart disease. 5.6 percent had asthma, 4.2 percent had lung disease, 2.1 percent had HIV infection, 1.4 percent had liver disease and other 1.4 percent had kidney disease and 0.7 percent had tuberculosis.

Among the home isolated patient, current smokers and user of alcohol accounted for 5.6 percent and 11.9 percent respectively. However, after being infected with COVID-19, the percentage of smokers dropped to 3 percent and the percentage alcohol users dropped to 4.9 percent.

Table 3. Activities carried out during Isolation.

Daily household activities	Frequency (n=536)	Percent
Doing normal household work	62	11.6
Doing all work as before	107	20.0
Not doing any work	314	58.6
Others	53	9.8
Financial activities		
Yes	78	14.6
No	458	85.4
Frequency of going out of home during isolation		
Yes, regularly	4	0.7
yes, sometime	14	2.6
Never	518	96.6

Concerning domestic activities, more than half (58.6%) of the participants did not perform any work during home isolation. However, almost 12 % were doing household activities as normal. Likewise, nearly 15 % were engaged in some form of financial activity.

Furthermore, 4 patients revealed going outside home on a regular basis and almost 3 percent stated going outside home only sometimes.

Each of the three DASS-21 scales has seven items that are grouped into subscales that have comparable content. According to the DASS scale's cut-off threshold, it was found that all individuals had normal stress levels. However, regarding depression, the majority (97.6%) of individuals had normal depression, with only 2.2 percent

suffering from mild depression.

Table 4. Mental Health Status.

Mental Health Status	Frequency (n=536)	Percent
Stress level		
Normal	536	100
Depression Level		
Normal	523	97.6
Mild	12	2.2
Moderate	1	0.2
Anxiety Level		
Normal	500	93.3
Mild	23	4.3
Moderate	13	2.4

Similarly, the majority of people (93.2 percent) had normal anxiety, with 4.2 percent having mild anxiety and 2.4 percent having moderate anxiety.

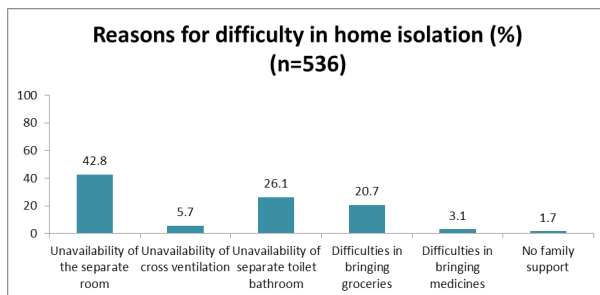


Figure 1. Reasons for difficulty in home isolation.

Figure 1 illustrates, difficulty in home isolation which showed about 20 percent of the participants having difficulty staying at home.

The lack of separate room was the major cause as stated by 42.8 percent of the patients. In contrast, 2 percent of them stated that they did not get any family support.

The majority of people (88.4 %) maintained a social distance from family members all the time. 9.7 percent of participants maintained a social distance only sometimes and those not maintaining social distancing at all was 1.9 percent.

Home remedies (44.6%) were done by most of the participants for the management of COVID-19 during home isolation which was followed by 39.9 percent of the participants who did ayurvedic treatment and 15.5 percent of the participants used allopathic medicine.

Furthermore, 34.3 percent of the participants using home remedies drank turmeric water.

47.9 percent took antibiotics and 10.6 percent used antihistaminic analgesic.

Table 5. Availability and Accessibility.

Availability of materials at home	Frequency (n=536)	Percent
Face guard	380	16.7
Oxymeter	266	11.7
Sanitizer	339	14.9
Thermometer	465	20.4
Mask	462	20.2
Disinfectant	370	16.2
Access to transportation (n=536)		
Yes	406	75.7
No	121	22.6
Don't know	9	1.7
Regular advice from Health worker		
Yes, Always	416	77.6
Yes, Sometimes	114	21.3
Never	6	1.1

Twenty percent of the patients stated having thermometer and mask with them. While, less percent of (11.7%) participants had the availability of oxymeter.

About 76 percent had access to transportation in an emergency. Regarding seeking care from health care worker, the majority of participants (77.6%) sought guidance on a regular basis. while, 6 participants did not seek any counseling during home isolation.

DISCUSSION

The finding of our study revealed that almost 34 percent of the participants were symptomatic. Moreover, the most common symptoms were fever, cough, cold, weakness and loss of taste. Some of the respondent also revealed having loss of smell, muscle pain, headache, difficulty in breathing, chest pain, sore throat, joint pain and nausea. In line with our study, a review of evidence on the 2019 novel corona virus diseases in India also showed the common symptoms as fever, fatigue, dry cough. However, less common symptoms were headache, dizziness, diarrhea, nausea and vomiting.¹¹

Regarding the eating behavior, the majority of patients from our study were found to have eaten an excessive amount of nutritious food while they were in isolation at home. Additionally, more than half of them consumed an excessive amount of liquid food. Moreover, smoking and alcohol intake had reduced after COVID -19 infections. Likewise, majority of the respondents were found not carrying out any physical and financial activities during their home isolation. Similar to our findings, a study on international online survey on effects of COVID-19 Home Confinement on Eating behavior and Physical Activity Showed COVID-19 home confinement had a negative effect. Food consumption and meal patterns were unhealthier during confinement with only alcohol drinking decreasing significantly. Additionally, daily sitting time increased from 5 to 8 h per day having negative effect on Physical Activity intensity levels.¹² However, in contrast, a study done in Italy showed, alcohol consumption and cigarette consumption increased by 17% and 30% respectively. However, lower percentage of respondents increased the consumption of healthy foods.¹³

A number of studies have shown greater impact in mental well-being of an individual following the worldwide outbreak of COVID-19.¹⁴⁻¹⁶ And the situation was even more threatening for those who tested positive for COVID-19.^{17,18}

However, scores of DASS-21 scale used in this study to assess stress, depression and anxiety level revealed that stress level of all the participants was normal. Similarly, majority of the participants had normal level of depression and anxiety with few participants having mild to moderate level of depression and anxiety. A study carried out to assess the prevalence of depression, anxiety, and sleep disturbances in COVID-19 patients showed that the prevalence of depression and anxiety was found to be 45% and 47% respectively. These findings are much greater than the findings obtained in this study.¹⁹

Several studies have explored the role of different factors in affecting the mental well-being of COVID positive persons which include lack of social and family support, supportive counseling during isolation, individual's resilience and so on.^{17,18,20}

These differences in our study could be attributed to the influence of some of the mentioned factors. One factor could be the support of family member as majority (95.9%) of the participants reported of having a family member to look after them throughout their

period of home isolation and 80 percent participants had no trouble in staying at home isolation after testing COVID positive. Likewise, another factor might be the regular communication between the participants and healthcare workers for the needed advice.

CONCLUSIONS

This study indicates that home isolation has had a positive behavioral influence on health, since it was shown that COVID-19 home isolated patients smoked less, drank less alcohol, and ate more nutritional foods. However, the impact on people's mental health was found. There were also challenges with home isolation due to the lack of separate rooms and toilets. Hence, it is essential to allocate social resources and build centralized isolation and quarantine facilities for people who are experiencing difficulties with management during home isolation. Furthermore, in a centralized isolation center, there will be a sharing and venting of sentiments linked to the difficulties they were facing, within the group with similar problems, which will aid in coping with the difficult circumstance and can prevent individuals from having mental disturbances. Therefore, health authorities should issue regulations for centralized isolation facilities and pay strict attention to the daily management of these facilities, in-depth studies and international collaboration on the centralized isolation policy are also recommended.

CONFLICT OF INTEREST

None

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