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Research Paper

Relationship Between Psychological Distress, Sleep Quality and Coping Among General Population During COVID-19 Pandemic

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ABSTRACT

The unprecedented times due to COVID-19 and the measures undertaken to curb the outspread and infection has led to enormous psychological impact. The research undertaken is an endeavor to study the relationship between psychological distress, sleep quality and coping among general population during COVID-19 pandemic. The study reports variation in the magnitude of impact among various age groups and sections of the society. Cross-sectional method was used in the present study, A total of 154 participants, with a mean age of 32.71+- 12.9 years took part in the present study. More than half (52.6%) of the participants likely to have mental disorder, post-COVID-19. Higher psychological distress was observed among the young, unmarried people in a nuclear family. The findings suggest that among the general population, the young age, unmarried individuals, and nuclear families were found to be associated with higher psychological distress, lower sleep quality and coping. Therefore, it was also suggested to practice psychological support and calming strategies.

Keywords: *Psychological distress, Sleep quality, Coping, COVID-19*

The COVID-19 is a human-to-human transmitted virus affecting millions of people globally, hence making it a pandemic. The outbreak of this viral pandemic has led to an increased level of psychological distress among the general population as well as the front-line medical healthcare professionals (doctors, nurses, and hospital administration staff), police, and public healthcare and sanitization workers dealing with the COVID-19 patients directly/indirectly. This new phenomenon has been termed "The New Normal" by various psychological experts. So, new coping strategies have to be adopted by one and all, such as wearing masks at all times when outside the home, application of hand sanitizers wherever possible, thermal checks at every public place entrance, social distancing should be maintained everywhere. Hence, this 'new normal' has affected the psychological wellbeing of the people. Also, due to the sudden drastic change in daily routine, including the shift in the work-life balance, the sleep-wake cycle is perturbed. The perturbed cycle is

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mainly attributed to the lockdown, home quarantines, work from home (WFH) regime, increased workload, job insecurities, sloping economy, and sedentary lifestyle.

In a recent study conducted by Wang et al. [1], on the general Chinese population evaluated the psychological distress and coping styles in the early stages of the COVID-19 epidemic. The study revealed that there is a high level of psychological distress among the younger, unmarried Chinese Population, which was having a history of visiting the city of Wuhan in the past month of the survey, having a greater concern with the media reports, perceiving more impacts of the epidemic outbreak (facing changes over the living situations, emotional control, epidemic related dreams) and negative coping styles. The degree of COVID-19 threat had significant correlations with insomnia, depression, anxiety, and stress. Age, gender, and area (Hubei province of China or other provinces) had significant correlations with insomnia. The prevalence of clinical insomnia during the outbreak of COVID-19 was about 20%, according to the Insomnia Severity Index (ISI). The factors of satisfaction with the current sleep pattern and perceptible symptoms of the current sleep pattern are to other people, and the middle (difficulty staying asleep) and terminal (waking up too early) factors of the ISI were significantly different across groups. Around 20% of the participants spent more than one hour awake in bed. Hence, it was found out that insomnia was more severe in people who were female, young, and living in the epicenter of the city. They were experiencing a high degree of threat from the COVID-19 pandemic.

Zhang et al. [2] studied the differential psychological distress of the Chinese population affected by the COVID-19 pandemic. It was the first study to assess the psychological wellbeing of the population across different levels of exposure to COVID-19 infection, namely the patients who experienced COVID-19 infection, individuals under quarantine, and the general population. An increased incidence of depression along with anxiety was found among the patients experiencing COVID-19 infection as well as the general population. A high proportion of severe depressive symptoms such as depressed mood, somatic symptoms, anxiety like behavior, becoming annoyed or irritated easily were recorded in patients experiencing COVID19 infection and the general population as compared to the individuals in quarantine.

Guo et al. [3], in their research, focused on the measurement of the level of psychological distress in the COVID-19 positive patients who were hospitalized and quarantined in Shanghai Public Health Clinical Center in Shanghai, China. The results revealed that COVID-19 patients manifested higher levels of depression, anxiety, and post-traumatic stress symptoms (PTSS) as compared to the non-COVID-19 patients. A high level of score of "Perceived Helplessness" was observed in female patients as compared to male patients. The presence of depression symptoms, reporting of negative feelings such as feelings of fear, guilt, and helplessness were recorded. Stigma and uncertainty of viral disease progression were the two main concerns as expressed by the COVID-19 patients. The results indicated that the hospitalized COVID-19 patients experienced a significant level of psychological distress and that levels of depressive symptoms may be related to the inflammation markers in these patients.

An analysis of psychological and sleep status and exercise rehabilitation of front-line Clinical staff in China in the fight against COVID-19 was conducted by Wu, K., and Wei, X. [4]. The study demonstrated higher than normal levels of somatization, depression, anxiety, and terror among the front-line medical staff at a hospital. The sleep quality was

assessed as poor by the PSQI scores, and a majority of the participants, around 62%, were facing moderate insomnia, and around 27% of the participants were facing severe insomnia.
In India, a recent study conducted by Roy et al. [5] showed that the Indian population had moderate knowledge about COVID-19 and adequate knowledge about its preventive measures. The respondents had a willing attitude towards following the guidelines laid out by the government regarding social distancing and quarantine measures. The levels of anxiety were assessed to be high. There were sleep difficulties in about 12.5%, paranoia about acquiring COVID-19 was about 38%, and distress due to social media in about 36% of the participants. It was perceived that there is a very high need to give attention to mental healthcare. Hence, this study aims to determine the post COVID-19 effect on the psychological distress, coping strategies, and sleep quality of the general population in India. It is equally important to study the general population as most of the studies conducted so far have a focus on the front-line healthcare professionals, doctors, nurses, and the hospital administration staff dealing directly with the COVID-19 patients. This study was aimed to assess the relationships between psychological distress, sleep quality, and coping among the general population during the COVID-19 pandemic.

METHODOLOGY

Sample

The sample size for this study was 154 people from general population. During this COVID-19 pandemic, an online questionnaire was developed using Google forms with a supplementary consent form. The link to this form was shared through emails, WhatsApp and other social media platforms. The personal information of all the participants were kept confidential.

The inclusion and exclusion criteria are as follows:

Inclusion

- Participants consenting to share their personal details.
- Participants are literate in English.
- Participants are 18 or above years of age.

Exclusion

- Participants having serious mental and physical illness.
- Participants unacquainted with online platforms for data entry and submission.

Ethical statement

Institutional Ethics Committee had discussed and reviewed the proposal and provided the necessary approval to conduct the above-mentioned research.

Tools

- **Socio-demographic data sheet:** A socio-demographic questionnaire was designed to collect information concerning age, gender, religion, occupation, marital status, family type, socio- economic status and domicile.
- **Kessler Psychological Distress Scale (K10):** The scale was developed by Kessler et al. [6] was adapted into Turkish by Altun et al. [7]. It consists of 10 questions on non-specific psychological distress. Each question refers to an emotional state and each has a five-level response scale. The Cronbach's alpha reliability coefficient of the K-10 scale is 0.82 (Patel et al.) [8].

- **Pittsburg Sleep Quality Index (PSQI):** It is a 24-item screening tool for sleep dysfunction which distinguishes between "good" sleepers and "poor" sleepers and it further categorizes between subgroups of poor sleepers. It was developed by Buysse et al. [9]. It measures the sleep disturbances along 7 dimensions- subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medication, and daytime dysfunction. The Cronbach's alpha reliability for PSQI is 0.736. (Manzar et al.) [10].
- **Ways of Coping Questionnaire (WCQ):** A questionnaire developed by Folkman and Lazarus [11]. Lazarus and co-workers distinguished eight groups of coping strategies: 1. confrontative coping, 2. distancing, 3. self-controlling, 4. seeking social support, 5. accepting responsibility, 6. escape-avoidance, 7. planful problem-solving and 8. positive reappraisal. The Cronbach's alpha reliability coefficient for WCQ ranging from 0.61(distancing) to 0.79 (positive reappraisal). The WCC-R scales overall exhibited slightly higher alpha coefficients ranging 0.74 (avoidance) to 0.88 (problem-focused). (Boyle et al.) [12].

Statistical analysis

The presentation of the categorical variables was carried out in the form of numbers and percentages. On the other hand, the presentation of the continuous variables was achieved as mean ± SD and median values. The association of the variables which were quantitative and qualitative in nature were analyzed using independent t test and chi-square test/Fischer's exact test respectively. Spearman rank correlation coefficient was used to find out the correlation of Kessler psychological distress, coping relative score and global PSQI score with each other. The data entry was executed using MS Excel spreadsheet and the final analysis was carried out using SPSS version 21.0.

For statistical significance, p value less than 0.05 was considered as significant.

RESULTS

The mean age of the study participants was 32.71 ± 12.9 years. The gender distribution showed Male: Female of 1:1. Most of the participants were in a job (44.81%), with some of them being students (22.73%) and businessmen (19.48%). Most of the participants were unmarried (60.39%), 37.66% participants were married, and 2 were (1.30%) divorced. 69.48% lived in a nuclear family. Most of the participants were from medium socio-economic status (92.86%) and residents of the urban area (91.56%) as shown in Table 1.

Table 1: Socio-demographic characteristics.

Variable	Category	Frequency	Percentage
Age	Mean ± SD	32.71 ± 12.9	
Gender	Female	77	50.00
	Male	77	50.00
Occupation	Student	35	22.73
	Job	69	44.81
	Business	30	19.48
	Home maker	14	9.09
	Unemployed	6	3.90
Marital Status	Divorced	2	1.30
	Married	58	37.66
	Single	93	60.39

	Widowed	1		0.65
Family Type	Joint	47		30.52
	Nuclear	107		69.48
Socio Economic Status	Low	6		3.90
	Medium	143		92.86
	High	5		3.25
Religion	Hinduism		140	90.91
	Islam	4		2.60
	Christianism	2		1.30
	Others	8		5.19
Domicile Status	Rural area	13		8.44
	Urban area	141		91.56

The mean (SD) scores for Kessler Psychological Distress Scale were 21.23 (7.53). Based on the scores, 81(52.6%) were likely to have mental disorder, which was proposed to be mild in severity in 41(26.62%), moderate in 20 (12.99%), and severe in 20 (12.99%) participants as detailed in Figure 1.

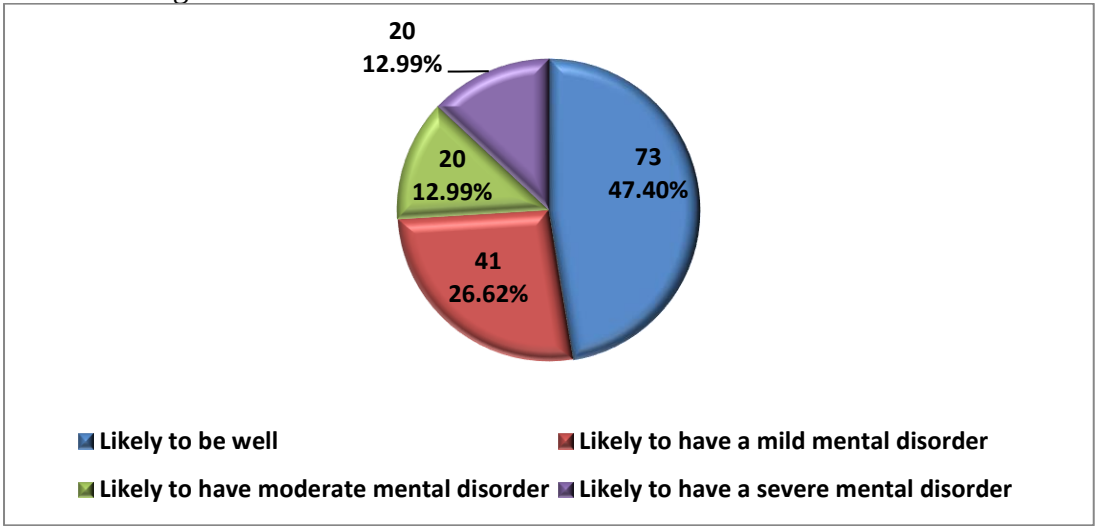

Figure 1: Distribution of Kessler Psychological Distress Scale of general population.

The mean Global PSQI score was 5.94± 3 based on which 81(52.6%) were found to have significant sleep disturbance, as shown in Figure 2.

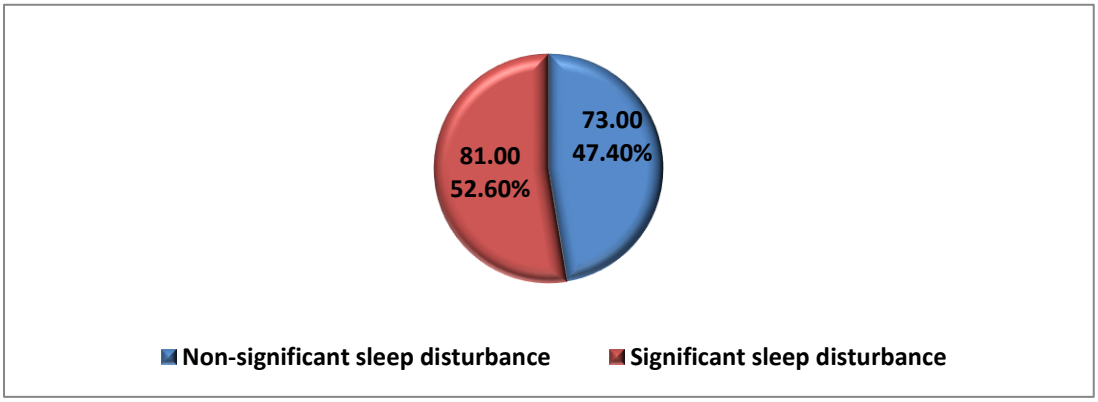

Figure 2: Distribution of global PSQI score of general population.

The participants showed varied coping strategy such as positive reappraisal (30.52%), distancing (16.23%), planful problem solving (14.94%), accepting responsibility (11.04%), self-controlling (9.74%), confrontive coping (7.79%), and seeking social support (7.14%). The mean coping score was 0.21 ± 0.098 (Table 2).

Table 2: Distribution of coping strategy of general population.

Coping strategy	Frequency	Percentage
Accepting responsibility	17	11.04
Confrontive coping	12	7.79
Distancing	25	16.23
Escape-avoidance	4	2.60
Planful problem solving	23	14.94
Positive reappraisal	47	30.52
Seeking social support	11	7.14
Self-controlling	15	9.74
Mean ± SD	0.21 ± 0.098	

After performing univariate linear regression, age, marital status- married and joint family type were significant factors affecting Kessler psychological distress scale with beta coefficient of -.154, -4.246 and -2.593 respectively. After adjusting for confounding factors none of the factor was independent significant factor affecting Kessler psychological distress scale as given in the Table 3.

Table 3: Univariate and multivariate linear regression to find out the factors affecting Kessler Psychological Distress Scale.

Kessler Psychological Distress Scale	Univariate		Multivariate	
	Beta coefficient (Lower bound (95%) to Upper bound (95%))	P value	Beta coefficient (Lower bound (95%) to Upper bound (95%))	P value
Age	-0.154(-0.245 to -0.064)	0.001	-0.1(-0.25 to 0.049)	0.187
Gender				
Male				
Female	-0.169(-2.573 to 2.235)	0.890	-	-
Marital Status				
Single				
Divorced	-12.849(-27.106 to 1.407)	0.077	-13.197(-27.378 to 0.984)	0.068
Married	-4.246(-6.619 to -1.873)	0.001	-1.776(-5.787 to 2.235)	0.383
Separated	13.151(-1.106 to 27.407)	0.070	13.907(-0.39 to 28.204)	0.057
Widowed	-3.849(-18.106 to 10.407)	0.594	-1.889(-16.524 to 12.746)	0.799
Educational Qualification				
Ongoing 12th				
12th pass	3.5(-14.395 to 21.395)	0.700	-	-
Pursuing graduation	-4.812(-19.874 to 10.249)	0.529	-	-
Graduate	-7.442(-22.193 to 7.309)	0.320	-	-
Doing Masters	0(-20.664 to 20.664)	1.000	-	-
Post graduate	-7.424(-22.146 to 7.297)	0.321	-	-
PhD	0(-16.006 to 16.006)	1.000	-	-
Professional degree	-8.727(-23.988 to 6.534)	0.260	-	-

Family Type				
Nuclear				
Joint	-2.593(-5.171 to -0.016)	0.049	-2.03(-4.555 to 0.495)	0.114
Socio-Economic Status				
Low				
Medium	-5.333(-11.512 to 0.845)	0.090	-	-
High	-4.733(-13.711 to 4.244)	0.299	-	-
Religion				
Hindu				
Agnostic	13.043(-1.824 to 27.911)	0.085	-	-
Christian	6.543(-4.007 to 17.093)	0.222	-	-
Jain	-0.957(-9.602 to 7.688)	0.827	-	-
Muslim	-0.957(-8.47 to 6.556)	0.802	-	-
Sikh	4.443(-2.3 to 11.186)	0.195	-	-
Occupation				
Unemployed				
Business	-2.031(-6.409 to 2.347)	0.361	-	-
Job	2.051(-1.658 to 5.761)	0.276	-	-
Student	1.288(-2.86 to 5.436)	0.540	-	-
Domicile				
Urban area				
Rural area	2.272(-2.037 to 6.581)	0.299	-	-

On performing univariate linear regression, marital status: married, Socio economic status: - medium and high were significant factors affecting global PSQI score with beta coefficient of -1.038, -3.168 and -3.8 respectively. After adjusting for confounding factors socio economic status, medium socio-economic status was the only independent significant factor affecting global PSQI score with adjusted beta coefficient of -2.94. (Table 4)

Table 4: Univariate and multivariate linear regression to find out the factors affecting Global PSQI Score.

Global PSQI Score	**Univariate**		**Multivariate**	
	Beta coefficient (Lower bound (95%) to Upper bound (95%))	**P value**	**Beta coefficient (Lower bound (95%) to Upper bound (95%))**	**P value**
Age	-0.026(-0.063 to 0.011)	0.165	-	-
Gender				
Male				
Female	-0.312(-1.268 to 0.645)	0.521	-	-
Marital Status				
Single				
Divorced	-4.366(-10.225 to 1.494)	0.143	-4.249(-10.052 to 1.553)	0.150
Married	-1.038(-2.013 to -0.063)	0.037	-0.948(-1.919 to 0.023)	0.056
Separated	2.634(-3.225 to 8.494)	0.376	-0.19(-6.514 to 6.135)	0.953
Widowed	-4.366(-10.225 to 1.494)	0.143	-4.249(-10.052 to 1.553)	0.150
Educational Qualification				
Ongoing 12th				
12th pass	-1.5(-8.762 to 5.762)	0.684	-	-
Pursuing graduation	-2.312(-8.424 to 3.799)	0.456	-	-
Graduate	-2.038(-8.024 to 3.947)	0.502	-	-
Doing	3(-5.385 to 11.385)	0.481	-	-

Masters				
Post graduate	-2.258(-8.231 to 3.716)	0.456	-	-
PhD	0.2(-6.295 to 6.695)	0.952	-	-
Professional degree	-2.455(-8.647 to 3.738)	0.435	-	-
Family Type				
Nuclear				
Joint	-0.917(-1.947 to 0.112)	0.080	-	-
Socio-Economic Status				
Low				
Medium	-3.168(-5.597 to -0.738)	0.011	-2.94(-5.572 to -0.308)	0.029
High	-3.8(-7.33 to -0.27)	0.035	-3.421(-7.091 to 0.249)	0.067
Religion				
Hindu				
Agnostic	0.964(-5.016 to 6.944)	0.750	-	-
Christian	-3.036(-7.279 to 1.208)	0.160	-	-
Jain	-0.036(-3.513 to 3.441)	0.984	-	-
Muslim	-1.286(-4.308 to 1.736)	0.402	-	-
Sikh	-1.036(-3.748 to 1.676)	0.452	-	-
Occupation				
Unemployed				
Business	-0.588(-2.363 to 1.186)	0.513	-	-
Job	-0.036(-1.54 to 1.467)	0.962	-	-
Student	0.009(-1.673 to 1.691)	0.992	-	-
Domicile				
Urban area				
Rural area	-0.097(-1.82 to 1.625)	0.911	-	-

The psychological distress endured by the participants with COVID-19 showed a significantly negative correlation with coping (r=-0.278, p=0.001) and a significantly positive correlation with Pittsburgh Sleep Quality Index (r=0.37, p<0.0001). The coping rating scale and global PSQI scale showed no significant correlation amongst themselves (r=-0.106, p=0.192).

Further, on carrying out univariate linear regression, age, marital status-Married, Christian religion were significant factors affecting coping relative scale with beta coefficient of .003, .047 and .296 respectively. After adjusting for confounding factors, age and Christian religion were the only independent significant factors affecting coping relative scale with adjusted beta coefficient of .004 and .268 respectively, as shown in Table 5.

Table 5: Univariate and multivariate linear regression to find out the factors affecting Coping relative scale.

Coping relative scale	**Univariate**		**Multivariate**	
	Beta coefficient (Lower bound (95%) to Upper bound (95%))	**P value**	**Beta coefficient (Lower bound (95%) to Upper bound (95%))**	**P value**
Age	0.003(0.002 to 0.004)	<.001	0.004(0.002 to 0.006)	< 0.0001
Gender				
Male				

Female	-0.015(-0.046 to 0.016)	0.334	-	-
Marital Status				
Single				
Divorced	-0.021(-0.213 to 0.17)	0.828	-0.025(-0.195 to 0.145)	0.772
Married	0.047(0.015 to 0.079)	0.004	-0.046(-0.094 to 0.002)	0.059
Separated	0.008(-0.183 to 0.2)	0.931	-0.043(-0.215 to 0.129)	0.623
Widowed	0.001(-0.19 to 0.193)	0.990	-0.102(-0.277 to 0.074)	0.256
Educational Qualification				
Ongoing 12th				
12th pass	0.041(-0.199 to 0.28)	0.738	-	-
Pursuing graduation	0.029(-0.172 to 0.231)	0.774	-	-
Graduate	0.046(-0.151 to 0.244)	0.644	-	-
Doing Masters	-0.002(-0.279 to 0.275)	0.988	-	-
Post graduate	0.063(-0.134 to 0.26)	0.527	-	-
PhD	0.012(-0.203 to 0.226)	0.915	-	-
Professional degree	0.038(-0.166 to 0.243)	0.713	-	-
Family Type				
Nuclear				
Joint	-0.002(-0.036 to 0.032)	0.897	-	-
Socio-Economic Status				
Low				
Medium	0.038(-0.042 to 0.119)	0.348	-	-
High	0.104(-0.012 to 0.221)	0.079	-	-
Religion				
Hindu				
Agnostic	-0.032(-0.217 to 0.153)	0.731	-0.02(-0.191 to 0.15)	0.812
Christian	0.296(0.165 to 0.427)	< .0001	0.268(0.147 to 0.389)	< 0.0001
Jain	-0.039(-0.146 to 0.068)	0.473	-0.019(-0.118 to 0.08)	0.701
Muslim	-0.007(-0.1 to 0.086)	0.881	0.016(-0.07 to 0.103)	0.709
Sikh	-0.02(-0.103 to 0.064)	0.646	-0.005(-0.082 to 0.072)	0.899
Occupation				
Unemployed				
Business	0.008(-0.049 to 0.065)	0.781	-	-
Job	0.018(-0.031 to 0.067)	0.463	-	-
Student	-0.021(-0.075 to 0.034)	0.451	-	-
Domicile				
Urban area				
Rural area	-0.023(-0.079 to 0.033)	0.425	-	-

DISCUSSION

The lockdown and the pandemic of COVID-19 have been psychologically distressful. We observed 52.6% of the participants likely to have mental disorders post-COVID-19. In comparison to our study, Badellino et al.,[13] and Domínguez-Salas et al., [14] reported higher psychological distress of 62.4% and 71.98%, while Xiong et al., [15] found that the rate of psychological distress varied between 34.43% and 38%. The rate varied among different

countries; however, all studies indicate that psychosocial support should be an adjunct in the management of COVID-19 patients [16].

In the present study, young age, unmarried and nuclear family types were found to significantly increase the odds of psychological distress during the COVID-19 period. All these factors of being at young age and without family have put a person at risk of loneliness and depression in the lockdown period. Rather the joint families and married individuals found it easy to pass the period in view of the family interactions and support.

The findings were somewhat in line with Wang, Y. et al., [17], who found that young age, residing in rural areas, and low socio-economic status were associated with higher depression odds. In contrast, some of the studies showed that advanced age might suffer from depression as they are vulnerable to mood disorders, comorbidities, early life adversities, etc. [18]. In view of this, more attention should be given by healthcare professionals to elderly people as they have factors that might affect their mental health.

Among other studies, Duran et al. [16] reported higher psychological distress scores among employed men, especially healthcare personnel who are married and with children. The health care professionals have been at the highest risk, and they find it stressful to carry that risk at home and putting their families at risk [19]. However, among the other professions, this association was not significant. The reason for higher stress among men may be ascribed to the fear of job loss and economic distress because of being confined at home [20]. This highlights the interdependent confounders while assigning the risk ratio of psychological distress to the demographic characteristics during the COVID-19 period. It is recommended to conduct comprehensive and in-depth studies to assess stress to be experienced based on age, and gender differences in the background of loneliness and family structure.

The psychological distress has taken a definite toll on the sleep quality of the participants with COVID-19. Factors contributing to lack of sleep include physical illness, environmental stressors, staying away from family and friends, and other comorbid psychological problems.

In our study, 81(52.6%) participants were found to have significant sleep disturbance as assessed by PSQI scores (mean values 5.94± 3). Duran et al. [16] reported that the sleep quality of 55.1% of the participants was poor, and the participants' mean PSQI score was found as 6.39 ± 3.31. This has been confirmed by Targa et al., [21] Chandra et al., [22] and various Chinese studies, [23],[24] which compared the mean PSQI scores of adults before and during the pandemic period.

Unmarried individuals and low socio-economic status significantly increased the chances of decreased sleep quality during the COVID-19 period. This might be because those belonging to high socio-economic status felt more financial stable. The findings corroborated with Duran et al. [16], where sleep quality levels were poorer in the unmarried, unemployed, and healthcare professionals.

Deo et al. [25] found that the quality of sleep was poor among single individuals compared to married ones. This may be due to the fact that the singles may have felt social isolation more deeply, which may have negatively affected their sleep quality.

During the COVID-19 pandemic, social distancing has been implemented in many countries, including India. Coping styles and the perceived social support both appear to contribute to individuals' management of the stress of social isolation and the sense of loneliness that can be derived from it [25].

In the present study, higher age, married and Christians had a better coping strategy among the participants. Among other studies, Rahman et al. [26] compared medium to high resilient copers with low resilient copers and found that visiting healthcare providers in person in the last four weeks was the only significant factor (P = 0.016). The experiences/activities to cope up with the stress were exercises, yoga, and meditation; watching movies; listening to music and reading books, spending time with kids and partners or focusing on family members, gardening, making phone calls to friends and loved ones, engaging in hobbies, etc.

Skapinakis et al. [27] found that when considering age and educational status, coping strategies such as planning and religious coping enhanced with age; whereas, instrumental support (like getting advice from others) reduced with age. Denial and giving up, i.e., dysfunctional coping strategies, demonstrated U-shaped association with an increase in use among young and elderly.

Overall, we observed a significantly negative correlation with coping and psychological distress ($r=-0.278$, $p=0.001$), indicating that with the increasing stress, the coping decreased [28],[29],[30].

It was also seen that there was a direct positive correlation of psychological distress with Pittsburgh Sleep Quality Index ($r=0.37$, $p<0.0001$), indicating that the increasing stress decreased the sleep quality. Duran et al., [16] also reported that the scores for psychological distress were negatively correlated with sleep quality levels. This has also been confirmed in the studies by Liu et al., [31] Xiao et al., [23] and Xiao et al., [24], which included the general population as well as risk groups like healthcare specialists and students. Thus, it can be stated that on increase in the level of psychological distress, sleep problems like difficulty in falling asleep or recurrent awakening are experienced more repeatedly [32].

CONCLUSION

Findings of the present study shed light on the psychological stress and its effects on the COVID-19 participants. Young age, unmarried individuals and nuclear families were found to be associated with higher psychological distress. The stress significantly lowered the sleep quality of the participants and affected the coping strategy. Low financial status also increased the odds of less coping with the disease since COVID-19 has been high on the hospital costs of admission and treatment. Thus, it is suggested to provide psychological support and calming strategies to the participants for a better recovery from the disease.

Limitations Of the Study

The study results must be interpreted in view of limitations of it being a single center study and without a controls population and thus findings may not be generalized. Secondly, the results of the study are limited to the statements in the scales used in the study and self-report of the participants, which results in information bias.

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Conflict of Interest
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