Prevalence and family factors associated with loneliness during COVID-19: A cross-sectional study from South India

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ABSTRACT

Background: Loneliness can affect anyone at any point in their life. It can be detrimental to the wellbeing and quality of life of individuals and communities. In the ongoing COVID-19 pandemic, loneliness is considered as a public health crisis. Hence, the objectives of the study were to estimate the prevalence of loneliness and family related factors associated with loneliness among general population in south India.

Materials and Methods: The study employed a cross-sectional online survey design. The data was collected in the first phase of the lockdown in 2020 from adults in Southern India. Socio-demographic profile and family related variables were collected using a semi-structured proforma. Loneliness was assessed by UCLA loneliness scale.

Results: Of 573 total respondents to the survey, aged between 18-65 years, 43% were male and 57% were female. The overall prevalence of loneliness was 63% (358/573). No significant gender differences were observed in the prevalence of loneliness. Family discord was associated with higher rates of loneliness (p<0.01). Other factors associated were younger age and being single.

Conclusion: Rates of loneliness during the COVID-19 lockdown were high in Southern India. Findings suggest that interventions should prioritize younger people. Increasing social support and improving interpersonal skills, which in turn would help reduce family discord and may reduce the impact of COVID-19 on loneliness.

Keywords: COVID-19, loneliness, family, isolation, lock-down, social, India

INTRODUCTION

COVID-19 is caused by a novel coronavirus, named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).[1] At present, COVID-19 has led to a large number of deaths with tens of thousands of confirmed cases globally, giving rise to a serious public health crisis. The control of COVID-19 largely relies upon avoiding or minimizing physical contact with people.[2] Therefore, a nationwide lockdown was imposed in India to contain the spread of the virus from March 25th to May 31st, 2020.[3] The social isolation, along with the financial and psychosocial burden, flared up after the COVI-19 lockdown, which was further compounded by the rising number of cases and mass panic and anxiety in the country.[4]

Loneliness is defined as an unpleasant experience that derives from deficiencies (qualitative and quantitative) in one's network of social relationships.[5] Social integration and connections are imperative for an individual's development and well-being across the lifespan. Research suggests that loneliness can adversely

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influence an individual's physical, mental and cognitive health.[6] Loneliness has been associated with a greater risk of cardiovascular disease, dementia, anxiety and depression.[7] Loneliness can impair daily activities and functioning and even exacerbate already existing mental health conditions.[7]

With restricted interpersonal contact opportunities and physical distancing in place, rates of loneliness increased all around the world during the COVID-19 pandemic. Recent evidence reported high levels of loneliness and stress in the UK.[8] A study in Spain found that perception of self as a burden, lower quality of sleep and being more exposed to news about COVID-19 were associated with higher feelings of loneliness.[9] In a survey among adolescents in Belgium during the COVID-19 quarantine found that participants who experienced loneliness were more inclined to use social media to cope with lack of social contact.[10] A study among adults in Italy during the lockdown period, participants with perceived loneliness reported spending more time on social media which was also associated with increasing levels of anxiety.[11]

Very few studies have explored loneliness among general population during the ongoing COVID-19 pandemic in India.[12, 13] Understanding the magnitude of the problem at hand and the factors associated with loneliness will help in the development of interventions to address loneliness. Hence, the aim of the study was to estimate the prevalence of loneliness among general population and to examine the family related factors associated with loneliness in south India during the COVID-19 lockdown.

MATERIALS AND METHODS

Survey: An online survey was created and circulated from May 5 to June 15, 2020. The survey questions were circulated using google forms.

Inclusion and Exclusion Criteria: Subjects with the following inclusion criteria were included in the study:

1) Age 18 to 65 years; 2) Residing in South India during the COVID-19 lockdown; 3) Any gender; and 4) consent to be a part of the study.

Measures: the following data was recorded

Socio-demographic and family variables: The online survey included information about socio-demographic profile and family related factors such as 'How much has COVID-19 affected your family in terms of stress and discord? 'Does your home environment feel tense?' 'Are you finding relationships with close ones difficult?' and 'In your relationship – how much are you able to express your needs (both physical and emotional)?'

Loneliness: Loneliness was assessed by UCLA Loneliness Scale.[14] It is a 20-item scale used globally to measure one's subjective feelings of loneliness and social isolation. The scale uses a 4-point rating scale (1= never; 4= always).

Statistical Analysis: All the statistical analyses were done using SPSS 20.0. Mean and standard deviation were used to summarize continuous variables and frequency and percentage were used to summarize categorical variables. Chi-square test was used to find association between categorical variables and Pearson's correlation for continuous variables. A $p<0.05$ was set as statistically significant.

RESULT

Socio demographic profile and family related variables

A total of 573 respondents took part in the study. The socio-demographic profile of the respondents is depicted in **Table 1**. Almost equal proportions of participants were employed (50.6%) and unemployed (49.4%). The mean age of the respondents was 28 years. Two-thirds (67.5%) of the participants in the age group 18-30 and 42.5% of the participants above the age 30 reported feeling lonely during the lockdown. Among the respondents, 322 were single and 251 were in a relationship. Among the respondents, 2.4% lived alone.

Table 1. Socio-demographic profile of the study participants (N = 573)

Variables		Frequency (%); Mean±SD
Gender, N (%)		
Male		246 (42.8)
Female		326 (56.7)
Others		1 (0.5)
Age (in years)		27.92 ± 9.87
Current relationship status		
Single		311 (54.3)
In a relationship	Cohabiting	14 (2.4)
	Not cohabiting	73 (12.7)
Married		164 (28.6)
Separated/ Divorced		7 (1.2)
Widowed		4 (0.7)
Current living status		
Alone		14 (2.4)
Less than or equal to 4		280 (48.9)
More than 4		279 (48.7)
Current employment status		
Employed		290 (50.7)
Unemployed		31 (5.4)
Homemaker		45 (7.8)

Prevalence of loneliness

The overall prevalence of loneliness in the population was 62.5%. The prevalence of loneliness was higher among respondents between the ages 18-30 as compared to participants above age 30 (**Table 2**). Respondents who were single were found have significantly higher prevalence of loneliness when compared with respondents who were in a relationship. No gender differences were observed in the prevalence of loneliness.

Table 2. Prevalence of Loneliness and its association between socio-demographic profile among the study participants (N = 573)

Variables	Total n (%)	No Loneliness n (%)	Loneliness n (%)	p value	CI
N (%)	573 (100)	215(37.5)	358(62.5)		
Gender					
Male	246	87(35.4)	159(64.6)	0.341	0.601-1.193
Female	326	128(39.3)	198(60.7)		
Age					
18-30	421	137(32.5)	284(67.5)	0.001	0.314-0.668
30-65	152	78(51.3)	74(48.7)		
Relationship status					
Single	322	98(30.4)	224(69.6)	<0.001	0.355-0.706
In a relationship	251	117(46.6)	134(53.4)		

Association between family related factors and loneliness

Only 29.6% of the population that reported feeling lonely faced no family stress and discord. 59% of the population faced mild, 8.7% faced moderate family discord, with outbursts being more frequent and children getting in physical fights. 2.8% of the population participants faced severe familial discord in which hitting and inducing harm were reported. **Table 3** depicts other family factors associated with loneliness. Finding relationships with close ones difficult, feeling dependent on others, a loss of control/power, not being able to openly speak about ones' problems were all associated with feelings of loneliness. 42% of the population that reported feeling lonely found their environment tense. The study also explored emotional and physical expressing of needs among participants who were in a relationship; it was found that 5.3% were not able to express at all, 9.5% to a small extent, 24.6% to some extent and 11.2% were able to express to a great extent.

Table 3. Association between family variables and loneliness among the study participants

Variables	No Loneliness	Loneliness	p value	95% CI
Does your environment feel tense?				
Yes	54(25.1)	149(41.6)	0.002	0.324-0.683
No	161(74.9)	209(58.4)		
Are you finding relationships with close ones difficult?				
Yes	20(9.3)	132(36.9)	< 0.001	0.106-0.292
No	195(90.7)	226(63.1)		
I feel dependent on others				
Yes	62(28.8)	149(41.6)	0.002	0.396-0.817
No	153(71.2)	209(58.4)		
I feel loss of control/power				
Yes	41(19.1)	137(38.3)	<0.001	0.254-0.568
No	174(80.9)	221(61.7)		
I am speaking openly about my problems				
Yes	151(70.2)	157(43.9)	< 0.001	2.109-4.326
No	64(29.8)	201(56.1)		
How much has COVID-19 affected your family in terms of stress and discord				
No	115(53.5)	106(29.6)	< 0.001	-
Mild	89(41.4)	211(58.9)		
Moderate	9(4.2)	31(8.7)		
Severe	2(0.9)	10(2.8)		
In your relationship – how much are you able to express your needs (both physical and emotional?				
Not at all	5(2.3%)	19(5.3)	< 0.001	-
Small extent	7(3.3)	34(9.5)		
Some	29(13.5%)	88(24.6)		
Great	88(40.9%)	40(11.2%)		
N/A	86(40.0%)	177(49.4)		

DISCUSSION

The aim of the study was to estimate the prevalence of loneliness and its association with family related factors amongst adults aged 18-65 during the COVID-19 lockdown in Southern India.

Results show that the overall prevalence of loneliness was 62.5% during the COVID-19 lockdown in South India. In another study conducted in the earlier phase of the lockdown in Japan, it was found that over 40% (41.4%) of the Japanese adults were lonely.[15] In a comparative study from Hong Kong, the prevalence of loneliness pre-COVID-19 phase was 40.6% and peri-COVID-19 phase was 71.1% among older adults.[16] Recent research published in the United Kingdom show a prevalence rate of 27% for loneliness during the lockdown.[8]

The high prevalence of loneliness in this study which is comparable with the other Asian countries could be due to the fact that they are collectivistic nations emphasizing on cultural and social ties.[17, 18] However, with urbanization and migration, and social structure rampantly changing, the risk of loneliness increases.[19] The lower prevalence of loneliness in the UK when compared to India could be due to cross-cultural differences that emphasize on individualistic societies.[20]

Results show that as the severity of family discord increases, the levels of loneliness increase. Similar results were observed in Taiwan, which showed that that those with stronger family cohesion during early adolescence were less likely to suffer from serious loneliness in young adulthood.[21]

With familial discord and an unhealthy family climate, family members may perceive a discrepancy in the quality of interactions that they have with one another, which may lead them to self-identify as lonely. The uncertainty of the pandemic, financial and academic stress, lack of personal space, resurfacing of past trauma, differences in ideologies and values among family members may have influenced the family climate leading to loneliness.[22]

In the study, no gender differences in loneliness experienced, younger age group (< 30 years of age) and being single were found to be associated with higher prevalence of loneliness. Studies in Spain and UK have found that women reported higher feelings of loneliness; however, no differential impact on gender was observed in our study. This may be due to the major cultural influences and norms in India. Women may not acknowledge and express feelings of loneliness due to the stigma and socio-cultural taboo surrounding it. It may also reflect the difficulty in voicing one's own concern and feeling burdensome to the family members.

Consistent with previous studies, those who had a spouse, or a partner were found to show lower levels of loneliness as opposed to those who were single. This reflects that being in a relationship can act as a protective factor. The companionship and intimacy of a partner reduces the feelings of loneliness. Considering the study was done with individuals who had access to the internet and social media, it indicates that the digital connectivity does not necessarily translate to a reduction in perceived loneliness.

An inverse relationship with age and loneliness was found, with very high prevalence of loneliness among the younger age group. The prevalence of loneliness decreased with age with 18-30-year old's having the highest frequency of loneliness (67.5%). Younger adults may be affected disproportionately due to the cessation of opportunities to visit schools, colleges or workplaces where they could interact and socialize. It is also important to consider that as young adults one's social needs are much higher and emotional regulation is not fully developed.[23]

Studies from the UK, Spain along with our current study have found that the youth is at higher risk for loneliness.[8, 9] This is also an indicator that the interventions to alleviate loneliness should target younger people. A good starting point is by addressing loneliness and isolation in the classrooms and workplaces.

Limitations of the current study are: 1. This was a cross-sectional study done with individuals who have access to the internet. Hence, the results will be not generalisable to all sections of population; and 2. The age range of the participants included is restricted and not included children.

More follow-up studies can be done to assess the risk factors and impact of loneliness. This study will also help us in setting out immediate priorities and long-term strategies for social connectedness and well-being at the community level.

CONCLUSION

More than two-thirds of the population reported feeling lonely in Southern India. Family discord has also been

found to be associated with loneliness. This can be detrimental to physical and mental health as well as how communities function at large. Therefore, novel interventions using digital platforms that provide a sense of belongingness and enhance community engagement should be developed. It is essential to place loneliness and social relationships high on the wider public mental health and research agenda.

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