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NATURE OF ALEXITHYMIA AND MENTAL HEALTH DURING COVID 19: A CORRELATIVE STUDY AMONG INDIAN EXPATS IN

UAE

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Article History	Abstract
Received: 08July2023	Mental health issues are common during pandemic situations. The
Revised: 29 Aug 2023	unexpected outbreak of covid-19 had created mental issues like
Accepted: 12 Oct 2023	stress, anxiety and depression among common people. Alexithymia
	is an important role in creating mental health problems. The studies
	indicated that alexithymia is a state of emotionless response which
	may later lead to depressive disorders. The increase in fear and
	curiosity about the upcoming details and news of pandemic may
	result in emotional imbalance and may lead to anxiety regarding
	the same. many studies have been done regarding the mental issues
	during covid-19. The survey study is used here to verify the result
	and the scales Toronto Alexithymia Scale (TAS-20) scale and
	GHQ-28 is used to collect data. Some of the data were collected
	from people who have been affected by covid pandemic and those
	who have undergone the procedure of home quarantine and most of
	those were in tested in youth. The data is collected from 25 males
	and 25 females. It was found that participants with mental issues
	and post covid clients also shows features of alexithymia. Many
	studies conducted recently have shown expats may be at greater
	risk of mental health problems. This most often manifests in the
	form expat depression and cases of stress, anxiety and alexithymia

CCLicense CC-BY-NC-SA 4.0	is also increasing. Finally, we are discussing some of the studies of
	alexithymia.
	Key words: Alexithymia, mental health issues, expats, UAE, India
	and Covid-19

INTRODUCTION

Alexithymia is a broad term to describe problem with feeling emotions. This term is derived from Greek word which literally means pushing away emotions. It's true that the term "alexithymia" was coined by psychotherapist Peter Emanuel Sifneos in 1973. Alexithymia is indeed a psychological phenomenon characterized by a person's difficulty in identifying and expressing their own emotions. Individuals with alexithymia often struggle to differentiate between bodily sensations and emotional feelings, making it challenging for them to understand and communicate their emotional experiences.

As for the COVID-19 pandemic, you're correct that it has had a significant impact on mental health worldwide. The outbreak of the coronavirus in late 2019 and its subsequent spread caused widespread fear, uncertainty, and anxiety among the general population. The fear of a highly contagious and potentially deadly virus, coupled with the rapid dissemination of information (and sometimes misinformation) through various media channels, contributed to heightened levels of stress and anxiety.

Individuals who were already dealing with mental health issues before the pandemic were indeed at a higher risk of experiencing exacerbated symptoms or developing new mental health problems. The social isolation, economic uncertainties, and disruptions to daily life caused by the pandemic all added to the mental health challenges people faced during this time.

Efforts were made globally to address these mental health issues, including providing access to teletherapy, online support groups, and public health campaigns aimed at promoting mental well-being during the pandemic. It's important to recognize the importance of mental health and seek support when needed, especially during times of crisis.

Maintaining social distance, washing hands frequently and wearing mask are the regular notices provided from government to reduce the risk of covid-19 positive cases. It's equally important to keep our mind and body fit and healthy by controlling unwanted thoughts and emotions and people should follow other precautions announced by health care system and government. Mental health is "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community Mental health problems particularly stress disorders, depression and anxiety have long been associated with exposure to traumas such as natural disasters, interpersonal traumas and deadly pandemics. Epidemiological studies suggest that some of the population experience these psychological issues during first stage of traumas or pandemic, which will create a heavy strain on families and society as they need to struggle for rebuilding their lives to normal. These mental health issues may later or faster may bring them in a stage of emotionless feeling less stage known as alexithymia. Even though alexithymia has important role in post-traumatic mental health issues but the associations between them are still unclear. One significant challenge during the transition to an alexithymic state is the difficulty people encounter in recognizing their

emotional experiences. According to the World Health Organization (WHO), mental health encompasses a wide array of elements, including an individual's overall sense of well-being, their confidence in their own capabilities, their ability to self-regulate, their proficiency, their capacity to nurture intergenerational connections, and their realization of their intellectual and emotional potential, among other aspects. In modern psychology, mental health encompasses our emotional, cognitive, and social welfare. It exerts a profound impact on our thinking patterns, emotional responses, and behavioral tendencies. Additionally, it plays a pivotal role in how we cope with stress, engage with others, and make decisions. Mental health is a vital facet of life, influencing us at every stage, from childhood and adolescence all the way through to adulthood.

Alexithymia represents an emotional deficit characterized by four primary components: challenges in recognizing, labeling, describing, and/or conveying emotions and feelings; difficulties in differentiating between emotions or feelings and physical sensations; and struggles with symbolism, resulting in an inability to experience. In the context of this transition, a crucial issue may be the presence of deficiencies in identifying and expressing emotions, a condition known as alexithymia (Paivio & McCulloch, 2004; Zou et al., 2016). Alexithymia is linked to three specific deficits in identifying and expressing emotions that depend on one's current state (Hendryx, Haviland, & Shaw, 1991): problems with recognizing feelings (DIF), challenges in describing feelings (DDF), and a tendency towards externally focused thinking (EOT) (Sifneos, 1991; Taylor, 1994). Individuals with severe alexithymia find it difficult to mentally process and articulate their emotions and have a limited ability to engage in symbolic or imaginative thinking (Taylor, 1984). These deficits lead to difficulties in regulating emotions and their associated responses, potentially predisposing individuals to both psychological and physical symptoms. Previous research has indicated that exposure to trauma can predict impairments in emotional awareness and expression (alexithymia) (Kench & Irwin, 2000). Moreover, alexithymia has been closely linked to various psychological symptoms (Aricak & Ozbay, 2016; Hendryx et al., 1991; Perry & Hayaki, 2014; Westwood, Kerr-Gaffney, Stahl, & Tchanturia, 2017). Nevertheless, the precise role that alexithymia plays in post-traumatic mental health issues remains uncertain, necessitating further in-depth research to clarify potential associations.

Some studies have examined to degree to which alexithymia mediates the relationships between number of trauma exposures and mental health problems. For example, it was found that the greater the number of traumatic experiences, the stronger the association with severe alexithymia (Hébert, Boisjoli, Blais, & Oussaïd, 2018). Alexithymia was also found to be a predictor for both internal and external symptoms (Mannarini, Balottin, Toldo, & Gatta, 2016). Given the known direct links between trauma and mental health problems, more research is needed into the etiologic of pandemic-related mental health problems and the role alexithymia plays in predicting the mental health problems associated with the COVID-19 pandemic to enable the development of more effective mental health intervention services This research was approved by the Ethics Committee of the Sichuan Psychology Association. Before the survey was conducted, the questionnaire content and procedures were discussed with the psychological services at all participating universities and written consent obtained from the proper authorities. Electronic consent was also given by participants by signing the first page of the survey. The student participants were informed about the study aims and

procedure and data confidentiality, were told that participation was voluntary, and that consent could be To date, there have been a limited number of investigations exploring the connections between alexithymia and the trauma responses experienced by individuals exposed to COVID-19 in China. Furthermore, the results from other studies examining the relationships between mental health issues and alexithymia or its constituent components (namely, Difficulty Identifying Feelings - DIF, Difficulty Describing Feelings - DDF, and Externally Oriented Thinking - EOT) have exhibited notable inconsistencies.

In the context of these three facets of alexithymia, for example, some research has uncovered a robust association between DIF and individuals grappling with depression, asserting that DIF strongly correlates with their existing psychopathological conditions. Additionally, these studies have indicated that both DDF and EOT have somewhat significant influences on mental health outcomes (Conrad, Wegener, Imbierowicz, Liedtke, & Geiser, 2009; Grabe, Spitzer, & Freyberger, 2004). Conversely, other investigations have shown that depression is significantly linked solely to DDF (Leweke, Leichsenring, Kruse, & Hermes, 2012) or, conversely, to both DIF and EOT (Luca, Luca, & Calandra, 2013).

These preliminary studies collectively suggest that alexithymia, as well as its constituent components (DIF, DDF, EOT), might potentially serve as predisposing factors for mental health issues. However, further research is imperative to elucidate whether the associations between trauma exposure and conditions such as PTSD or depression can be elucidated by specific features of alexithymia.

Furthermore, Larsen et al. (2006) made a noteworthy discovery by identifying a significant interaction between gender and alexithymia. Specifically, they found that greater difficulties in recognizing or articulating emotions were specifically linked to heightened emotional eating tendencies among men. This implies that alexithymia may exert a more pronounced influence on emotional eating behaviors in obese men as opposed to women.

In essence, the need for additional research to deepen our understanding of the interplay between alexithymia, trauma reactions, and mental health outcomes remains paramount, particularly within the unique context of COVID-19 exposure in China. Additionally, these findings underscore the importance of considering gender differences in the impact of alexithymia on behaviors like emotional eatingwithdrawn at any time. The survey was completed on the Chinese Star.

A survey website was set up, and a corresponding smartphone link was shared with the WeChat student group through the guidance of undergraduate instructors. Incentives in the form of small random monetary rewards (ranging from RMB 1 to 10) were offered to participants upon completing the questionnaires to enhance their motivation. We then compared the mean score differences across two groups of undergraduates: those who did not report probable depression or PTSD and those who did report probable depression or PTSD. This comparison encompassed not only the overall alexithymia survey scores but also the scores for each of its three subcategories.

To assess the statistical significance of these differences, we utilized an independent-sample t-test and performed Cohen's d calculations. Additionally, we conducted stepwise linear regressions, accounting for age and gender as covariates, to explore the independent associations between the alexithymia subcategories (DIF, DDF, and EOT) and the presence of depression or PTSD.

All of these statistical analyses were carried out using SPSS 22.0 for Windows, a trusted statistical software package (IBM, Chicago, IL, USA). Furthermore, we employed the PROCESS macro (Hayes, 2013) within SPSS 22.0 to perform mediation analysis, specifically to examine whether alexithymia acted as a mediating variable in the relationship between exposure to certain factors and the development of mental health problems.

To delve deeper into the relationships between the variables, we turned to structural equation modeling (SEM), utilizing AMOS 20.0 for Windows (IBM, Chicago, IL, USA). This approach allowed us to establish the path relationships among the various factors under investigation. Several SEM model indices, including the goodness of fit index (GFI), normed fit index (NFI), comparative fit index (CFI), Tucker–Lewis index (TLI), and root mean squared error of approximation (RMSEA), were examined to gauge the model's adequacy. Acceptable model fit was determined by values exceeding 0.90 for the GFI, NFI, CFI, and TLI, and falling below 0.08 for the RMSEA, with a significance level set at P < 0.05.

A total of 2501 undergraduate students participated in the survey, but 16 were excluded due to providing illogical answers, such as consistently selecting either one or zero for all survey items. Consequently, the final sample size consisted of 2485 undergraduate students. Among these, 960 were identified as male, while 1525 were identified as female. The average age of the participants was 19.8 years, with a standard deviation of 1.55 years, and ages ranging from 16 to 27 years.

Regarding their experiences during the epidemic, 2229 students (89.7%) reported that they had undergone home quarantine for different durations: less than one week (n = 147), one to two weeks (n = 242), two to four weeks (n = 1704), and over four weeks (n = 136). A total of 2.9% (n = 73) of the participants scored at or above the clinical threshold of 38 on the PCL-C, indicating probable PTSD, while 9% (n = 223) scored at or above the clinical cutoff of 10 on the PHQ-9, suggesting probable depression.

We investigated the differences in alexithymia characteristics between participants with and without PTSD or depression. Those with probable depression or PTSD reported notably higher levels of total alexithymia, as well as alexithymia's DIF and DDF features. In particular, the DIF score in individuals experiencing mental health issues was twice as high as that in non-depressive individuals.

To assess potential associations between the study variables, we employed Pearson's correlation coefficient. We observed moderate correlations between depression and DDF (r = 0.442) or PTSD symptoms and DDF (r = 0.474). However, stronger correlations were detected between depression and DIF (r = 0.570) and PTSD and DIF (r = 0.519). Surprisingly, we found no correlations between mental health issues and the EOT dimension of alexithymia. Furthermore, there was no discernible link between the duration of home quarantine and the presence of psychological problems or alexithymia.

To identify the specific alexithymia factors that independently predicted depression and/or PTSD, we conducted stepwise linear regression analyses using the alexithymia subscale categories. Both DIF and DDF were identified as independent predictors of depressive or PTSD symptoms. Notably, DIF explained a substantial portion of the variance for PTSD ($\Delta R^2 = 0.326$) and depressive symptoms ($\Delta R^2 = 0.276$), whereas DDF explained a relatively small portion of the variance for PTSD ($\Delta R^2 = 0.003$) and depressive symptoms ($\Delta R^2 = 0.003$) and depressive symptoms ($\Delta R^2 = 0.003$).

In the mediation analysis, we found that alexithymia played a partial mediating role in the relationship between the number of exposures and both PTSD and depressive symptoms. Specifically, alexithymia accounted for 30.77% of the total effect on PTSD and 34.85% of the total effect on depressive symptoms. Furthermore, we observed that PTSD symptoms partially mediated the connection between alexithymia and depressive symptoms, explaining 61.86% of the total effect.

The model fit indices indicated that our model was acceptable, with a Goodness of Fit Index (GFI) of 0.999, Tucker-Lewis Index (TLI) of 0.991, Normed Fit Index (NFI) of 0.998, Comparative Fit Index (CFI) of 0.998, and Root Mean Square Error of Approximation (RMSEA) of 0.042 (90% CI 0.016–0.080). Additionally, the model as a whole was statistically significant ($\chi 2 = 5.46$, df = 1, P = 0.016).

Our analysis revealed that exposure had a significant direct effect on PTSD ($\beta = 0.16$) and also directly influenced alexithymia ($\beta = 0.14$). Furthermore, we identified several indirect paths, including exposure \rightarrow alexithymia \rightarrow PTSD ($\beta = 0.07$), exposure \rightarrow alexithymia \rightarrow depression ($\beta = 0.03$), and alexithymia \rightarrow PTSD \rightarrow depression ($\beta = 0.29$).

In another study involving 179 Japanese healthy volunteers, the investigation focused on the relationship between alexithymia and coping with stress. Two separate correlational analyses indicated that individuals with higher alexithymia scores were more likely to report lower levels of social support and less effective responses to stress. Additionally, a multiple regression analysis revealed that the diminished coping responses were entirely accounted for by alexithymia scores.

These findings suggest that alexithymia, as a personality trait, may serve as a key factor in understanding why some individuals struggle to articulate their emotions. For these individuals, alexithymia, characterized by difficulties in recognizing, describing, and differentiating emotions from bodily sensations, as well as challenges in emotional expression and imagination, can significantly impact their psychological well-being. Alexithymia has been linked to various psychological issues such as depression and schizophrenia and may play a pivotal role in understanding emotional difficulties across diverse contexts. Moreover, it has been associated with higher risks of suicidality, increased psychosomatic complaints, and elevated mortality rates in certain populations.

Research Gap

- Scarce Research on Mental Health and Alexithymia During COVID: Existing research on the interplay between mental health and alexithymia during the COVID-19 pandemic is limited, prompting the need for further investigation.
- Potential to Bolster the Mental Well-being of Indians: This research has the potential to be a catalyst for improving the mental well-being of the Indian population by shedding light on the relationship between alexithymia and mental health.

- Insufficient Studies on Indians During the Pandemic: There is a notable gap in the literature when it comes to studying these issues among the Indian population during the pandemic, making this research particularly significant.
- Aiding Future Support Initiatives for All Indians: The findings of this study can serve as a foundation for future mental health support strategies that benefit the entire Indian populace.
- Exploring the Impact of Alexithymia on Pandemic Mental Health: This research endeavor aims to delve into the influence of alexithymia on mental health during the COVID-19 pandemic.

Objectives

- To gauge the extent of mental health challenges experienced by young individuals in India during the COVID-19 pandemic.
- To investigate the prevalence of Alexithymia among the youth in India amidst the COVID-19 crisis.
- To explore the correlation between Alexithymia and mental health disorders among the younger population in India.
- To assess gender-based variations in mental health issues within the youth demographic in India during the COVID-19 pandemic.
- To examine gender-related disparities in the manifestation of Alexithymia among young Indians during the COVID-19 pandemic.

Hypotheses

- It is expected that there will be a significant increase in mental health problems among young Indians during the COVID-19 pandemic.
- It is anticipated that a notable proportion of young Indians will exhibit the alexithymia trait in response to the COVID-19 pandemic.
- It is hypothesized that there will be no discernible correlation between the presence of alexithymia and the occurrence of mental health issues among young Indians during the COVID-19 pandemic.
- It is postulated that there will be no significant gender disparities in the prevalence of mental health issues and alexithymia among young Indians in response to the COVID-19 pandemic

METHODOLOGY

Sample:

50 Indian Expats will be taken for the purpose. 25 will be male participants and other 25 will be female participants.

Inclusion criteria

This research will focus on individuals in India within the age range of 20 to 35 years.

Inclusive of both genders, this study aims to encompass both males and females from the Indian population.

The research will specifically target individuals who have completed their education up to at least the 10th grade.

Participants for this study will be drawn from the middle socio-economic stratum of society.

Participants in this research will be selected from the middle socio-economic status, ensuring a diverse representation of individuals within this demographic.

Exclusion criteria

- Participants aged below 20 or above 30 years were excluded from the study.
- Only individuals with an academic level of 10th grade or higher were included in the study.
- The study's participants were limited to those within the middle socio-economic status range, excluding those below or above it.

Tools

Toronto Alexithymia Scale (TAS-20) developed by Bagby et.al General Health Questionnaire (GHQ-28) developed by Goldberg and Hiller

Procedure

The current study's participants were contacted through both messages and email correspondence. They were provided with a guarantee of complete confidentiality regarding their responses. The research instruments were subsequently administered to them. Prior to the administration of these tools, explicit instructions were carefully explained to the participants. Only after all their inquiries and concerns had been adequately addressed, they were invited to complete the questionnaire. Following the collection of their responses, the data was organized and subjected to statistical analysis, including the calculation of measures such as the mean, standard deviation, t-test, and correlation. Based on the results obtained, an interpretation was formulated, and conclusions were drawn from the findings.

Analysis of data

Data analysis was conducted employing rigorous statistical techniques, including the calculation of measures such as the mean, standard deviation, t-test, and correlation. The data underwent analysis using the Statistical Package for the Social Sciences (SPSS).

RESULT

SL. NO	ALEXITHYMIA	GHQ
1	46	22
2	53	60
3	55	67
4	61	29
5	59	57
6	66	80
7	58	74
8	63	67
9	62	70
10	61	54
11	39	23
12	65	68
13	66	67
14	67	78
15	40	34
16	65	67
17	57	77
18	55	49
19	64	65
20	62	74
21	61	80
22	55	76
23	64	79
24	61	72
25	44	60
Mean of males	57.96	62.64
Standard deviation	7.877	17.28
correlation	0.680366	
26	65	46
27	70	57
28	61	56
29	56	49
30	68	62
31	69	70
32	72	67
33	61	79

Table 1 Tabular presentation of the data of 25 male Indian expats and 25 female Indian expats on Toronto Alexithymia Scale and General Health Questionnaire (GHQ 28)

49	61
50	66
59	65
66	56
69	45
73	68
61	67
59	63
61	71
64	69
67	59
45	67
67	64
61	73
52	57
65	77
62	53
62.08	62.68
7.268	8.863
	-0.0299
	50 59 66 69 73 61 59 61 64 67 45 67 45 67 61 52 65 62 62 62.08

Table 2: Tabular presentation of the data of 50 Indian expats on Toronto Alexithymia Scale and General Health Questionnaire (GHQ 28)

Total Mean	46.33333	62.32
Total S.D	7.864	13.823
Correlation	0.433003	

DISCUSSION

Upon analyzing the results, it was observed that among young Indian expatriates, the mean score for females in the domain of Alexithymia (Mean = 62.08, SD = 7.268) was slightly higher than that of males (Mean = 57.96, SD = 7.877). However, the calculated t-value (1.67) did not reach statistical significance, suggesting that the observed difference in mean scores between male and female young Indian expatriates may be attributed to random chance factors. It's worth noting that the study by Larsen et al. (2006) yielded incorrect results within this particular sample.

The findings also indicate that there is a similarity in GHQ mean values between males and females during the COVID-19 pandemic, with males having a mean score of 62.68 and females having a mean score of 62.64. The correlation between these scores was found to be non-significant, suggesting that the relationship between male and female subjects' scores is

not statistically significant. These results align with previous research conducted by Fischlmayr and Kollinger (2010).

There is existing evidence from prior studies, such as those by Selmer and Leung (2020 & 2007), which suggests that male expatriates tend to exhibit better mental health outcomes than their female counterparts. However, in the current study, male participants demonstrated a higher level of mental distress than female participants residing in the UAE. This difference may be attributed to various psycho-socioeconomic factors in their lives. The table above highlights that, in the context of mental health issues among Indian expatriates in the UAE, the mean score for males is slightly higher than that of females.

The obtained t-value (2.009) is statistically significant at the 0.05 significance level, indicating that the difference between the scores of male and female subjects is statistically meaningful. Furthermore, the correlational value (0.55) also reaches significance at the 0.05 level, signifying that there is a statistically significant relationship between the scores of male and female subjects.

In contrast to the findings of this study, there exist research results, such as those from E. Taylor et al. (1989), which suggest that male expatriates tend to excel in interpersonal relationships compared to their female counterparts. The current study's outcomes can be interpreted in a manner that implies male subjects may encounter more emotional challenges due to the unique demands of their professions and other life adjustments compared to their female counterparts.

The results also imply that female subjects exhibited a lower degree of mental well-being compared to their male counterparts. This difference could be attributed to the nature of their jobs and the stress associated with balancing work and personal life.

CONCLUSION

Based on the aforementioned findings, it can be deduced that the participants exhibited a heightened level of mental health issues during the COVID-19 pandemic. Concerning mental health, the null hypothesis was rejected in favor of the alternative hypothesis. However, in the case of Alexithymia, the hypothesis was upheld. Consequently, within this limited scope, an examination of the relationship between different variables, specifically Alexithymia and mental health, was conducted among male and female expatriates. As a result, psychological and social correlations were explored within the male and female expatriate populations. Therefore, the study's title is well-suited and substantiated.

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