



# **FORMAN CHRISTIAN COLLEGE**

**(A CHARTERED UNIVERSITY)**

## **The Relationship Between Social Anxiety and Online Communication Using Social Media**

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## Table of Contents

Table of Contents.....	1
Abstract.....	3
Introduction .....	4
Significance .....	5
Study Aims .....	5
Hypothesis.....	5
Literature Review.....	7
Theoretical Framework.....	9
Self-presentation theory of social anxiety .....	9
Methodology.....	11
Variables .....	11
Conceptualization of variables.....	11
Operationalization of variables.....	11
Scales.....	11
Social anxiety scale (SAS) .....	11
Preference for online social interaction (POSI).....	12
Sampling design .....	13
Selection Criteria.....	13
Plans for data collection.....	13
Plans for data analysis.....	14
Ethical considerations .....	14
Budget.....	15
Timeframe for research and data collection .....	15
Results.....	16
Interpretation of basic socio-demographics of respondents (Table 1 and 2) .....	16
Interpretation of tests for validity and reliability (Table 2) .....	18
Interpretation of Descriptive Statistics (Table 3).....	19
Interpretation of Correlation between variables (table 4) .....	20
Interpretation of Linear regression model (Table 5) .....	20
Interpretation of Mean testing (Table 6).....	23
Interpretation of Independent Sample T-test and ANOVA (Table 7 and 8) .....	23
Interpretation of Case Summaries (Table 9).....	24

Discussions .....	26
Conclusion.....	29
Implications.....	30
Recommendations .....	31
Limitations and future research.....	32
References .....	33
Appendix A: Informed consent letter .....	37
Appendix B: Final Questionnaire .....	38
Appendix C: IRB Approval certificate .....	42

## Abstract

The main aim of this study was to assess the relationship between social anxiety and online communication which occurs through various social media platforms and over the internet. This research proposed the idea that different means of online communication may prove to be effective alternative for communicating, for those who experience social anxiety. The hypotheses of this study were based on the Self-presentation theory of social anxiety. This was a quantitative research where responses were collected and analysed from 100 university students, aged between 18-26 years. The results showed that there indeed existed a strong and positive correlation between the two variables. Moreover, it was also found that the independent variable (social anxiety) proved to be an accurate predictor for the dependent variable (online communication). Lastly, the results showed that there existed significant mean differences in values of both test variables across the categories of gender, where female respondents showed greater levels of both variables than male respondents. With reference to past studies, this study also highlights the fact that despite being effective means of communicating for those who experience social anxiety, the prolonged usage of online means of communication is not deemed to be an effective solution for overcoming these anxieties and may over time cause them to grow and can even cause the development of social anxiety in the first place.

**Keywords:** Social anxiety, negative evaluation, self-presentation, online communication, social media, anonymity

## Introduction

Social anxiety is described as a persistent fear of being negatively judged or criticized by others, and hence, those who suffer from social anxiety choose to avoid interactions with others (Vahia, 2013). This constant notion related to the possible negative outcomes of social interactions, causes socially anxious individuals to generally perceive such interactions as intimidating or threatening (Clark & Wells, 1995). It is said without a doubt that the current day and age is dominated by social media and its various forms of usage. Social media applications are becoming increasingly prominent in our everyday lives, in both their use and integration in our social interactions. As of 2020 the number of social media users has increased to over 3.8 billion, meaning that half of the world's population uses social media for communication and various other purposes (We Are Social, 2020). Some of the most common uses of such platforms are communication, entertainment, media sharing, business, opinions and reviews etc. (Bhasin, 2020). This research was based on finding the relationship between *social anxiety and online communication using social media*. Communication through social media platforms is both effective and efficient as people across the globe can connect and communicate with each other, without having to meet people in person especially in today's busy age. However, the increased spread of such online means of communication, for example: text messages, emails, voice notes etc., may also have some negative side effects, especially those pertaining to one's mental health and social wellbeing. This research was based on the main opinion that those who suffer from social anxiety tend to communicate more online and tend to avoid having face-to-face interactions with other people. For such people these means of being able to communicate online helps them to both cope with and find an alternative method for communicating.

## **Significance**

This research is of great significance as it helped in determining the relationship between social anxiety and online communication using social media. This research also helped to determine whether those who generally have, or experience social anxiety tend to be more engaged in social media usage and similarly if they show a greater preference for online communication. On the contrary, it was also true that those who did not experience high levels of social anxiety may also show the same preferences. Hence, this research helped to assess and conclude if there exists a general pattern or relationship between these variables. Another significant factor of this research, is the fact that not a great deal of research has been conducted which directly examine the relationship between these variables. The studies which have been conducted in the past, predominantly focus on the relationship between online communication, social media use, and psychological disorders such as loneliness, depression, and general anxiety, and not with social anxiety specifically. Moreover, this research helped to highlight 'one's preference for online communication' as being a consequence of one's social anxiety. Finally, this research also encourages those with social anxiety to communicate more in-person as an attempt to reduce their social anxiety.

## **Study Aims**

- To assess the relationship between social anxiety and online communication using social media.
- To identify if higher frequency of online communication is associated with higher social anxiety.

## **Hypothesis**

1. There exists a relationship between social anxiety and using social media and online means of communicating.

2. If the level of social anxiety is high, then the level and preference for online communication will also be high.

## Literature Review

Social anxiety is classified as a *psychological* disorder, which accounts for the development of an excessive and tenacious fear of engaging in social interactions (Caplan, 2007). Social anxiety is also known to be among the most conspicuous psychological disorders, which may also constantly reoccur throughout one's life (Keller, 2003). It is also described as the possible reluctance, shyness, hesitation, and generally a feeling of discomfort which may occur if one is to engage in social interactions, such as public speech, group interactions, or even one-on-one conversations. Though shyness is regarded as prominent indicator of social anxiety, it is important to realize that it may in some cases fit into the lower end of the spectrum associated with one's level of social anxiety, meaning that people who may have little social anxiety may tend to be shy in most social settings (Schlenker & Leary, 1982). The term 'Social phobia' is perhaps best suited to refer to extreme levels of social anxiety. Those who suffer from social phobia (extreme social anxiety) can be seen to avoid any form of direct, or in some cases, indirect social interaction with others (Schlenker & Leary, 1982). It is also to be noted that shy individuals are usually more open to the use of alternative means of communication (such as social cues: non-verbal communication) to overcome their social fears. Whereas those with social phobia are likely not to do the same, as they are constrained by their inner turmoil and excessive social fears, and hence may avoid face-to-face interactions altogether (Heimberg, 1995). This research signifies the fact that, here such individuals might resort to the use of alternative means of communication to cope with or to overcome their social anxiety.

The term social media is used to describe various media platforms and forums which involve online interactions between its users (Manning, 2014). Such platforms can be used for communication (text messages, voice notes, and calls), content sharing (photos and videos), social networking, collaborations, and other formal or informal interactions. Some of the most prominent social media sites include Facebook, Instagram, Twitter, LinkedIn, and Tumblr



(Ahmed et al., 2019). Here applications such as WhatsApp and Messenger can also be categorized as social media apps, in a sense that they can be used for communication and social networking (Lim et al., 2021).

Social media and generally different means of online communication provide its users with a great degree of anonymity, and thus, in most cases help to ensure that its users are not 'directly' intimidated or threatened on these platforms (Grayson & Schwartz, 2000). In that sense, such platforms provide for a comparatively less stressful, and seemingly positive outlook for those who suffer from social anxiety to start socializing and interacting with others (Nguyen & Durkin, 2004). Those who experience social anxiety, depression, and those who may be the victims of stigmatization have been known to avail the benefits of social media through being able to communicate online and anonymously (Berger et al., 2005). Communicating online through various social media application may alleviate the risk of being negatively judged or evaluated, and hence enables those with social anxiety to interact more comfortably with others (Lee & Stapinski, 2012).

While it is accurate to assume that social media usage provides an alternative method of communicating, through which those who have social anxiety can communicate and interact with others without being constrained by their social fears, however, such practices don't always offer a solution to their problem of social anxiety. Greater online communication and the preference of less face-to-face communication is notably a key indicator of one's social anxiety, and the persistent and excessive use of social media may cause one to be more socially anxious than before, meaning that their social anxiety increases (Caplan, 2007). Several studies have been conducted to find the relationship between excessive use of social media (for various purposes) and the negative impacts on the mental health of its users, and mostly a positive correlation is observed. It was also found that excessive use of social media can majorly

contribute to mental health issues such as stress, depression, anxiety, and can impact one's overall well-being (Eraslan-Capan, 2015; Hong et al., 2014).

In assessing the relationship between social anxiety and one's preference for online communication, Tamyra Pierce (2009), found a positive relationship between social anxiety and use of social media for communication, for example via text messages. This research also found that those who suffer from greater social anxiety showed greater preference for communicating online, instead of doing it face-to-face. Here it was also concluded that substitutes for face-to-face interactions/communication are also contributing to increasing levels of social anxiety among teens, especially since they are reducing face-to-face interactions/communication (Kraut et al., 1998). This means that our social and communication skills for in-person interactions are being negatively impacted due to the growing use of online means of communicating, and this in turn increases levels of social anxiety.

This study helped to assess the relationship between social anxiety and online communication, in Pakistan. This study also helped to fill the gaps which existed in past studies, by finding a more generalized relationship which exists between social anxiety levels, the levels social media usage and preference for online communication.

## **Theoretical Framework**

This research analysed the relationship between social anxiety and communicating online using social media, based on the following theory:

### ***Self-presentation theory of social anxiety***

Social psychologists Mark Leary and Robin Kowalski majorly developed the self-presentation theory of social anxiety in 1995. According to this theory people tend to have a natural tendency to present themselves well and make a pleasant impression on others, and this

commonly leads people to be anxious about how they present themselves (Leary & Kowalski, 1995). However, this level of anxiety may reach considerably high levels in those who already suffer from social anxiety in the first place, and such people also typically doubt both their ability to socialize and present themselves well in front of others. This eventually leads them to overestimate the negative outcomes of social interactions, as they are overwhelmed by a fear of being negatively evaluated, and hence they avoid such interactions altogether.

The use of social media elevates one's fear of being negatively evaluated, judged, and criticized by others. Social media use can be divided into two major categories, the first use is: communicating, and the second is to observe and learn. Usually those with social anxiety prefer not to have face-to-face conversations, mainly due to their fear of saying something wrong, not presenting themselves well, and not being able to communicate well with others. Here the use of social media for communicating, serves as a less- stressful means of communication for socially anxious people. Communicating online, for example via text messages, reduces the margin of error in one's message, as the senders can proofread what they are about to convey to others, hence ensuring that the message is accurate. This in turn decreases one's chances of being negatively evaluated, based on their conversational skills (Pierce, 2009).

## Methodology

### Variables

In this research the independent variable was ‘social anxiety’ and the dependent variable was ‘online communication’.

### Conceptualization of variables

**Social anxiety** is described as a persistent fear of being negatively judged or criticized by others, and hence, those who suffer from social anxiety choose to avoid interactions with others (Vahia, 2013). This constant notion related to the possible negative outcomes of social interactions, causes socially anxious individuals to generally perceive such interactions as intimidating or threatening (Clark & Wells, 1995)

**Online communication** means any form of communication which occurs through the internet and various social networking sites, such as Facebook, Instagram, WhatsApp, Email, common SMS etc (opentextbc.com). Such platforms facilitate communication and engagement between individuals (Bhasin, 2020)

### Operationalization of variables

**Social anxiety** is a measure of the social anxiety scale (SAS).

**Online communication** is measured using the preference for online social interaction scale (POSI).

### Scales

#### *Social anxiety scale (SAS)*

The social anxiety scale (SAS) is a 22-item Likert scale used to measure levels of social anxiety, based on three dimensions: performance anxiety, interaction anxiety, and evaluation anxiety. The scale was developed to assess social anxiety levels of students in higher

educational institutions in Pakistan, specifically those aged between 18-26 years (Ejaz et al. 2020). Through factor analysis of all three subscales (dimensions), it was found that each subscale had high reliability coefficients, all of which range from 0.78-0.90 (Ejaz et al. 2020). The overall construct validity of the scale was determined using several tests, where the Chi-square test presented a value of ( $\chi^2/df$ ) of 3. The final scale was an ordinal scale, which had 5 response categories with scores ranging from 4 (Always) to 0 (Never). As per this scoring, the added or final score determining the level of social anxiety ranged from 0 to 40. Here score ranging between 0 and 20 indicated Low level of social anxiety, whereas those ranging from 21-40 indicated that the level of social anxiety was High.

### ***Preference for online social interaction (POSI)***

The preference for Online social interaction scale (POSI) is a 15-item Likert scale used to measure, as the name states, the level of preference of online means of interactions over face-to-face ones. This scale consists of three dimensions: 1) online social interaction frequency, 2) online social interaction propensity (natural tendency), and 3) the perception that online social communication is superior compared to face-to-face communication. This scale has a high construct validity as determined by the Chi square test, which showed that the scale had the concerned value ( $\chi^2/df$ ) of 4.58 ( $<5$ ). Moreover, the reliability coefficient of the entire scale was 0.90, which indicates that the scale and its measures have good internal consistency reliability. (You et al. 2016). This was an ordinal scale which measured the level of POSI based on the following scoring: Strongly Disagree: 1, Disagree: 2, Neutral: 3, Agree: 4, Strongly Disagree: 5. As per this scoring the final score ranged from 10 (lowest) to 50 (highest). With a scores ranging from 10-25 indicating that the Use/preference for online communication is Low, and scores between 26-50 indicating that this level is High. For this scale no items were reverse scored.

## **Sampling design**

This research was conducted using a descriptive research design and collected data over a single point in time (Cross-sectional study). This was a survey-based study, and all data was collected accordingly. For this research a questionnaire was developed using Google Docs which include appropriate questions from each of the previously mentioned scales. Along with these questions, the final questionnaire included a few questions to gather nominal demographic information (age and gender only) of the respondents.

## **Selection Criteria**

To assess the relationship between online communication and social anxiety, this research aimed to use and analyse the data collected from 100 respondents (N=100), all of which were aged from 18 to 26 years. It is to be noted that the main population of this research was university students, however it also included some participants of other fields (working participants) to assess the validity of this research's hypothesis. This research used convenient sampling technology, as it can be done easily online, is fast, and inexpensive. The aim was to gather enough responses so that two distinct groups can be formed: one including those responses with higher levels of social anxiety, and one with those having low levels.

## **Plans for data collection**

A questionnaire was developed using Google Docs which helped in collecting data about the demographics (age and gender), and data to assess the levels of social anxiety, and preference for online communication of the respondents. The link to this questionnaire/form was sent to different WhatsApp groups and was also posted on other social platforms such as Facebook, to collect relevant data from the concerned individuals. Before sending the questionnaire, a formal consent form was sent to the respondents which highlighted the main purpose of this research, assured the respondents of their anonymity, and was an overview of

the ethical considerations of this research. After data collection, the raw data was filtered to include only valid responses.

### **Plans for data analysis**

For this research all the collected data was analysed using SPSS (statistical package for social sciences, version 20). The socio-demographic variables were analysed through the generation of frequency and percentage tables. For online communication, and social anxiety (both of which are continuous variables), descriptive statistics such as mean, median, standard error, standard deviation, and range of responses were generated and analysed. Moreover, to assess the construct validity and reliability of the aforementioned scales, factor analysis and Cronbach's Alpha was used respectively. As the variables and their distribution showed normality, Pearson's correlation was used to assess the correlation between the independent and dependent variables. To compare the mean values of both the independent and dependent variable across the socio-demographic groups, simple mean testing was used. Finally, for hypothesis testing and to assess the relationship between the variables, a simple linear regression model was preferred.

### **Ethical considerations**

This research was based on measuring the levels of social anxiety in different individuals aged 18 and above. Much like all psychological disorders, social anxiety is not something most people are comfortable talking openly about and may even feel offended or targeted if asked about such things by a researcher (stranger). Hence, this study greatly focused on keeping all the respondents anonymous and thus, protected their privacy and self-esteem. This research was conducted online again owing to the very same reason of ensuring anonymity and confidentiality of the respondents. Especially considering that those who already suffer from social anxiety may also find it more convenient to fill out an online survey rather than

talk about it with a stranger. Before filling out or even being sent the survey link, a consent form was sent to the respondents which stated the main purpose of this study and how the findings may help in formulating suggestions through which people may be able to overcome their social fears and social anxiety.

### **Budget**

There was no as such budget which was allocated to this research. The primary reason for this was the fact that this research was conducted entirely online using online surveys.

### **Timeframe for research and data collection**

The data for this research was collected during the three months of July, August, and September 2022. Upon its completion the researcher proceeded towards data analysis and interpretation, which was completed within the months of October and November 2022.



## Results

**Table 1**

*Basic Socio-demographics of respondents*

<b>Label</b>	<b>Sub-category</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Gender</b>	Male	50	50
	Female	50	50
<b>Age (years)</b>	18-20	34	34
	21-23	44	44
	24-26	22	22

### **Interpretation of basic socio-demographics of respondents (Table 1 and 2)**

The results include data collected from 100 respondents (**N=100**), out of which 50 were male and 50 were female. The number of total filled questionnaires was 116 out of which 60 were female and 56 were male, however, from these only 100 responses were chosen, to include 50 of each gender. Here several responses were rejected and excluded due to their invalidity. It is to be noted that no respondent chose not to specify their gender by choosing the third option in the questionnaire (labelled as ‘other’). Out of the collected responses, 34%, 44%, and 22% of the responses came under the age categories of 18-20 years, 21-23 years, and 24-26 years respectively.

Factor analysis was run to assess the construct validity and internal consistency of each of the used scales. To assess the reliability of these scales, dimension reduction was used. After analysing these results, appropriate items from each scale were computed to make one single variable (scale). The results for validity and reliability analysis are presented in table 2.

**Table 2***Tests for Validity and Reliability of used scales*

	<b>Factor loading</b>	<b>Cronbach's Alpha</b>
<b>Social Anxiety Scale (SAS)</b>		<b>.957</b>
I fear being disliked	.596	
I feel reluctant to make eye contact	.615	
I feel uneasy when someone stares at me	.749	
I feel uneasy sitting with people	.700	
I feel uneasy to express my feelings in front of others	.701	
I feel uneasy performing any task in front of others	.733	
I feel uneasy to address a gathering of people	.813	
I feel uneasy talking in a crowd	.775	
I feel uneasy being the centre of attention	.795	
I feel uneasy going to a party or function	.759	
<b>Preference for Online Social interaction</b>		<b>.893</b>
I spend much time communicating online	.540	
I prefer online social interaction over face-to- face	.732	
I feel more comfortable communicating online	.831	
I feel safer communicating online	.623	
I feel more intimate with online friends	.570	
I feel more at ease and natural when communicating online	.721	

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I prefer to seek help online	.552
I prefer online shopping	<b>.380</b>
I prefer to pour out my worries to other online	.843
I prefer to seek supportive information online	.763

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### **Interpretation of tests for validity and reliability (Table 2)**

Results for factor analysis showed that the factor loadings for every item of the Social Anxiety scale (SAS) was greater than 0.5, hence indicating that the scale has high validity. For the Preference for online social interaction scale (POSI), all items showed a factor loading value of greater than 0.5, except for item 8 (I prefer shopping online rather than in person) which showed a value of 0.38, and hence had to be excluded from the scale. Overall, the POSI scale also has high construct validity. Moreover, Dimension reduction was run to assess the reliability of both scales, and results showed that the Cronbach's Alpha value of SAS and POSI scale were 0.957 and 0.893 respectively. Both these values are greater than 0.7 and indicate that both scales have high reliability.

*\*Note: As one item from the POSI scale was excluded and the final scale now includes 9 items, the new range of final scoring is from 9-45 (previously 10-50). Hence, as per this change final scores ranging from 9-28 (previously 10-25) will indicate that the Use/preference for online communication is Low, and a final score ranging from 29-45 (previously 26-50) will indicate high levels of the concerned variable\**

SPSS was used to generate basic descriptive statistics for both the independent and dependent variable of this study. Here statistics such as mean, standard deviation, and range were generated, analysed, and compared. These basic statistics are summarized in table 3.

**Table 3***Descriptive Statistics*

<b>Variable</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. dev</b>
<b>Social anxiety</b>	1	39	19.71	9.900
<b>Online communication</b>	9	40	25.02	6.523

NOTE: these values are in terms of the coding that was used

**Interpretation of Descriptive Statistics (Table 3)**

The mean value for level of social anxiety was found to be 19.71, indicating that on average the respondents (51%) experienced Low levels of social anxiety. Out of these 51 respondents who had low social anxiety, 28 were male and 22 were female. Similarly, the mean value for use/preference for online communication was found to be 25.02, meaning that most respondents (73%) showed Low use/preference for online communication. From these 73 respondents, 41 were male and 32 were female.

Pearson's Correlation was used to assess the relationship between the two chosen variables for this study. These statistics helped to determine if there existed a positive and linear correlation between the independent and dependent variable of this study, and to conclude if the hypotheses can be accepted or not. The results are presented in table 4.

**Table 4***Correlations*

<b>Variable</b>	<b>Online Communication</b>	
<b>Social anxiety</b>	<b>Pearson's correlation</b>	<b>.577**</b>
	<b>Sig.</b>	.0003
	<b>N</b>	100

### Interpretation of Correlation between variables (table 4)

The results showed that there was a strong and positive correlation between social anxiety and use/preference for online communication, having a Pearson's correlation value of 0.577 ( $>0.5$ ). This correlation showed a significance value (p value) of 0.0003 ( $<0.05$ ) which indicates that the results were statistically significant and valid.

To test this research's hypothesis, of whether higher levels of social anxiety related to higher levels of online communication, and to determine whether the former can be used as a predictor of the latter, a Simple Linear Regression (SLR) was used. The two variables of this study showed a linear correlation, as assessed through the Pearson's correlation test, and tests for normality, hence, the use of a simple linear regression was best suited to obtain the desired results. The results of this simple linear regression are represented in table 5.

**Table 5**

*Linear Regression model*

Variable	R square (R <sup>2</sup> )	Unstandardized B	Std. Error (B)	Sig.	95% CI
<b>Social anxiety</b>	.332	.380	.054	0.000	.273, .488

Dependent variable: Online communication

### Interpretation of Linear regression model (Table 5)

Results of Linear regression showed that the value of R was found to be .577 with a significance value (p-value) of 0.000 ( $<0.05$ ). This implies that both variables have a strong correlation, where the independent variable serves as an accurate predictor of the dependent variable. Moreover, the results indicate that the mean increase in the level/preference for online communication was 0.380 (95% CI= .273-.488) units per 1 unit increase in level of social

anxiety, as presented in table 5 through the value of unstandardized B. This proves that there is a significant positive relationship between the two variables.

Mean testing was used to find the relationship between the socio-demographic variables of this research, and the test variables. This was done to assess if there were significant mean differences between levels of both the dependent variable and the independent variable across different sub-categories of gender and age. As the data showed normality, as assessed through values of the Shapiro-Wilk test for normality for both variables and through the presence of outliers (no significant outliers were seen), hence, Parametric mean testing was preferred. Here Independent samples t-test was used to compare mean values of both test variables across different categories of gender. Whereas, to do the same for age categories, One-way ANOVA was used. The results for these tests are summarized in table 7 (independent samples t-test) and 8 (One-way ANOVA).

**Table 6**

*Mean Testing*

	<b>Gender</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Std. Error</b>
					<b>Mean</b>
<b>Social Anxiety</b>	Male	50	18.24	10.062	1.423
	Female	50	21.18	9.610	1.359
<b>Online communication</b>	Male	50	23.14	6.061	.857
	Female	50	26.90	6.694	.947

**Table 7***Independent samples t-test*

	<b>Sig. (2-tailed)</b>	<b>Mean difference</b>	<b>95% CI</b>
<b>Social anxiety</b>	0.138	-2.940	-6.845; 0.965
<b>Online communication</b>	0.023	-3.76	-5.474; -0.406

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Std. Error</b>	
<b>Social Anxiety</b>	18-20 years	34	19.68	10.923	1.873
	21-23 years	44	19.61	8.916	1.344
	24-26 years	22	19.95	10.567	2.253
	Total	100	19.71	9.900	.990
<b>Online communication</b>	18-20 years	34	23.79	6.362	1.091
	21-23 years	44	25.43	6.348	.957
	24-26 years	22	24.23	7.197	1.534
	Total	100	24.61	6.523	.652

**Table 8***One-way ANOVA*

	<b>F</b>	<b>Sig.</b>
<b>Social anxiety</b>	0.009	0.991
<b>Online communication</b>	0.648	0.525

**Interpretation of Mean testing (Table 6)**

Results showed that on average Male respondents experienced Low levels of social anxiety (M=18.24) as compared to Female respondents who experienced High levels (M=21.18). For the use and preference for online communication, both categories of gender showed Low levels on average; for male (M=23.14) and for female (M=26.08). However, through these results it can be assumed that females showed slightly higher preference than male respondents.

**Interpretation of Independent Sample T-test and ANOVA (Table 7 and 8)**

Moreover, as per the results of the t-test of equality of means, it was observed that there were no significant mean differences between level of social anxiety across categories of gender, as seen by sig. value of 0.138 ( $>0.05$ ). However, there were significant mean differences between levels of online communication across these categories as seen by the significance value of 0.023 ( $<0.05$ ).

For the categories of age, it was found that on average all three categories experienced Low levels of social anxiety, however if these values are compared then the age category of 24-26 years experienced slightly higher levels of social anxiety. As for the use and preference for online communication, results showed that all three categories of age showed Low



preferences for online communication. However, here the age category of 21-23 years showed slightly greater preference than other categories of age. Finally, results for the One-way ANOVA showed that for the categories of age, both variables did not show significant mean differences as the significance values for both were greater than 0.05.

### **Interpretation of Case Summaries (Table 9)**

To further validate this research's hypotheses and answer its concerned research questions, it was opted to compare and link the responses of two items from each scale. These items were: 1. I fear being disliked by people, and 2. I Prefer online social interaction over face-to-face communication. Here it is to be noted that these specific items were picked from both scales because each of them fit best in summarizing the whole purpose of their concerned scales. For example, the statement, "I fear being disliked by people" summarizes the idea of social anxiety, especially with regards to this study's use of self-presentation theory of social anxiety, and how the fear of being negatively judged, and evaluated are the main causes of and symptoms of social anxiety. Moving on for both statements, the top two response categories of each scale were analysed, and their frequencies were compared, these were Often or Always for social anxiety scale, and Agree and Strongly agree for online communication scale. These responses were compared for gender, again to validate the extra findings of these study, which help to conclude the difference in social anxiety and preference for online communication in males and females. The results are summarized in Table 9.

### **Table 9**

#### *Case Summaries*

<b>I fear being disliked (Often/ Always)</b>	<b>I Prefer Online communication (Agree/ Strongly agree)</b>
--	--

<b>Male</b>	13	4
<b>Female</b>	19	15
<b>Total (out of 100)</b>	32	19

Results showed that 13 out of 50 (26%) males answered to this statement “I fear being disliked by people” using Always or Often. Whereas 19 out of 50 (38%) females did the same. This helps to validate the previously mentioned finding of this study that Female respondents experience greater social anxiety than male respondents. Similarly, only 4 out of 50 (8%) male respondents answered to the following statement “I prefer online social interaction over face-to-face communication” using Agree or Strongly agree. Whereas 15 out of 50 (30%) female respondents did the same. This goes to show that Female respondents show comparatively greater preference for online communication than male respondents.

Upon further analysis using SPSS, it was observed that out of 100 responses for the statement “I fear being disliked by people”, 32 respondents answered using Always or Often. Out of these 32 respondents 13 respondents answered to the following statement “I prefer online-social interaction over face-to face communication”, using Agree or Strongly agree. Over 40% of those 32 respondents. This goes to show that the main hypothesis related to social anxiety and preference for online communication can be accepted.

## Discussions

The first hypothesis of this research (There exists a significant relationship between social anxiety and preference for online communication) is supported by and is consistent with the findings of this research. Similarly, the second hypothesis (Higher levels of social anxiety will be generally associated with higher levels of online communication) is also accepted based on the findings. The results of the Pearson's correlation and the simple linear regression support these claims, with a significant and positive value for the Pearson's correlation, and a significant value of  $R^2$ . Here the acceptance of the second hypothesis was again validated through the analysis of case summaries, which asserted that a great percentage of those who feared being disliked (negatively evaluated) by others, preferred the use of online communication over face-to-face communication, as hypothesised using this research's theoretical framework (self-presentation theory of social anxiety). As per previous research on behaviour of socially anxious individuals, it was found that those who experienced high levels of social anxiety are usually overwhelmed with a great fear of being negatively judged, evaluated, or disliked by others, and these factors are labelled as the very causes and symptoms of social anxiety, as well as factors which make this behavioural trait persistent (Schneier & Goldmark, 2015). As a result, such individuals always look for alternate means to communicate and socialize with others (Berger et.al, 2005). It was also concluded through such research that social media and different means of online communication help such individuals in coping with their fears, and help them to socialize, as means of online communication provide its users with a sense of comfort, safety, and anonymity (Lee & Stapinski, 2012). Studies to assess the relationship between levels of social anxiety and online communication, also found a positive correlation between these two variables (Pierce, 2009).

Another major finding of this research, apart from those related to the hypotheses, was the significant difference in levels of social anxiety and online communication between male

and female respondents. It was observed that the mean levels of both variables were higher in female respondents than in male respondents, and that the former category also expressed; fear of being negatively judged/disliked, as well as preference for online communication, in greater frequencies than did the latter category of gender. Established research on these findings suggest that females generally suffer from higher levels of social anxiety and anxiety in general, than males, as they are greatly subjected to and oppressed by gender based normative factors in the society especially when it comes to presenting themselves in front of others (Asher et al, 2017). Hence, as per the self-presentation theory of social anxiety, and this research's main hypothesis, female respondents experience higher levels of social anxiety, and consequently show greater preference for online communication. Greater and more comprehensive research needs to be conducted on this topic for further validation of these claims.

Although the overall results of this research supported the hypothesis (positive correlation between variables), there was still a great percentage of respondents who did not fully fit into the proposed terms. For example, there were a great number of respondents who experienced low levels of social anxiety yet preferred online communication over face-to-face ones. Similarly, there were also some respondents who experienced high levels of social anxiety, yet they showed low preferences for online communication. Here these contradicting statements can be answered based on assumptions. Firstly, it can be assumed that for the first case (low social anxiety, and high online communication), that means of online communication, and social networking, present themselves to be more convenient methods for communicating and socializing, keeping one in his/her comfort zone. This assumption may also be validated through references to the increasing levels of social networking and social media usage across the globe, with over 3.8 billion users as of 2020 (We are Social, 2020). However, this assumption does not sit well with the findings of this specific research, as over 73% respondents showed low preferences for online communication. On the other hand,

assumptions to somewhat validate the second category of outlier responses (high social anxiety and low online communication), can be linked with such respondent's willingness to overcome their social anxiety and engage in more face-to-face interactions. Despite gaining some clarity about these two cases, such topics are open for future research to gain much clearer and broader explanations.

## Conclusion

This research concludes that there is a statistically significant relationship between social anxiety and one's use and preference for online communication, and those who experience higher levels of social anxiety will show higher use and preference for online communication. Those who experience social anxiety are more concerned about the way in which they present themselves, and for the ways in which they engage in social interactions. Here such individuals may fear that they may be negatively judged for how and what they say, for not being able to answer on the spot, for having speech issues, and for not being able to socialize effectively. Hence, they may choose to avoid social interactions altogether, and may revert to the use of social media and social networking sites for online communication. As mentioned earlier, such platforms may serve as a safe haven for those who wish not to interact or communicate with others in-person. It is also concluded that female respondents experienced higher levels of social anxiety than male respondents, again based on the assumption that females are more anxious than males about how they present themselves, and hence, are more concerned about being negatively evaluated.

The world as we know it today is the most developed when it comes to technology, through which almost every aspect of human need and living has become digitalized. Such changes, however, may in many ways lead to the de-materialization (conversion of physical to digital) of many aspects of human life. For example, through the ability to communicate online, communication is made easy across great distances, physical distances have become less important, the world has become a global village where information, goods, and services are accessible through online means, and such facilities are most beneficial in times when in-person interactions are not preferred (may be dangerous), much like in the recent global pandemic of COVID-19. Moreover, such facilities also have benefits pertaining to one's psychological needs, as they can be used by those who find it generally difficult to interact and

speak with others in-person, owing to factors such as social anxiety. On the other hand, those who do not experience high levels of social anxiety are generally more social and like to engage in in-person social interactions, such as group activities, discussions, parties, and public speaking opportunities. Although such individuals may still avail the benefits of online communication in many ways or may even have to engage in online communication quite frequently, they generally might not show a great 'preference' for doing so, and would prefer to engage in more in-person and face-to-face means of socializing.

### **Implications**

This study has major implications when it comes to shaping an individual social and psychological well-being, especially in a time when online communication is becoming increasingly accessible and normalized. This study concludes that social anxiety has caused many individuals to find alternative methods to socialize and interact with the world. Here it was concluded that the use of online means of communication greatly satisfies this need. However, it is also of major concern that the excessive use of online means of communication may not prove to be a solution for one's social fears and may overtime result in such fears to grow.

Educational institutions who are shifting greatly to online modes of teaching can learn greatly from such studies and should formulate their modes of teaching accordingly. This means that they should consider the consequences of fully shifting to online teaching, especially for students who experience social anxiety and for those who may develop such disorders and fears through such modes of teaching. Educational institutions and parents should also be considerate of the fact of how the very presence of social anxiety in a student's behaviour can be very impactful on his/her overall well-being and progress.

Lastly, the growing use and normalization of social media applications and online means of communication has also greatly resulted in the increase in acts of cyber harassment and cyber bullying. It is also known that those who experience social anxiety tend to avoid unwanted social interactions especially those who may lead them to become victims of bullying and negative evaluation, hence such individuals seek refuge using social media applications and socializing anomalously (İçellioğlu & Özden. 2014). However, here it is also to be noted that such individuals may end up becoming the victims of cyber bullying instead, through their greater and excessive use of such platforms, again which may cause their social anxieties to grow.

### **Recommendations**

As mentioned earlier that the use of online means of communication to deal with social anxiety is although effective, but it does not present itself as a means to overcome such fears. Hence, this paper recommends that those who experience higher levels of social anxiety should try to engage in more in-person conversations and interactions, as this will slowly help them overcome their fear of social interactions. It is also recommended for those who do not experience high levels of social anxiety to also do the same, as their excessive and continuous use of online means of communication may cause their social anxiety to grow over time. Those who experience higher levels of social anxiety and fears of presenting/public speaking should be encouraged in the classrooms to do so, and their efforts should be appreciated by teachers and class-fellows. A major contributor for social anxiety is the fear of being negatively judged, for which acts of bullying and negative evaluation should be punished and discouraged. On a personal level, individuals who experience social anxiety should try to be more confident and should try to develop a greater self-esteem, by focusing less on what others have to say. Moreover, educational institutions should also organize special sessions for those students who



experience high levels of social anxiety and find it difficult to speak publicly and socialize with others. Meeting new people and interacting with them is also an effective way to reduce one's social fears (Antony, 2004). So in the classroom those who experience social anxiety should be grouped with random students and should be given interactive and teamwork-based tasks which require communication and consent from all group members.

When it comes to the usage of online communication and social media sites, parents should be advised to monitor their children's concerned usage from an early age, and should, from the beginning, encourage their children to practice more in-person modes of socialization rather than online ones. In educational institutions, especially those at a higher level (university), communication between teachers and students outside the classroom is mainly (in these days) through email or messaging, as it is seen as a means of convenience for both parties. However, students should be encouraged or even forced to meet their teacher in-person every now and then, as this will help them overcome their social anxiety as it will help them to communicate effectively in a formal setting.

### **Limitations and future research**

The major limitation of this study was that the sample size used was very small, and hence cannot be used to gain generalized results about the entire population. The sampling technique used, which was based on convenient sampling, limits the accessibility to different populations or groups, again decreasing the generalizability of the results. Although certain patterns in the findings are consistent, but this consistency might decrease if a greater sample was used, especially that which includes respondents belonging to (in this case) from areas where facilities for online communication are more and less easily available. This research also did not include specific focus groups which again decreases the ability to do a comparative analysis on the findings from different groups.

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[adolescents.pdf](https://www.researchgate.net/profile/Fanchang-Kong/publication/305718826_Development_of_the_Preference_for_Online_Social_I)

## **Appendix A: Informed consent letter**

### **Date:**

Dear Respondent,

You are welcomed to take part in this research survey based on the topic, “The relationship between social anxiety and online communication using social media”. The main aim of this study will be to assess how the levels of social anxiety relate to different levels and frequencies of online communication.

The survey questionnaire requires you to answer different questions which will assess your level of social anxiety and your preference and frequency for online communication. The questions are objective, and MCQ based, hence, the survey should not take more than 10-15 minutes of your time. Please be informed that you are not subjected to any compulsion, and whether you take part in this research or not is entirely based on your willingness to do so. The questions in this survey will not put you at any risk of being negatively judged and will not bring any harm to your self-esteem. Moreover, personal questions such as your name, city of residence, income, etc will not be asked, to ensure your privacy and anonymity. All your responses will be kept confidential, will not be shared with any third-party, and will only be used for this research.

By signing this form, you are confirming that you have read and understood the above-mentioned statements, and your decision to take part in this research is completely voluntary.

### **Signature:**

Researcher: Ayesha Khalid

BS (Hons.) Sociology

Department of Sociology, Forman Christian College

## Appendix B: Final Questionnaire

### Social anxiety, and online communication using social media.

Greetings,

Before filling out this questionnaire please be informed about the following:

What you will be asked:

\*Different questions to assess you level of social anxiety, social media use/engagement, and use/preference for online communication.

Ethical considerations:

\*No personal questions (for example name, city of residence, income etc.) will be asked.

\*All your responses will be kept confidential and will only be used for this study specifically.

<b>Demographic Questions</b>					
<b>Questions 1-2</b>					
	<b>Question</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>	<b>Coding</b>
<b>1</b>	<b>Age</b>	18-20	21-23	24-26	1  2  3
<b>2</b>	<b>Gender</b>	Male	Female	Other	1  2  3

<b>Social Anxiety Scale (SAS)</b>	
<b>Questions 3-7</b>	
<b>Question</b>	
<b>1</b>	I fear being disliked by people
<b>2</b>	I feel reluctant to talk to people while making eye contact
<b>3</b>	I feel uneasy when someone stares at me
<b>4</b>	I feel uneasy sitting with people
<b>5</b>	I feel uneasy to express my feelings in the presence of people
<b>6</b>	I feel uneasy performing any tasks in front of people
<b>7</b>	I feel reluctant to address a gathering of people
<b>8</b>	I feel uneasy talking in a crowd
<b>9</b>	I feel uneasy being the centre of attention
<b>10</b>	I feel uneasy going to a party or function

<b>Responses</b>	<b>Scoring</b>
Always	4
Often	3
Sometimes	2
Very less	1
Never	0



**As per this scoring a higher score will indicate that the level of social anxiety is HIGH, and vice versa.**

<b>Preference for Online social Interaction (POSI) scale</b>	
<b>Questions 13-17</b>	
<b>Questions</b>	
<b>1</b>	I spend much time communicating with people online everyday
<b>2</b>	I prefer online social interaction over face-to-face communication
<b>3</b>	I feel more comfortable communicating with others online than during face-to face interaction
<b>4</b>	I feel safer communicating, when communicating with others online rather than during face-to-face interaction.
<b>5</b>	I feel more intimate with online friends than with offline friends
<b>6</b>	I feel more at ease an natural when communicating online than during face-to-face interaction
<b>7</b>	I prefer seeking for help online rather than face-to-face, if there are any difficulties or problems in my life
<b>8</b>	I prefer shopping online rather than in-person
<b>9</b>	I prefer to pour out my worries and troubles to others online rather than doing it face-to-face

<b>10</b>	I prefer to seek supportive information from people online rather than face-to-face, when I an in trouble
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Response	Scoring
Strongly Disagree	1
Disagree	2
Neutral	3
Agree	4
Strongly agree	5

**As per this scoring a higher score will indicate that the level of Online communication is HIGH, and vice versa.**

## Appendix C: IRB Approval certificate



**FORMAN CHRISTIAN COLLEGE**  
(A CHARTERED UNIVERSITY)

### INSTITUTIONAL REVIEW BOARD APPROVAL CERTIFICATE

#### IRB Approval Certificate

**IRB Ref: IRB-388/05-2022**

**Date: 18-05-2022**

**Project Title:** The Relationship between Social anxiety and online communication using social media.

**Principal Investigator:** Ayesha Khalid.

**Supervisor:** Dr. Shamaila Athar.

Institutional review board has examined your project in IRB meeting held on 18-05-2022 and has approved the proposed study. If during the conduct of your research any changes occur related to participant risk, study design, confidentiality or consent or any other change, then IRB must be notified immediately.

Please be sure to include IRB reference number in all correspondence.

Dr. Kauser Abdulla Malik HI, SI, TI  
Chairman, IRB  
HEC Distinguished National Professor (Biotechnology)  
Dean Postgraduate Studies  
Director, Research, Innovation & Commercialization (ORIC)  
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