

## Activities of Daily Living and Perceived Stress of Indian Population during the COVID-19 Pandemic

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### ABSTRACT

**Background:** The people were enforced to stay back at home and restricted personal, social and economical activities worldwide after outbreak of COVID-19 pandemic. Restrictions in activities of daily life have impact physical and mental health of the people.

**Aim:** To explore impact on activities of daily living and perceived stress in Indian population during the COVID-19 Pandemic.

**Method and Materials:** The present survey was online cross-sectional study among Indian population during the COVID-19 pandemic. We received total of 914 responses in the stipulated time. The participants who agreed for virtual consent were diverted for the further study. Socio-demographic datasheet, a 6-items self-designed questionnaire on Activities of Daily Living, Perceived Stress Scale was included in the Google Form.

**Results:** Findings of this study revealed 5.3% of perceived stress in Indian population. Activities of daily life influenced such as using mobile for more than 2 hours, decreased desire of shopping 46.4%, incapable of handling money (16%), engaged in food preparation (74.8%), laundry (79.4%), Often perform daily housekeeping (51.9%) during the lockdown of COVID-19 pandemic.

**Conclusion:** The present study shows the activities of daily life and perceived stress are directly affected to mental health problem in COVID-19 pandemic. Specially, people who work in private sector and daily wages were suffering with low income, job security and require of daily living things, those are led to high level of stress and other health issues.

**Keywords:** Stress, Activities of Daily Living, Indian population, COVID-19 pandemic

### INTRODUCTION

The COVID-19 pandemic has affected on mankind in different ways like health, day to day life, trades, economy, etc. This impact has been observed worldwide in which countries enforced lockdown, social distancing, and strict quarantine to flatten the curve of the corona virus infection. Restriction in the day-to-day movements has affected activities of daily life. People have been facing problems related to healthcare, economy and social life [1-3]. On March 25, 2020, lockdown was declared by the Prime Minister of India in the whole country for next 21 days [4]. In India, lockdown measures similar to other countries included travel bans, stay at home, the mandatory closure of schools, social distancing, nonessential commercial activities and other mass participation events. Other countries in the world have also taken similar or even stricter measures to stop community spread of COVID-19. The total number of

confirmed cases worldwide is more than 20439814, with more than 2396637 cases in India alone [5].

The combined effect of changes in lifestyle behaviors; confinement to the home through government restrictions in travel; and elevated depression, anxiety and stress associated with the current COVID-19 pandemic, may have significant

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negative impacts on sleep [6]. Those people in self-isolation and stay at home, they are restricted of maintaining contact with loved ones, their daily life routines are dramatically changed, and people normally engage in everyday activities impact their health and well-being [7]. In India, the work in an urban areas informal economy is alternating, during COVID-19 pandemic marked by low-skill requirements, low wages, severe struggle, and regular job insecurity [8]. COVID-19 pandemic is especially relevant for those people in self-isolation or quarantine, where facing of income issues, psychological distress, depression, anxiety fear, and anger may manifest [9]. The pandemic threatened the existence of the individuals to a great extent, worry, sleep disturbances and affected their mental status negatively [10]. The public are returning to work after the concern about virus exposure, they worry about delays in work time and subsequent deprivation of their anticipated income explains the high-stress level [11]. The people were facing a pandemic with no vaccination would result in fear of the unknown making them anxious and stressed. Keeping in mind the concerns regarding psychological distress raised in their around [12]. There is need to see the how people are managing their lives during the enforced lockdown after outbreak of COVID-19 pandemic. Our study aimed to study the impact of COVID-19 pandemic on activities of daily living and perceived stress in Indian population.

## MATERIALS AND METHODS

The present study was a cross-sectional online survey conducted through Google Forms web survey platform. The Google Forms link of the questionnaire was sent through WhatsApp and other social media to the contacts of the participations. Google Forms offers the advantage of submitting the response when maintaining secrecy. Participants were assured that their responses would be kept confidential and utilized only for the research. The survey started to be applied on April 25, 07:13 h, and ended on May 26, 09:48 h (IST). The survey link clearly stated that the participants can draw their participation back at any time before submission of his/ her response and also, they will be provided an informed consent. The survey could reach up to 24 states of India. A total of 914 Indian subjects have completed this online survey by the predetermined time and sample. The study was approved by the Ethics Review Board of Central India Institute of Mental Health and Neurosciences, Rajnandgoan, Chhattisgarh, before the start of collecting data. Participants of both the genders, aged between 18 to 65 years, able to read and understand Hindi and English language, participants with online informed consent were included.

### Tools used

**Socio-demographic datasheet:** The socio-demographic datasheet was developed for the present study consisted of variables like age, sex, education, occupation, family types, etc.

**Activities of daily living:** A 6-items self-designed questionnaire was used for the purpose of the study. Activities of daily living included mobile use, shopping, food preparation, housekeeping, laundry, and finance. The questionnaire included questions about on activities of daily living life impact of COVID-19 pandemic on the general population.

**Perceived Stress Scale (PSS) [13]:** The PSS is the most widely used psychological instrument for measuring the perception of stress during the last month. It is a measure of the degree to which situations in one's life are appraised as stressful. The scale had 10 items and each item provides five response options: never, almost never, sometimes, fairly often, and very often. Items n. 1, 2, 3, 6, 9 and 10 are scored from 0 to 4; items n. 4, 5, 7 and 8 are scored reversely, from 4 to 0. The scores range between 0 and 40. Higher score indicated that high perceived stress.

## DATA ANALYSIS

The statistical analysis was done using Statistical Packages for the Social Science (SPSS)-16 software package for windows. For socio-demographic variables, descriptive statistics were used such as frequency, percentage, mean, and standard deviation (SD).

## RESULTS

**Table 1** reveals the socio-demographic details of the participants. The mean and SD score of hospital staff was  $29.64 \pm 6.44$  with age range between 18-75 years. More than half (66.1%) of the participants were male, majority (44.9%) of the participants had completed post-graduate education, maximum (49.0%) of them were working in private sectors. Most (86.1%) of the participants belonged to nuclear family. More than half (51.0%) of the participants were belonging to urban areas.

**Table 2** shows that activities of daily living of the respondents in during the lockdown of COVID-19 pandemic. The most of 88.0 % participants were used mobile more than one hour. Almost half 46.4% reporting desire of shopping was decreased. Majority of 74.8 % Participants ware independent plan, prepare and serve food at home. Most of half 51.9 % reporting that they were performed daily task like- dishwashing and bed making and other household work. Participants were 79.4 % doing personal laundry work. Participants reported that 16.0 % was incapable of handling money and financial issues during the lockdown of COVID-19 pandemic.

**Table 3** reports that the mean and SD score of stress in general population were  $16.81 \pm 5.51$  and this table also reports the prevalence of perceived stress during the lockdown of COVID-19 pandemic in general population based on perceived stress scale scores at high perceived stress level. The results showed 25.2% of low stress, 69.6%

of moderate stress and 5.3% of high perceived stress during the lockdown of COVID-19 pandemic in general population.

**Table 4** shows the prevalence of perceived stress level on the profession. On stress level were found to be 69.0% moderate level and 6.5% high level of stress in private employees, 77.1% moderate level and 2.1% high level of stress in government employees, 73.8% moderate level and

7.1% high level of stress in businessman, 65.8% moderate level and 2.6% high level of stress in student, 66.7% moderate level and 6.7% high level of stress in house wife and 66.8% moderate level and 31.2% high level of stress in labor. The table shows among different professions, labor, private employees, businessman and housewife were found perceived high level of stress.

**Table 1.** Socio-demographic profile of the participants (N=914).

Variables		(Mean ± SD)
Age		29.64±6.44 (range 19-75)
		N (%)
Gender	Male	604 (66.1%)
	Female	310 (33.9%)
Education	10 <sup>th</sup>	30 (3.3%)
	12 <sup>th</sup>	78 (8.5%)
	Graduate	344 (37.6%)
	Postgraduate	410 (44.9%)
	Ph. D	52 (5.7%)
Marital Status	Married	410 (44.9%)
	Unmarried	500 (54.7%)
	Widow	4 (0.4%)
Occupation	Private Employee	448 (49.0%)
	Govt. Employee	144(15.8%)
	Businessman	42 (4.6%)
	Student	234 (25.6%)
	Housewife	30 (3.3%)
	Labour	16 (1.8%)
Family Types	Joint	127 (13.9%)
	Nuclear	787 (86.1%)
Domicile	Rural	328 (35.9%)
	Urban	466 (51.0%)
	Semi-urban	120 (13.1%)

SD: Standard deviation; N: Number (914); %: Percentage (100%)

**Table 2.** Activities of daily living of the participants during COVID-19 pandemic (N=914).

Activities of daily living		N (%)
Use of Mobile	Less than 2 h	110 (12.0%)
	More than 2 h	804 (88.0%)
Shopping	Desire of Shopping Increased	114 (12.5%)
	Desire of Shopping Decreased	424 (46.4%)
	No changes in shopping desire	376 (41.1%)
Food Preparation	Independent plan, prepare & serve food	684 (74.8%)
	Dependent on others	230 (25.2%)
Housekeeping	Perform daily task like- dishwashing & bed making	474 (51.9%)
	Sometime participate in household work	408 (44.6%)
	Does not participate in household work	32 (3.5%)
Laundry	Does personal laundry completely	726 (79.4%)
	Dependent on others	188 (20.6%)
Finance	Manage financial issue & day to day purchase independently	768 (84.0%)
	Incapable of handling money	146 (16.0%)

*N: Number (914); %: percentage (100%)*

**Table 3.** Perceived stress of the participants during the COVID-19 pandemic.

Variables	N (%)	(Mean±SD)
Low stress	230 (25.2%)	16.81±5.51
Moderate stress	636 (69.6%)	
High perceived stress	48 (5.3%)	

SD: Standard deviation; N: Number (914); %: Percentage (100%)

**Table 4.** Distribution of stress level among profession of participants.

Variables	Private Employee N= 448	Govt. Employee N= 144	Business N= 42	Student N= 234	Housewife N= 30	Labour N= 16
Low Stress level	110(24.6%)	30 (20.8%)	8 (19.0%)	74 (31.6%)	8(26.7%)	0 (0%)
Moderate Stress Level	309(69.0%)	111(77.1%)	31(73.8%)	154(65.8%)	20(66.7%)	11 (66.8%)
High Stress Level	29(6.5%)	3 (2.1%)	3 (7.1%)	6 (2.6%)	2(6.7%)	5 (31.2%)

N: Number; %: Percentage (100%)

**DISCUSSION**

The present study found 88.0 % participants were used mobile more than two-hour, 46.4% reporting desire of shopping was decreased, 74.8% Participants were independent plan, prepare and serve food at home, 51.9 % reporting that performed daily task like- dishwashing and bed making and other household work, 79.4 % doing personal laundry work, 16.0 % was incapable of handling money and financial issues during the lockdown of COVID-19 pandemic. Some similar study supported it; majority of the people were worried about the financial loss they were incurring during the period of lockdown [10]. The restriction of mobility can act as a difficulty in obtaining daily-life necessary supplies, potential financial losses, and access to conflicting and inadequate information on the Internet [14,15]. The COVID-19 outbreak has led to diversified mental health responses depending on the individual's strengths and weaknesses [16]. People were affected on physical activity, their work and income during COVID-19 pandemic [17]. People are restricted of maintaining contact with loved ones, their daily routines are dramatically changed, and engage in everyday activities impact their health and well-being [6].

The present study has also found that 25.2% of low stress, 69.6% of moderate stress and 5.3% of high perceived stress

during the lockdown of COVID-19 pandemic in general population. Result also found that higher level of the stress has in labour (31.2%), private employees (6.5%), businessman (7.1%) and housewife (6.7%). Some similar study supported it, high rates of anxiety, insomnia, perceived stress and adjustment outcomes found during the lockdown of COVID-19 in the Italian of general population [18]. The psychosocial stress was perceived, and participants presented high levels of perceived distress in the general population [14]. This could be associated with high levels of anxiety and stress because of isolation, indicating adverse mental health [19]. The mental health impact on the non-infected community, revealing significant psychiatric morbidities during the SARS outbreak [20]. Those people in self-isolation or quarantine, where feelings of stress, anxiety, depression, fear, guilt, and anger may manifest [6]. People had trauma-related distress symptoms and significantly higher psychological distress in women and young adult population [21]. Among different professions, students and healthcare professionals were found to suffering from stress, anxiety, and depression more than others and normal ranges found in mental health professionals [22].

**LIMITATIONS**

The present study has some limitations; the size of the sample in some profession groups was quite small.

Accidental sampling technique was used in the present study. Activity of daily living assessment was self-report. The longitudinal study may help to see long term effects of COVID-19 pandemic on job stress, job satisfaction, family conflicts and suicide ideation.

### IMPLICATIONS

The present admits that the general population is vulnerable to experience problems related to activities of daily living life and perceived stress while living in pandemic situation at home. The mental health professionals, policy makers and government can take step to secure physical and mental health of general population to impart effective in their daily life. They have to need stress management programs, online counseling facilities, adequate manpower supply, etc. for reduce their perceive stress and improve daily living life.

### CONCLUSION

The present study reveals activities of daily living and perceived stress are consequence mental health problems among Indian population during outbreak of the COVID-19 pandemic. The people experienced isolation, loss of social network, risk or infections to family members, decreased income, physical exhaustion, job insecurity and livelihood concerns. The uncertainty was in each age group about future as school, retail shops, entertainment sector remained closed. A great loss to the unorganized sector, private sector caused problems to the young adults.

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