Social Anxiety among Introverts and Extroverts across gender among Undergraduate students during the pandemic COVID-19 in Bangalore

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ABSTRACT

Social Anxiety is an anxious response to the social situation the individual is in. Biological and environmental factors together are believed to be the reason for the development and maintenance of social anxiety. The personality studies have also suggested varying results making it hard to conclude the possible influence of personality on social anxiety. The gender studies on anxiety disorders suggest that social anxiety to be prominent in females than in males (Christiansen, 2015). With Covid -19 making changes throughout the world in terms of communication, health prospects, safety etc does it influence social anxiety in extraverts and introverts across gender? The study was to understand the difference in social anxiety among personality types- introverts and extraverts, across the two gender male and female. The purposive sampling method is used with a sample size of 417 of age group 18-25years. The scale used for the study are Introversion scale developed by McCroskey and Social Anxiety Questionnaire for Adults (SAQ-A30) by Vicente E.Caballo. The findings of the study showed that, there is a significant difference in extroversion and introversion personality traits across gender and Social Anxiety do not differ significantly in extroverts and introverts across gender. The limitations, scope for further study and implications were mentioned.

INTRODUCTION

Social Anxiety is an anxious response to the social situation the individual is in. Fear or anxiety in social situations, particularly where an individual is exposed to scrutiny or has a possibility of negative evaluation by others as Social anxiety is defined in Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM 5). Social Anxiety Disorder (SAD) or Social Phobia is a common psychological disorder for psychological practitioners, which is why SAD celebrates the third position in the mental health care problem in the world. Indian research data on the prevalence of social anxiety and related disorders throughout the population is scanty. Through the already existing data, social anxiety is seen estimated to have about 5.9-7.8% in urban university students (Jaiswal A. et al. 2020). Studies have shown that approximately 90% of the individual to feel social anxiety when exposed to social anxiety eliciting stimulus at least ones in lives. Female participants are found to be more prone to have anxiety disorders than male participants (Christiansen,2015). Therefore, the present study is to understand the gender significance of social anxiety among introverted personality types and the extraverted personality type in Undergraduate (UG) students of Bangalore during COVID -19.

Studies have shown that social anxiety disorder to hurt academic achievement which may lead to higher-order psychological disorders like depression and suicidal tendencies. A cross-sectional descriptive study done recently in East Delhi on Undergraduate medical students has shown a prevalence rate of social anxiety and social phobia in medical students to be 5.94% and 12.62% respectively (Das, 2019). Biological and environmental factors together are believed to be the reason for the development and maintenance of social anxiety.

COVID-19 pandemic came with a complete change in the social interaction, relationship and education system throughout the world. Social distancing and personal hygiene demand of the pandemic has made it hard for the

individual to communicate freely. The video chatting applications like Zoom, Microsoft Teams and Google-meet has become the agents of communication and knowledge transfer. The social distancing may seem to be enjoyed by individuals with personality difference differently. For eg: Social distancing for extroverts would have been hard and strenuous, whereas the introverts would have cherished the idea. Introversion is the personality trait that is internally oriented when compared to extroverts who are externally oriented. The introverts who are mistaken to be shy and timid and isolate themselves from the crowd take this opportunity to isolate themselves willingly (Thorne, A. 1987; Cain, S 2012). On the other hand, the extroverts who cannot live without being the talk of the crowd undergo a lot of disadvantages in distancing themselves from the social gathering. Therefore, it is easy to conclude that the extroverts need the crowd and Introverts don't. Some articles suggest that extroverts to have more connection and express themselves well when they are having a conversation in the traditional way rather than through the internet (Amichai-Hamburger,2002). Inexpressiveness of the feeling and emotions might also trigger the co-morbid psychological disorders in individuals.

Maryann Wei (2020) in her research paper explains the introversion in terms of variables like age, gender and living condition during Covid-19. The study elaborates on the point that except the living condition that is being a burden to someone due to financial difficulties were the only reason the introverts had an issue. Introverts seemed to adjust well the Covid-19.

The objective of the study is to evaluate the existence of social anxiety among extroverts and introverts in undergraduate students by ignoring the misconceptions of their personality trait. The online survey was done during the peak stages of the COVID pandemic in Bangalore.

METHOD

Aim of the study: To study the significant gender difference of socially anxious in introverts and extroverts pursuing their Under-graduation (UG) in Bangalore during the outbreak of COVID-19.

Objectives of the study:

- To study the socially anxious introverts and extraverts pursuing their Under-graduation (UG) in Bangalore
- To study the gender difference in socially anxious introverts and extraverts pursuing their Under-graduation (UG) in Bangalore

Hypothesis:

H_0: Social anxiety do not differ significantly in Extrovert personality type among UG students across gender during the pandemic COVID-19.

H_0: Social anxiety do not differ significantly in Introvert personality type among UG students across gender during the pandemic COVID-19.

Variables:

Dependent Variable: Introversion & Extroversion, Social anxiety

Independent Variable: Gender.

Inclusion criteria

- UG students aged between 18-25years.
- Both Professional and Non-professional degree program students.
- Bangaloreans were included.

Exclusion criteria

- Differently abled people were not included.

Research design: Research is exploratory in nature and survey sample research design was adopted.

Sample size: 415 UG students from across Bangalore were part of the study. Among which 275 participants were found to be introverts and 140 participants were found to be extroverts. The age range under consideration was 18-25 years.

Sampling Method: Purposive sampling method is used for the study.

Tools used:

Introversion scale developed by McCroskey

The scale was developed in 1992 to assess the apprehensiveness faced by the individual during a communication. A few of the components in the

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questionnaire were borrowed from Eysenck's personality questionnaire. The scale consisted of 18 items. The question numbers 3, 6, 9, 12, 15& 17 were avoided from the computation of the introversion scores as the items represented the neuroticism. The correlational value of Personal Report of Communication Apprehension (PRCA-24) and this scale was found to be around .30. Alpha reliability was found to be ≤.80.

Social Anxiety Questionnaire for Adults (SAQ-A30) by Vicente E.Caballo

SAQ-A30 was developed in 2015. The scale has 30 items. The scale consisted of 5 factors: Speaking in public/talking with people in authority (SA1); Interactions with the opposite sex (SA2); Assertive expression of annoyance, disgust, or displeasure (SA3); Criticism and embarrassment (SA4); & Interactions with strangers (SA5). Each of the factors had 6 items that were randomly dispersed in the scale. The cut off scores of each of the factors was as follows: 16, 18, 18, 20, and 19. The Liebowitz Social

Anxiety Scale (LSAS-R) and SAQ-A30 showed a moderate level of correlation on both clinical and non-clinical patients. The scale displayed .93 of internal consistency reliability on total SAQ-A30 scores.

Procedure:

The data collection was done in online mode. The participants were provided with the google forms. The filled google forms were sent to the researcher's e-mail ID. The results were shared with the participants privately. The responses were scored using the scoring criterion provided by the tool developers. Analyses of the scores were done using MS Excel and SPSS applications. **Statistical Analysis**: Non-Probability statistical analysis were used: Mann-Whitney U-test, percentage analysis was used.

Result and Discussion:

Table 1 Shows the percentage of the level of social anxiety among extroverts and introverts across gender.

	N		Speaking in public/talking with people in authority (SA1)	Interactions with the opposite sex (SA2)	Assertive expression of annoyance, disgust, or displeasure (SA3)	Criticism and embarrassment (SA4)	Interactions with strangers (SA5)	Social Anxiety Total score
Female Introverts (FI)	198	HIGH	40%	38%	23%	28%	48%	31%
		LOW	60%	62%	77%	72%	52%	69%
Male Introverts (MI)	77	HIGH	38%	44%	22%	25%	52%	38%
		LOW	62%	56%	78%	75%	48%	62%
Female Extroverts (FE)	105	HIGH	36%	38%	26%	36%	43%	32%
		LOW	64%	62%	74%	64%	57%	68%
Male Extroverts (ME)	35	HIGH	37%	37%	26%	20%	43%	31%
		LOW	63%	63%	74%	80%	57%	69%

As per the Table 1, a total number of female Introverts (FI) are 198; Male Introverts (MI) are 77; Female Extroverts (FE) are 105 and Male Extroverts (ME) are 35. Under FI, the female participants with high introversion have got 40%, under SA2 have 38%, Under SA3 have 23%, under SA4 have 28%, Under SA5 have 48% and the overall percentage score for SA(Total) is 31%. Under FI, the female participants with low introversion have got 60% under SA1, under SA2 have 62%, Under SA3 have 77%, under SA4 have 72% and Under SA5 have 52% and the overall percentage score for SA(Total) is 69%. Under MI, the male participants with high introversion have got 38%, under SA2 have 44%, Under SA3 have 22%, under SA4 have 25%, Under SA5 have 52% and the overall percentage score for SA(Total) is 38%. Under MI, the male participants with low introversion have got 62% under SA1, under SA2 have 56%, Under SA3 have 78%, under SA4 have 75% and Under SA5 have 48% and the overall

percentage score for SA(Total) is 62%. Under FE, the female participants with high extraversion were found to have 36%, under SA2 have 38%, Under SA3 have 26%, under SA4 have 36%, Under SA5 have 43% and the overall percentage score for SA(Total) is 32%. Under FE, the female participants with low introversion have got 64% under SA1, under SA2 have 62%, Under SA3 have 74%, under SA4 have 64% and Under SA5 have 57% and the overall percentage score for SA(Total) is 68%. Under ME, the female participants with high introversion have got 37%, under SA2 have 37%, Under SA3 have 26%, under SA4 have 20%, Under SA5 have 43% and the overall percentage score for SA(Total) is 31%. Under FE, the female participants with low introversion have got 63% under SA1, under SA2 have 63%, Under SA3 have 74%, under SA4 have 80% and Under SA5 have 57% and the overall percentage score for SA(Total) is 69%.

Table 2 shows the significant difference between introversion and extroversion across gender.

Variable	Introverts		Extraverts	
	Male	Female	Male	Female
Group	77	198	35	105
Mean rank	146.65	134.64	84.43	65.86
Sum of ranks	11292	26658	2955	6915
Mann Whitney U-test	6957		1350	
Wilcoxon Score	26658		6915	
Z Value	-1.135		-2.364	
p value	0.256		0.018	

Above table 2 shows the significant difference between extrovert and introvert personality types in male and female participants. The 77 male Introverts were found to have a mean rank of 146.65 and sum of the ranks of 11292. And 198

female introverts were found to have a mean rank of 134.64 and sum of ranks to be 26658. Together the male and the female participants have found to have a score of 6957 in Mann Whitney U-test, 26658 in Wilcoxon Score, the Z value of -1.135

and p-value of 0.256. The 35 male extraverts were found to have a mean rank of 84.43 and sum of the ranks of 2955. And 105 female introverts were found to have a mean rank of 65.86 and sum of ranks to be 6915. Together the male and the female extravert participants have found to have a score of 1350 in Mann Whitney U-test, 6915 in Wilcoxon Score, the Z value of -2.364 and p-value of 0.018.

The scores indicate that among male and female participants, male participants were seen to be more characteristics of their personality than female participants.

Table 3 Shows the significant difference in social anxiety factors in introverts across gender

Introverts	SA1		SA2		SA3		SA4		SA5		SA(Total)	
	M	F	M	F	M	F	M	F	M	F	M	F
Mean rank	13.782	138.82	150.32	133.21	136.53	133.21	128.68	134.91	145.95	134.91	141.86	136.50
Sum of ranks	10612	27338.	11574.50	26375.50	10512.50	2637.50	9908	26712	11238	26712	10923	27027
Mann Whitney U-test	7609.0		6674.50		7509.500		6905.000		7011.0		7326	
Wilcoxon Score	10612.000		26375.50		10512.500		9908.0		26712		27027	
Z Value	-.024		0.981		-.192		-1.215		-1.036		-0.502	
p-value	-1.604		.109		.848		.224		.300		0.616	

Table 3 illustrates the mean rank, sum of ranks, Mann Whitney U test, Wilcoxon score, z score and p-value of different factors of social anxiety for both male and female introvert participants. Under the social anxiety factor SA1, the male and female introverts have got the mean rank of 137.82, 138.07 and sum of ranks is 10612, 27338 respectively. The score of Mann Whitney U-test for the introverts was 7609, Wilcoxon score was 10612, Z value was -.024 and p-value was -1.604. Under the social anxiety factor SA2, the male and female introverts have got the mean rank of 150.32, 133.21 and sum of ranks is 11574.5, 26375.5 respectively. The score of Mann Whitney U-test for the introverts was 6674.5, Wilcoxon score was 26375.5, Z value was 0.981 and p-value was .109. Under the social anxiety factor SA3, the male and female introverts have got the mean rank of 136.53, 138.57 and sum of ranks is 10512.5, 27437.5 respectively. The score of Mann Whitney U-test for the introverts was 7509.5, Wilcoxon score was 10512.5, Z value was -.192 and p-value was .848. Under the social anxiety factor SA4, the male and female introverts have got the mean rank of 128.68, 141.63 and sum of ranks is 9908, 28042 respectively. The score of Mann Whitney U-test for the introverts was 6905, Wilcoxon score was 9908, Z value was -1.215 and p-value was .224. Under the social anxiety factor SA5, the male and female introverts have got the mean rank of 145.95, 134.91 and sum of ranks is 11238, 26712 respectively. The score of Mann Whitney U-test for the introverts was 7011, Wilcoxon score was 26712, Z value was -1.03 and p-value was .300. Under the overall social anxiety factor SA(T), the male and female introverts have got

the mean rank of 141.86, 136.50 and sum of ranks are 10923, 27027 respectively. The score of Mann Whitney U-test for the introverts was 7326, Wilcoxon score was 27027, Z value was -0.502 and p-value was .616.

From the results obtained it can be predicted that social anxiety factors like Interactions with the opposite sex (SA2), Assertive expression of annoyance, disgust, or displeasure (SA3), Interactions with strangers (SA5) based difficulty along with overall score (SA total) to be more in male participants than female participants who portray introversion. Therefore, the proposed hypothesis "There is no significant difference between male and female introvert personality types in terms of social anxiety in UG students in Bangalore during COVID-19" was disproved by the results.

Table 4 Shows the significant difference in Social anxiety factors in extraverts across gender

Extroverts	SA1		SA2		SA3		SA4		SA5		SA(Total)	
	M	F	M	F	M	F	M	F	M	F	M	F
Mean rank	68.31	71.23	72.86	69.71	72.06	69.98	62.43	2185	73.40	69.53	69.53	70.82
Sum of ranks	2391	7479	2550	7320	2522	7348	73.19	7685	2569	7301	2433.5	7436.5
Mann Whitney U-test	1761		1755		1783		1555		1736		1803.50	
Wilcoxon Score	2391		7320		7348		2185		7301		2433.50	
Z Value	-.398		-.398		-.263		-1.362		-.490		-.164	
p value	.691		.691		.793		.173		.624		0.870	

Table 4 illustrates the mean rank, sum of ranks, Mann Whitney U test, Wilcoxon score, z score and p-value of different factors of social anxiety for both male and female extravert participants. Under the social anxiety factor SA1, the male and female extraverts have got the mean rank of 68.31, 71.23 and sum of ranks is 2391, 7479 respectively. The score of Mann Whitney U-test for the introverts was 1761, Wilcoxon score was 2391, Z value was -.369 and p-value was 0.712. Under the social anxiety factor SA2, the male and female extraverts have got the mean rank of 72.86, 69.71 and sum of ranks is 2550, 7320 respectively. The score of Mann Whitney U-test for the introverts was 1755, Wilcoxon score was 7320, Z value was -.398 and p-value was 0.691. Under the social anxiety factor SA3, the male and female extraverts have got the mean rank of 72.06, 69.98 and sum of ranks is 2522, 7348 respectively. The score of Mann Whitney U-test for the introverts was 1783, Wilcoxon score was 7348 Z value was -.263 and p-value was 0.793. Under the social anxiety factor SA4, the male and female extraverts have got the mean rank of 62.43, 73.19 and sum of ranks is 2185, 7685 respectively. The score of Mann Whitney U-test for the introverts was 1555, Wilcoxon score was 2185, Z value was -1.362 and p-value was .173. Under the social anxiety factor SA5, the male and female extraverts have got the mean rank of 73.40, 69.53 and sum of ranks is 2569, 7301 respectively. The score of Mann Whitney U-test for the introverts was 1736, Wilcoxon score was 7301, Z value was -.490 and p-value was .624. Under the overall social anxiety factor SA(T), the male and female extraverts have got the mean

rank of 69.53, 70.82 and sum of ranks are 2433.50, 7436.5 respectively. The score of Mann Whitney U-test for the introverts was 1803.5, Wilcoxon score was 2433.5, Z value was -.164 and p-value was .870.

From the results obtained it can be predicted that social anxiety factors like Interactions with the opposite sex (SA2), Assertive expression of annoyance, disgust, or displeasure (SA3), Interactions with strangers (SA5) based difficulty to be more in male participants than female participants who portray extraversion personality type. In the overall social anxiety (SA total) as such female participants are more prominent is portraying social anxiousness than the male counterparts. Therefore, the proposed hypothesis "There is no significant difference between male and female extravert personality types in terms of social anxiety in UG students in Bangalore during COVID-19" was disproved by the results.

Conclusion:

Social anxiety restricts the individual from having a hearty conversion or present self in public. The analysis of results of the scores indicate that participant scores disprove either of the hypothesis proposed by the researchers. The results from the study also questions the literature about the presence and social anxiety across gender (Dorte M. Christiansen 2015).

Scope and limitation of the study:

The result from the study serves the material for further studies related to personality difference and social anxiety as the data is low or scanty.

It is also to noted that the survey was done during the peak time of pandemic spread in Bangalore. Social distancing and lockdown may influence the UG students which might be reflected in the results. Since the number of respondents of the questionnaires in either group was different and it was an online survey the reliability of the response is questionable.

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