ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 8.4
IJAR 2021; 7(11): 303-319
www.allresearchjournal.com
Received: 10-09-2021
Accepted: 21-10-2021

Akanksha Kamble
Occupational Therapy Intern,
L.T.M.M.C & G.H. Sion,
Mumbai, Maharashtra, India

Vinaya Dandekar
Occupational Therapy Extern,
L.T.M.M.C & G.H. Sion,
Mumbai, Maharashtra, India

Dr. Parag Sawant
Assistant Professor,
Occupational Therapy
Department, L.T.M.M.C &
G.H. Sion, Mumbai,
Maharashtra, India

Analyzing the impact of Covid-19 pandemic on occupational therapists: Quality of life and psychological well-being

Akanksha Kamble, Vinaya Dandekar and Dr. Parag Sawant

DOI: <https://doi.org/10.22271/allresearch.2021.v7.i11e.9150>

Abstract

Background: Covid-19 outbreak had detrimental effect on global healthcare systems and on human life. Mental health problems are rising due to Covid-19 pandemic. This also brought significant disruptions to Occupational therapist's Quality of life. Therefore, we investigated the prevalence, severity of psychological well-being and analyzed various coping strategies used during Covid-19 and its impact on quality of life of Occupational Therapists.

Objectives: Assess the impact of Covid-19 using Covid Impact scale, Psychological Well-being using Psychological Well-being scale, coping strategies using Brief Cope scale.

Methods: Here, Quantitative research - Cross sectional survey, Non-probability sampling method- Convenience sampling was used based on Inclusion - Exclusion criteria. 100 participated in the study, Google forms containing questionnaires from scale were sent.

Results: Statistical analysis showed – the mean value of Covid Impact Scale was 3.12 indicating there was an impact of Covid-19 on quality of life. 64% of the participants had an impact of Covid-19. The mean value of Psychological Well-Being Scale was 90.94 indicating that psychological well-being was not much affected. Maximum participants used Personal growth subcomponent (69.56). The mean value for Brief Cope Scale was 63.92. Approach coping was used the highest among all the participants (68.62). Co-relation statistical analysis between the Covid Impact scale and Psychological well-being scale showed weak negative co-relation ($r = -0.11$).

Conclusion: 64% Occupational Therapists had an impact of Covid-19. Since Psychological well-being scale was a multifactorial component, weak negative co-relation was found between them. Participants being Occupational Therapists used more of Approach coping.

Keywords: Covid-19, Psychological well-being, Coping, Occupational Therapists

Introduction

Viral outbreaks can be experienced as disruptive and can be associated with trauma-related stress symptoms^[2]. The outbreak of COVID-19 (the disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)) has a detrimental effect on global healthcare systems with a ripple effect on every aspect of human life as we know it. Sohrabi *et al.* highlighted the extent of the outbreak with the World Health Organisation (WHO) declaring the COVID-19 outbreak as a global emergency on January 30, 2020. SARS-CoV-2 has left a long-lasting impact on everyone worldwide and especially the medical fraternity, which is using the most cutting-edge ways to treat the patients. COVID-19 is the public name given to the scientific name SARS-CoV-2 which has been studied by Coronavirus Study Group of the International Committee on Taxonomy of Viruses and has found its symptoms in accordance with Severe Acute Respiratory Syndrome - Coronavirus (SARS-CoV) which first came into light in 2002 and this re-emerged with a different name ten years later as the Middle East respiratory syndrome coronavirus (MERS-CoV). With the research done on the impact of this virus and its origin, the preliminary details trace its origin to a family of single-stranded RNA viruses which are also known as Coronaviridae^[5].

The most common symptoms of COVID-19 are:

Corresponding Author:
Akanksha Kamble
Occupational Therapy Intern,
L.T.M.M.C & G.H. Sion,
Mumbai, Maharashtra, India

Other less common symptoms are: Irritability, confusion, reduced consciousness (sometimes associated with seizures), anxiety, depression, sleep disorders. More severe and rare neurological complications are stroke, brain inflammation, delirium and nerve damage. Complications leading to death may include respiratory failure, acute respiratory distress syndrome (ARDS), sepsis and septic shock, thromboembolism, and/or multi organ failure, including injury of the heart, liver or kidneys ^[10].

It also caused universal psychological impact by causing mass hysteria, economic burden and financial losses. Mass fear of COVID-19, termed "Corona Phobia", has generated a plethora of psychiatric manifestations. Disease itself multiplied by forced quarantine to combat COVID-19 applied by nationwide lockdowns can produce acute panic, anxiety, obsessive behaviours, hoarding, paranoia, and depression, and post-traumatic stress disorder (PTSD) in the long run. Healthcare workers are at higher-risk of contracting the disease as well as experiencing adverse psychological outcomes in the form of burnout, anxiety, fear of transmitting infection, feeling of incompatibility, depression, increased substance-dependence, and PTSD.

The rampant rise in total number of people reported worldwide on 3 June 2021 is 17.2Cr while the world has seen an untimely death of 36.9L humans worldwide, and the overall recovery number has been 15.5Cr. Whereas, the total number of people reported in INDIA till 3 June 2021 were 2.8Cr with 3.3L number of deaths, of which the total count for MAHARASHTRA on 3 June 2021 was 57.6L with 96,198 deaths. The high surge in the numbers of cases worldwide led the WHO to declare it as Pandemic (public health emergency) ^[6].

According to WHO, the difference between Quarantine & Isolation is:

- A Pandemic is defined as “an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people”. The classical definition includes nothing about population immunity, virology or disease severity. By this definition, pandemics can be said to occur annually in each of the temperate southern and northern hemispheres, given that seasonal epidemics cross international boundaries and affect a large number of people. However, seasonal epidemics are not considered pandemics.
- Isolation and Quarantine are public health practices used to protect the public by preventing exposure to

people who have or may have a contagious disease. Isolation separates sick people with a contagious disease from people who are not sick.

- Quarantine separates and restricts the movement of people who were exposed to a contagious disease to see if they become sick. These people may have been exposed to a disease and do not know it, or they may have the disease but do not show symptoms.

The Covid-19 pandemic brought significant disruptions to Occupational therapist's Quality of life. Considering their professional aspect, there have been profound and varied changes experienced by almost all the professionals. There was a marked impact on education & research since teaching had moved online, Clinical postings had been cancelled or postponed, Communication had been affected with some students. Most Occupational therapists were providing an alternative method of service delivery & have had to learn new skills (IT skills for conducting lectures & attending webinars). Changes in caseloads were seen with reduction in routine caseloads and reduction in new referrals. Redeployment to another team had occurred with a small number of participants being redeployed to support the multidisciplinary team in Covid wards. The new duties included Occupational therapy Rehabilitation in general Medicine Covid ward, Occupational therapy Rehabilitation of post-operative Covid ward, Occupational Therapy Rehabilitation in ICU Covid ward, Immunisation duty at vaccine centre, Telephonic guidance in Covid war Room (Covid helpline), filling of ICMR form of Covid positive patients, Distribution of PPE to resident doctors, running visiting services to urban health centre, Wellness program, Transportation service, Counselling and guidance to the patients are relatives and Post Covid rehabilitation.

Across the globe, it has substantially been established by now that the mental health problems are on the rise through the COVID-19 pandemic ^[1]. Many of us are facing challenges that can be stressful, overwhelming, and cause strong emotions ^[3]. Stress is understood to not only be a universal phenomenon but also a universal experience, and the way in which people respond to and cope with stress differs ^[7].

Lazarus and Folkman define stress as a particular relationship between the person and the environment, appraised by the person, as taxing or exceeding his or her resources, and endangering his or her well-being. If one views an event or situation as a challenge, it is more likely that a positive outcome will be achieved, whereas, if the situation was viewed as a burden or threat, it is more likely that a negative outcome will be reached ^[4].

It is natural to feel stress, anxiety, grief, and worry during the COVID-19 pandemic. Learning to cope with stress in a healthy way will make you, the people you care about and those around you become more resilient.

Coping has been defined as a process of constantly changing one's cognitive and behavioural efforts in order to manage specific external or internal demands that are appraised as taxing or exceeding the resources of the person. Coping strategies are considered those specific efforts, both behavioural and psychological that an individual employs to master, reduce or minimise and tolerate stressful events ^[4].

- **Purpose of the study:** Globally, there is limited literature that investigated the effect of mental health

symptoms among Occupational Therapists on psychological well-being during a pandemic. Therefore, we sought to investigate the prevalence and severity of psychological well-being and understand various coping strategies used during Covid-19, as well as its impact on quality of life. Such data would enable healthcare administrators and policymakers to rapidly develop and implement mental health interventions.

▪ **Aims and Objectives**

Aims: To study the impact of COVID-19 pandemic and psychological well-being of occupational therapists and assessing their coping strategies.

Objectives

Primary objectives

1. To assess the impact of COVID-19 on Occupational Therapy professionals using Covid Impact scale.
2. To assess psychological well-being of Occupational Therapy professionals using the Psychological Well-being scale.
3. To assess coping strategies used by Occupational Therapy professionals using the Brief Cope scale.

Secondary objectives: To provide and explain coping strategies to deal with stressors.

Materials and Methods

- **Inclusion criteria:** Interns and practicing Occupational therapists, Both Males & Females and Working in Government hospitals in Maharashtra with Covid wards.
- **Exclusion criteria:** Occupational therapist with any psychiatric illness and any neurological or orthopaedic deficits.
- **Type of study design:** Quantitative Research- Cross-sectional survey.
- **Sampling method:** Non-Probability Sampling Method- Convenience sampling was used throughout the study. Participants were selected based on availability and willingness to take part.
- **Assessment tools:** Three scales were administered on the participants. They were Covid impact scale, psychological well-being scale and brief cope scale.

Covid Impact Scale: This scale is a short and feasible tool aimed at assessing the impact of the Covid-19 pandemic on quality of life, as perceived primarily by people. The scale could be administered in the two following ways:

- a. The participant could fill it out directly.
- b. The clinician/researcher could read the items and ask participants to rate each of the statements (items).

Scoring key: The higher score, the greater impact on quality of life and related domains subjectively perceived by the participants. Scores could be displayed and analysed for each item separately. For calculating the total score for each participant, the researcher should sum the scores on all of the items and divide that result by the number of items (i.e., 6). Hence, the total score will be the average of all the items. Then, average scores could be compared with the theoretical one for a five-point scale (which equals to 3). Item 3 refers to anticipatory anxiety which can be calculated based on participants' response. Total score obtained to be compared out of 5.

Psychological well-being scale: Psychological Well-being is assessed with a modified 18 item version of Ryff's Scales of Psychological Well-Being. The scale includes 3 items for each of 6 aspects of well-being: self-acceptance, autonomy, environmental mastery, purpose in life, positive relations with others and personal growth. Participants are asked to rate how each item applies to themselves using a 7-point Likert rating scale. Items that are positively worded are flipped so that higher ratings on all individual items indicate greater well-being. The total score is the mean of the ratings, with a higher score relating to greater well-being. The Autonomy subscale items are Q15, Q17, Q18. The Environmental Mastery subscale items are Q4, Q8, Q9. The Personal Growth subscale items are Q11, Q12, Q14. The Positive Relations with Others subscale items are Q6, Q13, Q16. The Purpose in Life subscale items are Q3, Q7, Q10. The Self-Acceptance subscale items are Q1, Q2, Q5.

Scoring key: Q1, Q2, Q3, Q8, Q9, Q11, Q12, Q13, Q17, and Q18 should be reverse-scored. Reverse-scored items are worded in the opposite direction of what the scale is measuring. The formula for reverse-scoring an item is: $[(\text{Number of scale points}) + 1] - (\text{Respondent's answer})$. To calculate subscale scores for each participant, sum respondents' answers to each subscale's items. Higher scores mean higher levels of psychological well-being.

Brief-Cope scale: The Brief Coping with Problems Experienced (COPE) is designed to assess the varying coping strategies used by individuals in response to stress. It comprises 14 scales, each of which assesses the degree to which a respondent utilizes a specific coping strategy. Each of the 14 scales comprises two items, and each item is rated on a 4-point Likert scale, with higher scores indicating increased utilization of that specific coping strategy. Scoring key: Scores are presented for the two overarching coping styles:

- Avoidant Coping, which is characterised by the subscales of denial, substance use, venting, behavioural disengagement, self-distraction and self-blame. Avoidant

Coping is associated with poorer physical health among those with medical conditions. Compared to Approach Coping, Avoidant Coping is shown to be less effective at managing anxiety.

- Approach Coping is characterised by the subscales of active coping, positive reframing, planning, acceptance, seeking emotional support, and seeking informational support. Approach Coping is associated with more helpful responses to adversity, including adaptive practical adjustment, better physical health outcomes and more stable emotional responding.

What is avoidance coping?

Avoidance coping, also known as avoidant coping, avoidance behaviours and escape coping is a maladaptive form of coping in which a person changes their behaviour to avoid thinking about feeling or doing difficult things.

What is approach coping?

Approach coping is any behavioural, cognitive, or emotional activity that is directed toward a threat (e.g., problem solving or seeking information). There are 2 main types of Approach coping or Active coping i.e., Active behavioural coping (addresses the problem directly) and Active-cognitive coping (involves changing how you think about the stressor)^[11].

Scores are also presented for each of the following subscales

Approach Coping: Active coping-items 2 and 7, Emotional support - items 5 and 15, Use of informational support - items 10 and 23, Positive reframing - items 12 and 17, Planning - items 14 and 25, Acceptance - items 20 and 24.

Avoidant Coping: Self distraction - items 1 and 19, Denial - items 3 and 8, Substance use - items 4 and 11, Behavioural disengagement - items 9 and 21, Self-blame - items 13 and 26.

Neither avoidant nor approach coping: Humour - items 18 & 28, Religion - items 22 and 27.

This study was conducted by following all guidelines for COVID-19. No direct contact was there between participants & the researchers.

Online platform was used for conducting the study. Communication between the researcher and participants was done through WhatsApp.

Informed consents were taken from all the participants. Impact of covid-19 scale, Psychological well-being scale & BRIEF-Cope scale was used for conducting the study.

GOOGLE FORMS were created containing an introduction which included instructions for form filling, Informed consent, Demographic data of the participant in page 1 of the form.

Page 2, 3 & 4 contained Impact of covid-19 scale, Psychological well-being scale & BRIEF-Cope scale respectively.

Google form as follows

Impact of Covid-19 and Psychological wellbeing of Occupational Therapists.

We, Akanksha Kamble and Vinaya Dandekar, Occupational Therapy Interns from L.T.M.M.C & G.H.(Sion hospital, Mumbai), under the guidance of Dr. Parag Sawant (Assistant Professor), are conducting a research study on "IMPACT OF COVID-19 AND PSYCHOLOGICAL WELL-BEING OF OCCUPATIONAL THERAPISTS". You will be presented with information relevant to the study and questionnaires regarding the same. It will take you around 20 mins to respond to the questionnaire. Please be assured that your responses will be kept completely confidential. Please feel free to contact us regarding any queries :
Akanksha Kamble - 7208632788
Vinaya Dandekar - 9167779049

* Required

1. Email *
2. By clicking the button below, you acknowledge your participation in this study is voluntary, confidentiality of the data will be maintained and you are an Occupational Therapy professional. *
☐ I consent, begin the study.
3. Name
4. Age
5. Gender *
☐ Male
☐ Female
☐ Others
6. Age group *
☐ 20-30
☐ 31-40
☐ 41-50
☐ 51-60

7. Name of the institute/Hospital * _____
8. Work designation * _____
9. How many years of work experience ? *
- ☐ 1-10
- ☐ 11-20
- ☐ 21-30
- ☐ 31-40 plus
10. Have you been actively involved in COVID-19 related duties in your hospital ? *
- ☐ Yes
- ☐ No

If yes, describe the nature of work. _____

11. Presence of any co-morbidity ? *
- ☐ Yes
- ☐ No
12. If yes, then which amongst the following ?
- ☐ Hypertension
- ☐ Diabetes
- ☐ Cardiac illness Any
- ☐ others

13. If yes, then how many years ? _____
14. Have you had history of covid-19 ? *
- ☐ Yes
- ☐ No
15. If yes then how many months ago ?

Mark only one oval.

- ☐ 1-3 months ago
- ☐ 3-6 months ago
- ☐ 6-9 months ago
- ☐ 9-12 months ago

16. Have you been vaccinated ? *

- ☐ Yes
- ☐ No

17. If yes, then..

- ☐ 1st dose
- ☐ 2nd dose

Link for the forms were forwarded on WhatsApp from 5th April 2021 to 7th April 2021 to 159 OT professionals & Interns working currently.

Reminders were sent to the participants twice (14th & 18th April) for form filling. Of the 159 forms sent, 59 were dropouts (incomplete forms, no response from the participant) 100 completely filled form responses were received which was used for assessment.

100 responses were received in 1 month. Data obtained from the filled google forms was transferred on Microsoft Excel Sheet.

Calculation for the score of the submitted questionnaire for each scale was done based on participants responses.

Score obtained for each scale was studied based upon each demographic data (Age group, Work designation, work experience)

Statistical Analysis

The total number of participants was 100.

Pie Chart 1: Distribution according to gender **Pie Chart 2:** Distribution according to age **Pie Chart 3:** Distribution according to Work **Pie Chart 4:** Distribution according to years of designation experience**Table 1:** Distribution according to COVID duty

Distribution according to COVID duty	Number of participants
Participants who did Covid duty	41
Participants who did not have COVID duty	59

Table 2: Distribution according to Co-morbidity

Distribution according to Co-morbidity	Number of participants
Participants with comorbidity	11
Participants with no comorbidity	89

Table 3: Distribution according to History of COVID-19

Distribution according to history of Covid-19	History of Covid-19 in months	Number of participants
History of COVID-19	9-12 months ago	2
	6-9 months ago	7
	3-6 months ago	5
	1-3 months ago	7
No History of Covid-19	-	79

Table 4: Distribution according to Vaccination

Distribution according to vaccination	Dose	Number of participants
Vaccinated	First dose	54
	Second dose	34
Non-vaccinated	-	12

Results

Mean, Standard error of Mean, Standard deviation was calculated based on total scores for 100 participants for

Covid impact scale, psychological well-being scale, Brief Coping scale which is given in the table 5 below:

Table 5: Mean, Standard Error of mean & Standard Deviation of Covid Impact scale, Psychological well-being scale and Brief Coping scale

	COVID IMPACT SCALE (TOTAL SCORE)	PSYCHOLOGICAL WELL-BEING SCALE (TOTAL SCORE)	BRIEF COPE SCALE (TOTAL SCORE)
MEAN	3.1243	90.94	63.92
STANDARD ERROR OF MEAN	0.082	1.16	1.163
STANDARD DEVIATION	0.822	11.53	11.57

Covid Impact Scale

The mean value of the Covid Impact Scale was calculated for 100 participants which was 3.12 which indicated that there was an impact of COVID-19 on quality of life (score below 2.9 is no impact and 3 & above 3 is impact on quality of life). The anxiety subcomponent of The Covid Impact Scale had a mean value of 3.12 which indicated that there was anxiety present which affected the quality of life (score below 3 is no presence of anxiety and 3 & above 3 is presence of anxiety).

Graph 1: Covid Impact scale total score

Graph 2: Covid Impact scale anxiety sub-component score

The scores obtained for the total score and for the anxiety sub-component was distributed according to the demographic data i.e., Age group, Years of work experience and Work Designation which is as follows-

Table 6: Distribution according to Age group of the total score

	Age Groups			
Scores	20 to 30 years	31 to 40 years	41 to 50 years	51 to 60 years
Below 2.9	36	0	0	0
3 and above	46	9	5	4

Table 7: Distribution according to Age group of the anxiety sub-component score

	Age Groups			
Scores	20 to 30 years	31 to 40 years	41 to 50 years	51 to 60 years
Below 3	31	1	0	0
3 and above	51	8	5	4

Table 8: Distribution according to years of work experience of the total score

	Work experience			
Scores	1 to 10 years	11 to 20 years	21 to 30 years	31 to 40 plus years
Below 2.9	27	2	1	0
3 and above	58	6	4	2

Table 9: Distribution according to work experience wise of the anxiety sub-component score

	Work experience			
Scores	1 to 10 years	11 to 20 years	21 to 30 years	31 to 40 plus years
Below 3	24	3	0	0
3 and above	61	5	4	2

Table 10: Distribution according to work designation of the total score

	Work designation			
Scores	Intern	Post graduate students	Clinical Occupational therapist	Faculty
Below 2.9	13	14	0	3
3 and above	10	28	25	7

Table 11: Distribution according to work designation of the anxiety sub-component score

	Work designation			
Scores	Intern	Post graduate students	Clinical Occupational therapist	Faculty
Below 3	9	12	8	3
3 and above	14	30	17	7

Psychological well-being scale

The mean value of the Psychological Well-Being Scale was calculated for 100 participants which was 90.94. The subcomponent of the Psychological Well-Being Scale had mean value as: Autonomy subscale - 14.86, Environmental mastery subscale - 14.04, Personal growth subscale - 17.39,

Positive relations subscale - 14.17, Purpose of life subscale - 14.15, Self-acceptance subscale - 16.33

For the total mean score obtained for each subscale, the mean percentage was calculated for each scale which is as follows:

Graph 3: Total mean scores obtained for subscales in percent form

The scores obtained for the subscales was distributed according to the Demographic data i.e., Age group, years

of work experience and work designation which is as follows

Table 12: Distribution according to age group wise of the mean score of the subscales in percent form

	Autonomy	Environmental mastery	Personal growth	Positive relations	Purpose in life	Self acceptance
Age group 20-30 years	58.19	54.43	68.39	55.65	55.36	64.24
Age group 31-40 years	64.88	61.77	76.88	57.77	62.22	69.77
Age group 41-50 years	25.6	24	77.6	64.8	28	71.2
Age group 51-60 years	65	69	67	65	55	70

Table 13: Distribution according to years of experience of the mean score of the subcomponents in percent form

	Autonomy	Environmental mastery	Personal growth	Positive relations	Purpose in life	Self acceptance
1-10 years experience	69.2	65.3	81.7	66.6	66.2	75.8
11-20 years experience	81.5	70.8	90.4	62.5	70.8	77.3
21-30 years experience	76.1	77.1	91.4	81.9	82.8	89.5
31-40plus years experience	76.1	88	76.1	88	61.9	83.3

Table 14: Distribution according to work designation of the mean score of subcomponents in percent form

	Autonomy	Environmental mastery	Personal growth	Positive relations	Purpose in life	Self acceptance
Intern	79.5	74.1	89.1	70.2	73.9	84.1
Post graduate students	75.6	62.8	84.4	62.2	63.3	74.2
Clinical occupational therapist	70.8	68	84	68.5	67.8	78
Faculty	77.1	79	88.5	77.1	76.1	87.1

Brief Cope Scale

The mean value for the Brief Cope Scale was calculated for 100 participants, which was 63.92. The 3 components of the scale had a mean value of - Avoidant coping as 22.56,

Approach coping as 32.78 and Neither avoidant nor approach coping as 8.65. The mean values obtained were converted into percentage form which is as follows:

Graph 4: Total mean scores obtained for subcomponent

- The mean value for each component of the Avoidant coping mechanism obtained were converted into percentage form which is as follows:

Graph 5: Total mean scores for Avoidant coping mechanism

- The mean value of each component of the Approach coping mechanism obtained were converted into percentage form which is as follows:

Graph 6: Total mean scores for Approach coping mechanism

Amongst the Approach coping mechanisms used, Positive reframing was used maximum while Emotional Support was used minimum.

- The mean value each component of the Neither avoidant nor approach coping mechanism obtained were converted into percentage form which is as follows:

Graph 7: Total mean scores for neither avoidant nor approach coping mechanism

The scores obtained for the subcomponent was distributed according to the demographic data i.e., Age group, Years

of work experience and work designation which is as follows

Table 15: Distribution according to age group of the total mean score of subcomponents

	Age group 20-30 years	Age group 31-40 years	Age group 41-50 years	Age group 51-60 years
Avoidant coping	47.28	46.99	41.66	47.91
Approach coping	67.8	72.22	71.25	65.62
Neither avoidant nor approach coping	55.25	50.69	45	48.43

Table 16: Distribution according to years of experience of the total mean score of subcomponents

	1-10 years experience	11-20 years experience	21-30 years experience	31-40 plus years experience
Avoidant coping	47.05	49.47	37.5	58.3
Approach coping	67.78	75.2	68.3	59.3
Neither avoidant nor approach coping	54.8	54.6	41.25	50

Table 17: Distribution according to work designation of the total mean score of subcomponents

	Intern	Post graduate students	Clinical occupational therapist	Faculty
Avoidant coping	44.9	48.6	47.2	44.3
Approach coping	69.2	67.7	68.1	68.7
Neither avoidant nor approach coping	55.1	54	56	45.6

Co-relation

The Covid Impact scale and Psychological well-being scale are point scales which give us ordinal data which is Non-parametric data ^[12]. Since both the scales were non-parametric, co-relation designs which compare two sets of scores is the Spearman rank order co- relation coefficient test ^[12]. Rs (ρ -rho) was found from the following formula:

$$R_s = \frac{1 - 6\sum d^2}{N(N^2 - 1)}$$

Where $\sum d^2$ = the total of all the d^2 values i.e., 185969
N = the number of subjects or pairs of scores i.e., 100

$$R_s = \frac{1 - 6 \times 185969}{100(10,000 - 1)}$$

$R_s = -0.11$ (negative sign indicates negative correlation. i.e., there is weak negative correlation between Covid impact scale and psychological well-being scale)

Graph 8: Scattered diagram showing weak negative correlation between Covid impact scale and Psychological well-being scale

For looking up the value of R_s (Spearman test table), Social statistics app was used. P value for two tailed hypothesis was 0.22821

Discussion

The COVID-19 pandemic has brought significant disruption to Occupational therapists with a clear impact on quality of life & disrupted Psychological well-being. In this study we analysed the components affected & the coping strategies were also assessed. Total number of participants were 100: 10 Faculty, 25 Clinical Occupational Therapist, 42 Post graduate students and 23 Interns (Pie chart 3).

In Covid impact scale, minimum score is 1 & maximum score is 5 ^[14]. In this scale, higher the score higher is the impact of COVID-19 on quality of life. For the anxiety subcomponent, the minimum score is 1 and the maximum score is 5 ^[14]. Here, the higher the score, the higher is the rate of anxiety.

Covid Impact Total Score - The total mean score (3.12) (Table 5) indicated that there was an impact of COVID-19

on quality of life. Score of 3 & above suggests that participants have had an impact on their Quality of life ^[14]. 36 participants scored up to 2.9 & 64 scored 3 and above 3 (Graph 1). This showed that 64% who participated in the study had an impact due to COVID-19 on their Quality of life. The total score indicated that there was the highest impact on Clinical Occupational Therapists (Table 10). This can be because the other group participants (Interns, PG, Faculty) are involved in academic work as well.

Similar results were seen in the study, "The impact of the COVID-19 pandemic on Occupational therapy in the United Kingdom by "Dr. Gillan Wardet, *et al.* This study stated that the impact of the COVID-19 pandemic on the Occupational therapy profession has been profound & varied as reflected in both the quantitative & qualitative responses to the survey.

Similar results were also seen in the study conducted by Benjamin *et al.* Psychological impact of the Covid-19 pandemic on healthcare workers in Singapore ". This study concluded that non-medical health care personnel are at a

highest risk for the psychological distress & impact on quality of life during Covid-19 outbreak.

Covid Impact Anxiety Subcomponent Score - The Anxiety subcomponent indicated that 32 participants scored below 2.9 whereas 68 scored 3 & above (Graph 2) which states that 68% who participated in the study had anxiety, which had an impact on their Quality of life. Younger participants showed lesser anxiety compared to the senior participants (Table 7).

Distribution according to Age group- All the participants who scored 2.9 & below lie in the age group of 20-30 years (Table 6).

Distribution according to years of experience - Most of the participants who scored 2.9 & below had less than 10 years of clinical experience, which showed that they had less impact of COVID-19 compared to the other participants who had more than 10 years of clinical experience (Table 8).

Distribution according to work designation of participants- The Clinical Occupational therapist who participated in the study (25) did not score below 2.9 which states that all Clinical Occupational therapists had an impact of Covid-19 on their Quality of life (Table 10).

On the psychological well-being scale, the minimum score was 18 & maximum score was 126. The subcomponents of the scale were Personal growth, Self-acceptance, Autonomy, Positive relation, Purpose of life, Environmental mastery. Each subcomponent had minimum score 3 and maximum score is 21^[16]. The mean of the Total score of Psychological well-being was 90.94 (Table 5) which suggested that Psychological well-being was not much affected.

Psychological well-being scale subscale wise scoring: Personal growth subscale- 69.56%, Self-acceptance subscale - 65.32%, Autonomy subscale - 59.44%, Positive relation subscale - 56.68%, Purpose of life subscale - 56.60%, Environmental mastery sub-component - 56% (Graph 3).

Distribution according to age group- As shown in table 12, the highest score in age group of 20-30, 31-40 and 41-50 was for Personal growth subscale (participants had a feeling of continued development; they saw self as growing and expanding; they are open to new experiences; had sense of realizing his or her potential; saw improvement in self and behaviour over time; is changing in ways that reflect more self-knowledge and effectiveness).

While in the age group of 51-60 the highest score was for Self-acceptance subscale (participants possessed a positive attitude toward the self; they acknowledged and accepted multiple aspects of self, including good and bad qualities; felt positive about past life).

As shown in table 12, the lowest score in the age group of 20-30 and 41-50 was for Environmental mastery subscale (Participants had difficulty managing everyday affairs; felt unable to change or improve surrounding context; were unaware of surrounding opportunities; lacked sense of control over the external world).

While in the age group of 31-40 lowest score was for Positive relations with others subscale (Participants had few close, trusting relationships with others; they found it difficult to be warm, open, and concerned about others; are isolated and frustrated in interpersonal relationships; not willing to make compromises to sustain important ties with others).

In the age group 51-60 the lowest score was for Purpose in life subscale (Lacked a sense of meaning in life; had few

goals or aims, lacked sense of direction; does not see purpose of past life; had no outlook or beliefs that give life meaning).

Distribution according to years of experience - As shown in table 13, the highest score in 1 to 10 years, 11 to 20 years and 21 to 30 years work experience was in Personal growth subscale (participants had a feeling of continued development; they saw self as growing and expanding; they are open to new experiences; had sense of realizing his or her potential; saw improvement in self and behaviour over time; is changing in ways that reflect more self-knowledge and effectiveness).

While in the 31 to 40 plus years of work experience the highest score was for Environmental mastery subscale (participants had a sense of mastery and competence in managing their environment; they controlled complex array of external activities; made effective use of surrounding opportunities; were able to choose or create contexts suitable to personal needs and value) and Positive relations (participants had warm, satisfying, trusting relationships with others; are concerned about the welfare of others; capable of strong empathy, affection, and intimacy; understood give and take of human relationships).

As shown in table 13, the lowest score in 1 to 10 years work experience was in Environmental mastery subscale (participants had difficulty in managing everyday affairs, they feel they are unable to change or improve surrounding context and are unaware of the surrounding opportunities and lack a sense of control over the external world).

While the lowest score in 11 to 20 years work experience was in Positive relations subscale (Participants had few close, trusting relationships with others; they found it difficult to be warm, open, and concerned about others; are isolated and frustrated in interpersonal relationships; not willing to make compromises to sustain important ties with others).

The lowest score in 21 to 30 years work experience was in Autonomy (Participants are concerned about the expectations and evaluations of others; relied on judgments of others to make important decisions; conforms to social pressures to think and act in certain ways) and lowest score in 31 to 40 plus years work experience was in Purpose in life subscale (Lacked a sense of meaning in life; had few goals or aims, lacked sense of direction; does not see purpose of past life; had no outlook or beliefs that give life meaning).

Distribution according to work designation- As shown in table 14, the highest score among Interns, Post graduate students, Clinical Occupational therapist and Faculty was in Personal Growth subscale (participants had a feeling of continued development; they saw self as growing and expanding; they are open to new experiences; had sense of realizing his or her potential; saw improvement in self and behaviour over time; is changing in ways that reflect more self-knowledge and effectiveness).

As shown in table 14, the lowest score among Interns and Post Graduate students was for Positive relations subscale (Participants had few close, trusting relationships with others; they found it difficult to be warm, open, and concerned about others; are isolated and frustrated in interpersonal relationships; not willing to make compromises to sustain important ties with others).

The lowest score among Clinical Occupational Therapist and Faculty was for Purpose in life subscale (Lacked a sense

of meaning in life; had few goals or aims, lacked sense of direction; does not see purpose of past life; had no outlook or beliefs that give life meaning).

The mean of Covid impact scale & mean of Psychological Well-being scale was analysed by using Spearman's correlation test, the coefficient of correlation (r) = -0.11, which stated that there was weak negative correlation between the Covid-19 impact scale & Psychological Well-being scale mean scores of the participants (Graph 8) ^[12].

In the Brief cope scale, there are 3 subcomponents - Avoidant coping, Approach coping, & neither avoidant nor approach coping. The maximum score in this scale was 112 and minimum score 28 ^[15].

In this study 64 participants had Covid Impact score of 3 & above. (Graph 1). So, the Covid Impact & coping mechanisms of those 64 participants was analysed, which showed that 34.53 (mean) used Approach coping, 23.18 (mean) used Avoidant coping & 8.60 (mean) used Neither avoidant nor approach coping (i.e., 68.6% Approach coping, 48.3% Avoidant coping and 53.8% Neither approach nor Avoidant coping).

Similar results were seen in the study, "Experiences of burnout & coping strategies utilized by Occupational therapists" by Sangeeta Gupta *et al.* This study states that participants were using coping strategies like spending time with family & maintaining professional/ personal balance, control of work responsibilities, maintaining sense of humour and self-awareness/ self-monitoring.

64 participants scored 3 & above in Covid Impact scale. Their Psychological well-being scores were analysed. The mean of which was 90.93. The highest value was found in Personal growth subscale which indicated that the Occupational Therapists had a feeling of continued development, they see themselves as growing & expanding individuals who are open to new experiences. They also have a sense of realising their potential, see improvement in self and behaviour overtime and are changing in ways that reflect more self-knowledge and effectiveness ^[13]. The lowest value was found in Environmental mastery subscale which indicated that the Occupational Therapists had difficulty in managing everyday affairs, they feel they are unable to change or improve surrounding context (which

can be due to lack of resources, proper infrastructure), and are unaware of the surrounding opportunities and lacks sense of control over external world ^[13].

Conclusion

This descriptive study was conducted in the pursuit of determining the impact of Covid-19 on quality of life, the psychological well-being & the coping strategies utilized by the Occupational therapists who participated in the study.

Amongst the participants, 64% had an impact of Covid-19 on quality of life. Younger participants had comparatively more anxiety.

The psychological wellbeing of the participants was also affected. But, as it is a multifactorial component, weak negative correlation was found between the impact of Covid-19 on quality of life & the psychological well-being of the Occupational therapists.

Most of the participants, being Occupational Therapists, used more positive coping mechanisms.

Advantages of the study: Cross sectional studies are conducted faster and are inexpensive. This type of study may be useful for planning appropriate strategies, monitoring and evaluation. This study was conducted by following all guidelines for Covid-19 (No direct contact, communication was done through an online platform). Scales used were self-administering scales.

Limitations of study: The sample size was small. Since it was a cross sectional study, one time measurement of exposure & outcome, so it is difficult to derive causal relationships. It was an online survey, so all were not responding in the same set up at the same time. 3 questionnaires were included in the google form in a sequence, which might create a bias in responses.

Recommendations: Large scale studies can be conducted to validate the results. Comparative study can be taken up on other health care professionals. To study their coping mechanisms & compare them with that of an Occupational therapist. Awareness regarding healthcare coping mechanisms can be created.

References

1. Viswa Chaitanya Chandu, *et al.* Measuring the impact of Covid-19 on mental health: A Scoping Review of the Existing Scales, Indian Journal of Psychological Medicine. 2020;42(5):421-427.
2. Lauranne, *et al.* Validation of the Impact of Event Scale with modifications for Covid-19 (IES-Covid-19), Front Psychiatry, 2020.
3. Benjamin, *et al.* Psychological Impact of the COVID-19 Pandemic on Health Care Workers in Singapore, ann internal medicine, American College of physicians, 2020.
4. Clifford Morgan T, Richard King A, John Weisz R, John Schopler. Textbook on introduction to Psychology, 7th Edition.
5. Amit Lakhani, *et al.* Coronavirus (Covid-19) and its Impact on Health Care Workers, Journal of the Association of Physicians of India. 2020;68:66-69.
6. Nishi Suryavanshi, *et al.* Mental health and quality of life among healthcare professionals during the COVID-19 pandemic in India, Wiley Online Library. 2020;10(11).
7. Pragashnie Govender, *et al.* OT students experience of stress and coping, African Journal of Occupational Therapy. 2015;45(3):34-39.
8. Julian Cardenas. Quantitative Analysis: the guide for beginners, Research Gate, 2019.
9. Never Mujere. Sampling in research, Research Gate, 2016.
10. WHO website. <https://www.who.int>
11. Elizabeth Scott, *et al.* Avoidance Coping and Why It Creates Additional Stress, very well mind, 2021.
12. Dr. JV Dixit Principles & Practice of Biostatistics, 7th edition.
13. Tricia Seifert A. The RYFF Scales of Psychological Well-Being, Spring University of Iowa, Center of Inquiry, 2005.
14. Selman Repišti, *et al.* COVID-19-Impact on Quality of Life (Cov19-QoL) scale (v1.5), Research gate, Global Psychiatry. 2020;3:2.
15. Brief-Cope scale, Novo Psych.
16. Souvik Dubey, *et al.* Psychosocial impact of Covid-19. 2020;14(5):779-788. PubMed.gov
17. Coping strategies, approach coping, American Psychological Association, APA dictionary of Psychology.
18. BK Mahajan. Mahajan's methods in biostatistics for medical students and research workers, 8th edition.
19. WHO. coronavirus (Covid-19) dashboard. <https://covid19.who.int>
20. Coronavirus disease. India dashboard, JHU CSSE, 2019.
21. Jacob Shreffler, *et al.* The impact of COVID-19 on Health Care workers wellness: A Scoping review, The Western Journal of Emergency Medicine. 2020;21(5):1059-1066.
22. Maura Tobin F, *et al.* Self-reported stress & coping strategies of Occupational therapy faculty employed at or graduated from a large Midwestern United States University, Health Professions Education. 2020;6(3):406-410.
23. Dr. Gillian Ward, *et al.* The impact of Covid-19 pandemic on occupational therapy in the United Kingdom-A survey report, Education and Research, Royal College of Occupational Therapists, 2020.
24. Sangeeta Gupta, *et al.* Experiences of burnout & coping strategies utilized by Occupational Therapists, Canadian Journal of Occupational Therapy. 2012;79(2):86-95.
25. Mitchell MM, *et al.* Coping strategies used by Occupational Therapy Students during fieldwork: An exploratory study, The American Journal of Occupational Therapy. 1990;44:6.