

Cross-Sectional Nexus of Fomo, Self-Esteem, and Social Anxiety Across Generations in Peshawar, Pakistan

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Abstract

The present study explored the association of FM, SE and SA among generational groups. A cross-sectional sample of 190 adults was collected by physical visit and digitally from Peshawar, Pakistan by hybrid distribution method. It was hypothesized that the subjects having more FOMO would be having a lower degree of self-esteem; and those having high Social Anxiety would be having a higher degree of FoMO. Individuals having high self-esteem would be having low levels of Social Anxiety. Furthermore, to investigate if the relationship between FoMo and Social Anxiety is mediated by self-esteem. Three sets of standardized scales were used for the subjects namely, Rosenberg's Self-Esteem Scale, Social Interaction Anxiety Scale and Fear of Missing out Scale.

The study focused on the relationships among Fear of Missing Out (FOMO), Social Anxiety and Self-esteem among generational groups. The correlational analysis showed a significant positive correlation between FOMO and Social Anxiety ($r = .30, p < .01$) and a significant negative correlation between Social Anxiety and Self-esteem ($r = -.34, p < .01$). Interestingly, there was no significant correlation between Self-esteem and FOMO.

The results showed that there was no interaction effect between FOMO and Social Anxiety as the effect of FOMO on Social Anxiety did not vary with the level of Self-esteem. The results of a comparison of gen Z ($n = 95$) and Millennials ($n = 70$) revealed that there were no significant differences between the FOMO levels of the two generations ($t(163) = .43, p = .09$). The findings indicated, however, that Social Anxiety ($t(163) = .23, p < .001$) was not the same for both cohorts, indicating that social distress varies significantly between these two cohorts. This study offers unique insights to the FOMO, Self-Esteem and Social Anxiety of the generations.

Future studies are encouraged to use qualitative interviews and follow up studies to investigate why self-evaluation does not have a mitigating effect on FoMo and how self-evaluation changes over time across generations of social anxiety. Furthermore, employing stratified sampling and platform-specific analysis will improve result generalizability and shed light onto the effects of the different digital environments on such psychological outcomes.

Keywords: Fear of Missing Out , Social Anxiety, Self-Esteem, Generational Differences, Mediation Analysis

1. Introduction

The psychological, social and environmental factors have a profound impact on human behaviour. The reach of social media and digital disconnection has significantly influenced the ways people think, feel and act toward one another in recent decades. Self-expression and social media have become a form of communication and expression that can't be ignored in this digital era, but it has also brought psychological problems. One of the new psychological issues of the digital era is 'Fear of Missing Out (FoMO)'. FoMO is defined as a constant fear of missing out on something that gives others more satisfying experiences than they are getting, and it's exacerbated by people seeing idealized versions of life online all the time, according to psychologists. The idea of Fear of Missing Out (FoMO) was first acknowledged by Przybylski et al (2013) and explored the psychological origins of FoMO. They discovered that the need to be socially connected and competent lead to FoMO, forcing users to remain constantly connected on the internet. They concluded that individuals with high FoMO tend to have more emotional instability and social media dependence, paving the path for further studies on the emotional and behavioral effects of FoMO.

This FOMO makes people stay too much involved in social networks looking for reassurance, validation, and inclusion from peers (Przybylski et al., 2013). In this sense, FoMO may be considered a motivational and emotional state that affects human behavior, similar to other basic human motives, such as to belong or get social approval.

FoMO is a more comprehensive type of social comparison and emotional insecurity that are closely connected to two key psychological concepts, namely, self-esteem and social anxiety. Self-esteem is seen as the individual's overall assessment of his/her worth or value (Rosenberg, 1965), and therefore has an important role in shaping the meaning assigned to others' social response. People with low self-esteem may feel in some way inferior or less valuable, and find themselves feeling excluded from or deprived of other people's success online (Jan et al., 2021). On the other hand, individuals with higher self-esteem are more likely to be able to process social information and less likely to be influenced by comparisons, which means they are less likely to experience FoMO (Beyens et al., 2016).

Social anxiety is the over internalization of a negative social evaluation. Barlow (2002) says that anxiety is triggered by a cognitive-affective system in which control of anticipated social interactions and/or perceived threats is lost. This emotional pattern becomes amplified when translated to an online environment, where social surveillance is heightened with a perceived lack of participation and/or exclusion in social situations threatening an individual's social self. This pattern demonstrates the interaction of FoMO, self-esteem, and anxiety, as they create a psychological context akin to what has been traditionally recognized as social readjustment, social belonging, and social meaning needs.

Researchers point out that FoMO is closely linked with anxiety symptoms and checking behaviors, because people strive to get reassurance and acceptance from digital worlds. FoMO is recognized as a symptom and antecedent of mental health problems like social withdrawal, depressive trends and generalized anxiety (Elhai et al., 2018). It has been shown to forecast increased problematic social media use in the future and is strengthened by the use of social media (Li et al., 2024). The cyclical nature reinforces the ongoing nature of FoMO behaviours and their long-lasting impact on mental health.

Additional findings point directly to social anxiety and FOMO in digital environments and self-

esteem: Additional findings relate directly to social anxiety and FOMO in digital environment and self-esteem: The study of Servidio et al., (2024) revealed that people are more likely to engage in FoMO-related social comparison and subsequently with Problematic social media use (PSMU). Likewise, O'Day et al. (2021) found the passive use of social media (looking at others' posts without interacting with them) to be associated with high social anxiety ratings and a sense of loneliness and anxious self-focus. Both studies show that social anxiety and FoMo are self-perpetuating: people who are afraid of being judged use social media as a coping mechanism, but that use only fuels their sense of failure and feeling left out.

Differences in experience and expression of FoMO-related anxiety are also found. Just like women tend to be more religious than men when under emotional pressure, women have been seen to be more susceptible to FoMO and social anxiety than men (Dhir et al., 2018). This gender difference is explained by both social and emotional reasons: Women tend to be more emotionally expressive, more relationally oriented, and more internally oriented, which means that they are more sensitive to social exclusion or comparison online (Beyens et al., 2016).

Graham and Lewis (2025) found that there may be a positive relationship between FOMO and anxiety, meaning that those with a higher level of FOMO are more likely to report higher anxiety symptoms. In contrast, negative correlation was discovered between FOMO and self-esteem, suggesting the greater the FOMO score, the lower the self-esteem score. Importantly, it was noted that self-esteem was a mediator between FOMO and anxiety, meaning that some people with poor self-esteem would be more susceptible to anxiety if they were to experience high levels of FOMO.

Moreover, another study by Servidio, et al., (2024) was done on 632 young adults aged (18-35). It examined the correlation between FoMO and social comparison, as well as between FoMO and self-esteem and the correlation between social comparison and self-esteem on problematic social media use. The study set up a "serial mediation" model. It concluded that FoMO is not always a direct cause of problematic use, rather it creates a chain reaction. The more often Social Comparison takes place, the more it affects Self-Esteem, due to FoMO. This lowers self-esteem levels which then put them in a "vulnerability state" leading to greater Social Anxiety and problematic use of social media.

The results are always consistent, showing that higher FoMO is associated with lower self-esteem

and higher symptoms of social anxiety (Alt & Boniel-Nissim, 2018). On the other hand, users who manage their social media with consciousness and self-acceptance are more likely to have a healthy emotional state and healthy relationships.

FoMO is defined as the fear of missing out on experiences, achievements, or fun events in social media that are happening to others, which causes anxiety and feelings of distress and compulsion to use social media. Self-esteem and social anxiety are other psychological factors related to FoMO, that have also been identified as a major element in online interaction. People with low self-esteem may feel the need to use social media for self-confirmation, and people with social anxiety may feel safer communicating online, but it may merely help to encourage avoidance behaviors.

In the year 2025, Zhang & Wang conducted a Systematic Meta-Analysis of 32 studies on Addiction out of which 26,166 students were included. The results of this extensive review showed that there was a universal negative correlation between Self-Esteem and Social Media Addiction ($r = -0.24$). It also revealed that FoMO was the highest predictor ($r = 0.41$) of anxiety for all age groups. The researchers found that for people with high social anxiety, social media can be a "maladaptive coping mechanism" – that is, the internet is a protective but ultimately harmful alternative to in-person experiences.

After synthesizing existing research, Gupta et al. (2021) suggested that FoMO is the result of the combination of unmet social belonging needs and an increased sense of social comparison, both of which lead to a drop in self-esteem and an increase in anxiety. Their review highlighted that young adults and young adolescents' social groups who have greater social connectedness are more susceptible to the psychological impact of FoMO.

A Study on Nomophobia, Fear of Missing Out, Emotional regulation among GenZ and Millennials (2025) explored the differences across cohorts i.e GenZs and Millennials. A sample of 60 individuals was collected; 30 GenZs and 30 Millennials from Punjab, India. The results indicated that significant difference existed between GenZs and Millennials on FoMo and Nomophobia as GenZs were found more vulnerable to FoMo and Nomophobia than the Millennials, suggesting that the virtual world is introducing a new form of social exclusion for the new generations.

These studies together present FoMO as a multidimensional phenomenon, based on emotional insecurity and social comparison, which has direct and indirect effects on self-esteem, anxiety and social functioning.

In summary, the existing literature shows that there is a clear interconnection between FoMO, self-esteem and social anxiety, which all impact someone's social media experience. Low self-esteem and high social anxiety are linked to a high FoMo and are both significant factors in problematic online behavior, emotional distress, lower self-esteem and higher anxiety levels. Nevertheless, although these three variables have received increasing focus and attention, there has been relatively very little research that has investigated all three variables together within one model. Moreover, few researches have taken self-esteem as a moderator between FOMO and Social Anxiety. This gap is one to be addressed in further research that will investigate how they are connected and interrelated across age groups, and among the social media users in GenZs (1997-2011) and Millennials (1981-1996) who are living in digital environment. The present study aims to fill this void by examining the interaction between FoMO, self-esteem and social anxiety in the context of the age of constant connection, with Self-Esteem as a moderator between the interaction between FoMO and Social Anxiety.

2. Methodology

The problem is that you cannot stop. The issue is, you can't stop. Knowing the connection of FoMo, Social Anxiety, and Self-esteem from generation to generation (Millennials, and GenZs). And, to see if self-esteem is a moderator, that is, if it enhances or diminishes the relationship between FoMo and Social Anxiety.

2.1. Objectives

To determine the relationships between Fomol (fear of missing out), self-esteem and social anxiety.

To investigate if self-esteem was a moderator between FoMo and Social Anxiety.

To compare the cohorts (GenZs and Millennials) on the variables FoMo and Social Anxiety.

2.2. Hypotheses

- H1: There will be a negative correlation between Self-esteem and FoMo.

- H2: There will be a positive correlation between FoMo and Social Anxiety.
- H3: There will be a negative correlation between Self-esteem and Social Anxiety.
- H4: Self-esteem will be a mediator between FoMo and Social Anxiety.
- H5: There will be a significant difference between GenZs and Millennials on FoMo.
- H6: GenZs and Millennials will be significantly different in terms of Social Anxiety.

Apply operational definitions of variables. Apply operational definitions of variables.

2.3. FoMo

FOMO is the anxiety or worry about missing out on socializing, meeting people, or enjoying something or being successful. Greater fear of missing out will be predicted by a higher score on FoMo scale (Przybylski., et al 2013).

2.4. Self-Esteem

Self-Esteem is an overall appraisal of oneself; the positive or negative attitude that a person has towards himself. High score on Rosenberg's self-esteem scale will indicate positive attitude about one-self or self-esteem and vice versa.

2.5. Social Anxiety

The anxiety was expressed socially, in regard to the fear of being negatively evaluated. It's a feeling or behavior that causes some unease in people, but they are able to handle. Higher score on Social Interaction Anxiety Scale by Mattick and Clark (1988) indicates a higher level of anxiety in social interactions.

2.6. Sample

The respondents were selected using convenience sampling technique. The study was conducted on three generations (GenZs, Millennials, and GenX) of Peshawar. A total of 196 sample size was taken in Peshawar, KP, Pakistan using Hybrid distribution of questionnaires (Online & Offline).

A total of 81 male and 109 female samples were collected. Furthermore, GenZs were 95 years old, Millennials were 70 years old and Gen X were 25 years old.

3. Instruments

3.1. FOMO Scale

Przybylski, Murayama, DeHaan, and Gladwell (2013) created the Fear of Missing Out Scale (FoMOS) to capture the general sense of "Fear of Missing Out (FoMO)" which they describe as the fear that people are engaging in rewarding activities while one is away. The main function of the instrument is to measure the need to be always engaged in others' activities and experiences, especially when using social media. This is a 10 item unidimensional FoMOS scale with items rated on a 5 point Likert scale, usually 1 (Not at all true of me) to 5 (Extremely true of me). There is no statement with negative wording. There is a high degree of internal consistency in the scale. The reliability of the initial development reported by Przybylski et al. (2013) was Cronbach's $\alpha = .82$, and subsequent studies have found the scale to be reliable with Cronbach's α of .87 to .90 (Lai et al., 2016). The results of confirmatory factor analysis also suggest a good model fit. Negative correlation with psychological need satisfaction ($r = -.29$) was used to determine the discriminant validity, and

3.2. Social Interaction Anxiety Scale (SIAS)

The SIAS developed by Mattick and Clarke (1998), was employed to assess participants' levels of distress and anxiety specifically related to initiating and maintaining social interactions. The SIAS differs from the performance based measures in that it measures the cognitive and affective reactions to social friction in group environments or in one-on-one encounters.

The instrument is a 20 Item unidimensional scale. Each item is answered on a 5-point Likert type scale from 0 (Not at all characteristic or true of me) to 4 (Extremely characteristic or true of me). Three items (Items 5, 9 and 11) on the scale were reverse-scored to promote response validity and minimize acquiescence bias. The scores are normally distributed between 0 and 80, with a higher score representing higher social interaction anxiety.

The internal consistency of the SIAS has been high in both clinical and community samples, with

Cronbach's alpha values between alpha = .88 and .94 (Mattick & Clarke, 1998; Fergus et al., 2014). The test-retest reliability also is high ($r > .90$), suggesting that the construct is stable over time.

It is a well-validated psychological scale:

There are strong positive relationships between the SIAS and the Social Phobia Scale (SPS) ($r = .53 - .77$) and the Liebowitz Social Anxiety Scale (LSAS) ($r = .67 - .77$).

It clearly differentiates anxiety related to social interaction from other types of psychopathology, including generalized depression and agoraphobia.

3.3. Rosenberg Self-Esteem Scale (RSES)

The RSES was created by Morris Rosenberg (1965) to offer a one-dimensional evaluation of self-esteem all over the world. The RSES reflects a person's overall self-esteem and self-acceptance. Reflects positive and negative self-concept. It is a scale of 10 items, which are stated as self-evaluation statements. The participants respond to level of agreement in a 4-point Likert-type scale: (0 = Strongly Disagree, 1 = Disagree, 2 = Agree, 3 = Strongly Agree). The scale is unidimensional. The scale is balanced to prevent loss of interest and valid responding, with five positively worded items (e.g., "I feel that I have a number of good qualities") and five negatively worded items (Items 2, 5, 6, 8, 9; e.g., "At times I think I am no good at all"). The range of scores from 0 to 30. Scores of 15 to 25 are considered normal; scores below 15 indicate low self-esteem.

The Cronbach's alpha is always very high, usually in the .77 to .88 range in a variety of populations. Scale correlations are frequently above $r = .82$ and are generally very stable over time (test-retest reliability). The scale is highly correlated in predictable ways with other constructs, such as negative correlations with anxiety and depression scales, and positive correlations with the life satisfaction scale. The RSES has been translated into dozens of languages and has been tested in more than 50 countries, making it a valid instrument in various cultures.

4. Procedure

A protocol for the study was established before data collection to guarantee the safety of the participants and ethical integrity in the study. Informed consent was given to all respondents, explaining the research and its voluntary nature. The data were treated with the utmost confidence

and no personally identifiable information was associated with the responses, and data were kept securely - to protect participant privacy. Participants were told expressly that there was no risk in the study and that they could withdraw from the study at any time without penalty.

The data was collected in Islamia University, HED, Commerce College, Post Office, Police Personnels and Jinnah College. A convenience sampling method was used to recruit those who were readily available and willing. To ensure a diverse representation across generational cohorts Gen X, and, Millennials and Generation Z specifically.—a hybrid distribution method was used..

In-person collection: Hard copy questionnaires were sent out in the institutions mentioned.

Digital Distribution: Potential respondents from target generations were also e-mailed and targeted on Linked In. A cover letter, detailing the study's aims, was sent to these participants with a link to the online questionnaire.

After the data collection period was over, responses were consolidated and cleaned for statistical analysis. To find the effect of self-esteem in bringing the change between the FoMo and Social Anxiety, the researchers applied the correlation and Moderation analysis. SPSS 27 version was used to analyze the results.

5. Results

Table 1: Demographics of the Study

Variable	N	%
Gender		
Male	81	41.3
Female	109	55.6
Education		
School	1	0.5
Matric	4	2.0
FSC	19	9.7
BS	81	41.3
MA	41	20.9

MPhil	27	13.8
Phd	17	8.7
Generation		
X	25	12.8
Millennials	70	35.7
Z	95	48.5

The above table shows the demographic information of the sample including 81 males and 109 females with diverse educational backgrounds and three cohorts having 25 GenX, 70 Millennials, and 95 GenZs.

Table 2: Alpha Reliability of the scales

Scales	No of Items	Mean	<i>SD</i>	Min	Max	Alpha Coefficient
FOMOS	10	21.45	6.00	10	39	.70
RSES	10	19.64	4.52	4	30	.66
SIAS	20	23.4	12.21	1	61	.86

Note. FOMOS= Fear of Missing Out Scale, RSES= Rosenberg Self-Esteem Scale, SIAS= Social Interaction Anxiety Scale

The alpha reliability of the scales used in the study showed good and adequate alpha coefficient values indicating that the scales were reliable in our data set.

Table 3: Correlation for the Study Variables

Variable	1	2	3
FOMO	--		
SE	.02	--	
SA	.30**	-.34**	--

**= $p < .01$

Note. FOMO= Fear of Missing Out, SE= Self-Esteem, SA= Social Anxiety

The results of Table 3 showed that there was significant positive correlation between Social

Anxiety and FOMO at .01 level. Self-Esteem is inversely correlated with Social Anxiety which is significant at .01 level. Correlation between Self-esteem and FOMO is however small and insignificant.

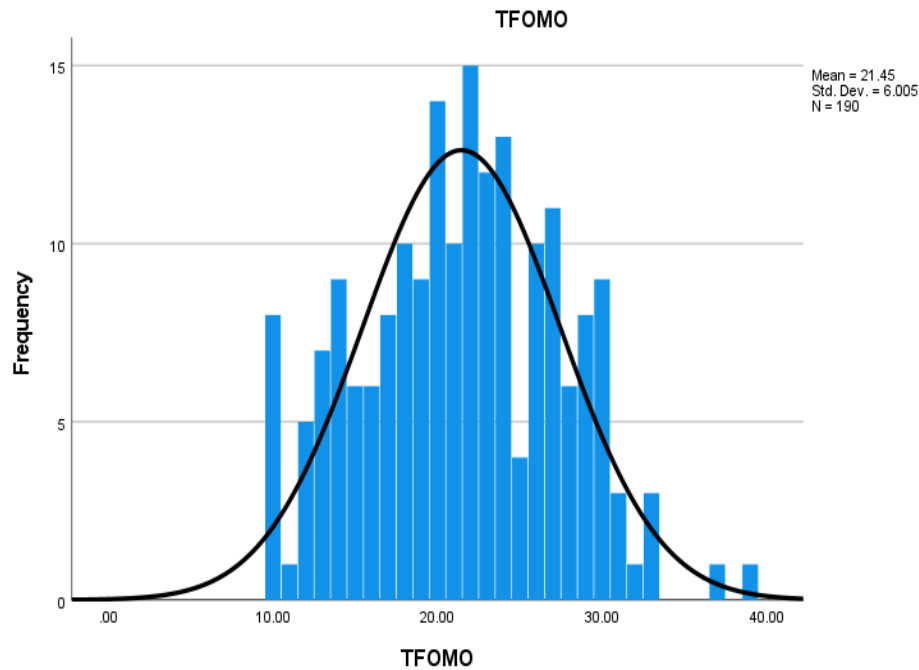


Figure 1: FOMO Total Score

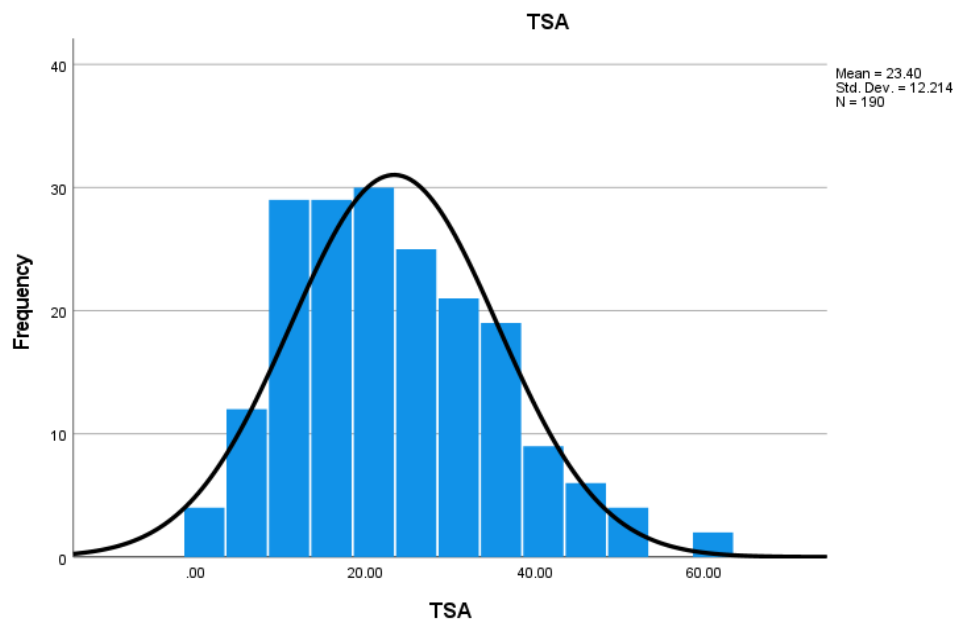


Figure 2: Social Anxiety Total Score

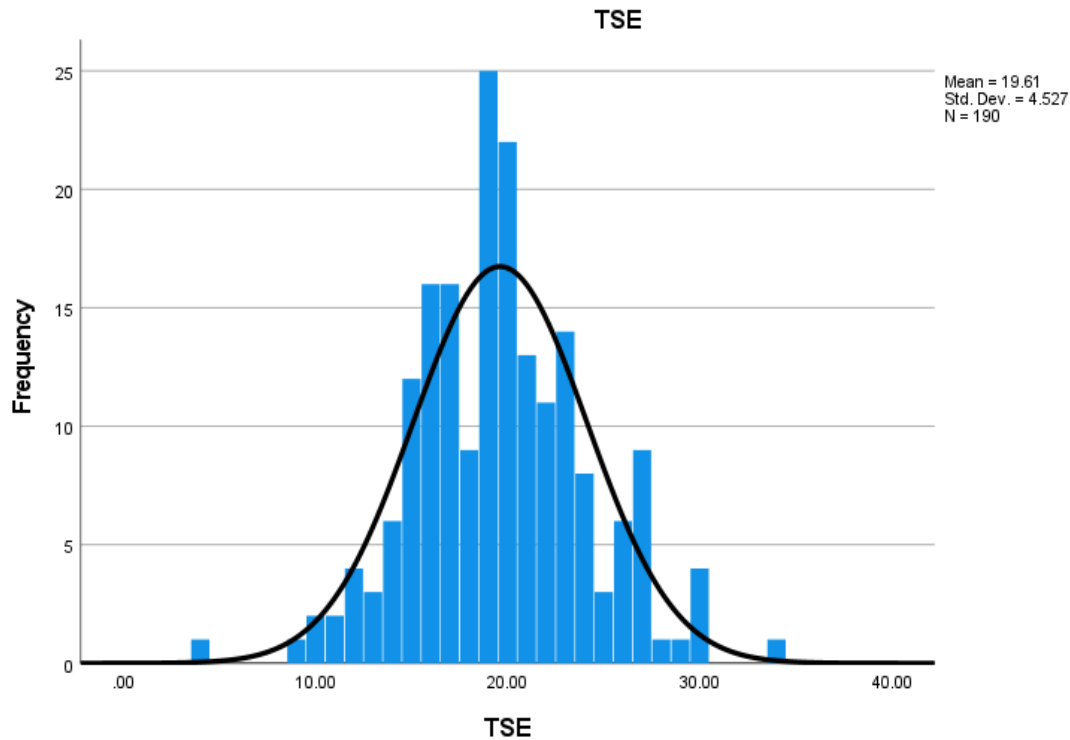


Figure 3: Self-Esteem Total Score

Table 4: Moderation Analysis

Variable	B	SE	T	p	95% CI [LL, UL]
Constant	28.89	13.38	2.15	.03	[2.48, 55.23]
FoMo (IV)	0.55	.60	.91	.36	[-.64, 1.76]
Self-Esteem (Mod)	-.97	.65	-1.49	.13	[-2.27, .31]
FoMo × Self-Esteem	.004	.02	.13	.89	[-.05, .06]
R ²	.020				
AdjR ²	.0001				

Note. N =190. CI = confidence interval; LL = lower limit; UL = upper limit.

The table indicates that the Model I having FOMO and Self-Esteem as predictors (IVs) and Social Anxiety as an outcome (DV) is non-significant at .05 level. The R² value suggests that the model explains 2% variance in the DV i.e, Social Anxiety. Moreover, Self-esteem was entered as a

Moderator between the FOMO and Social Anxiety in the Model II. The Adj R² value indicates that the model accounts for very little of the non-significant variance (0.01%) when entered as moderator between FOMO and Social Anxiety. The *p* value is much larger than the conventional .05 limit and the CI contains zero, indicating that Self-Esteem does not moderate the association between FoMo and the Social Anxiety. It reveals that the effect of FoMo on Social Anxiety remains the same irrespective of individuals with high and low self-esteem.

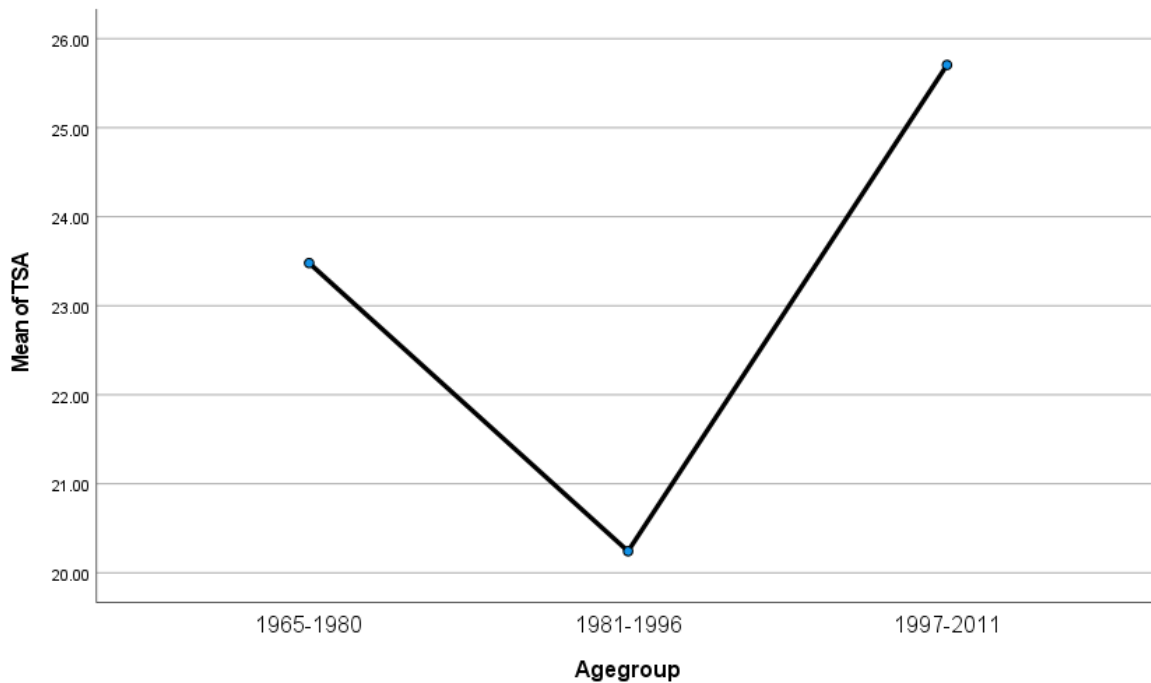
Table 5: *t* values showing differences in FOMOS, and SIAS between GenZs, and Millennials

Variable	GenZs		Millennials		t(163)	P	Cohen's d
	(n=95)		(n=70)				
	M	S.D	M	S.D			
FOMO	22.25	6.06	20.24	5.59	.43	.09	5.87
SIAS	25.70	12.90	20.24	11.36	.23	.00	12.27

Note=FOMO=Fear of Missing Out, SIAS= Social Interaction Anxiety Scale.

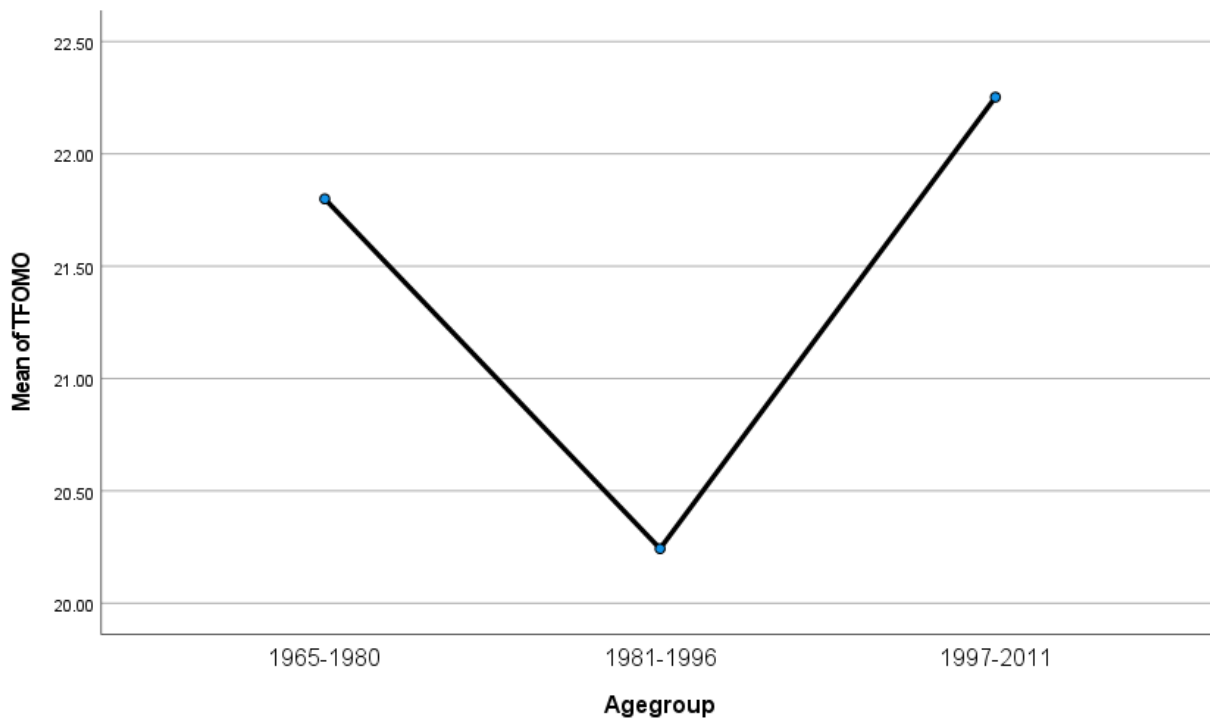
The results indicated that the *t* value was non-significant for FOMO X .01 level ($t(163) = .43, p = .09$) meaning that there was no significant difference between the GenZs and the Millennials when it came to FOMO. The Cohen's *d* value indicates a large effect size. The *t* value for Social Anxiety, however, was significant at .001 level ($t(163) = .23, p = .00$) which indicated significant differences across the cohorts. When Cohen's *d* value is large, it means that the effect size is large.

5.1. Means Plot for Social Anxiety



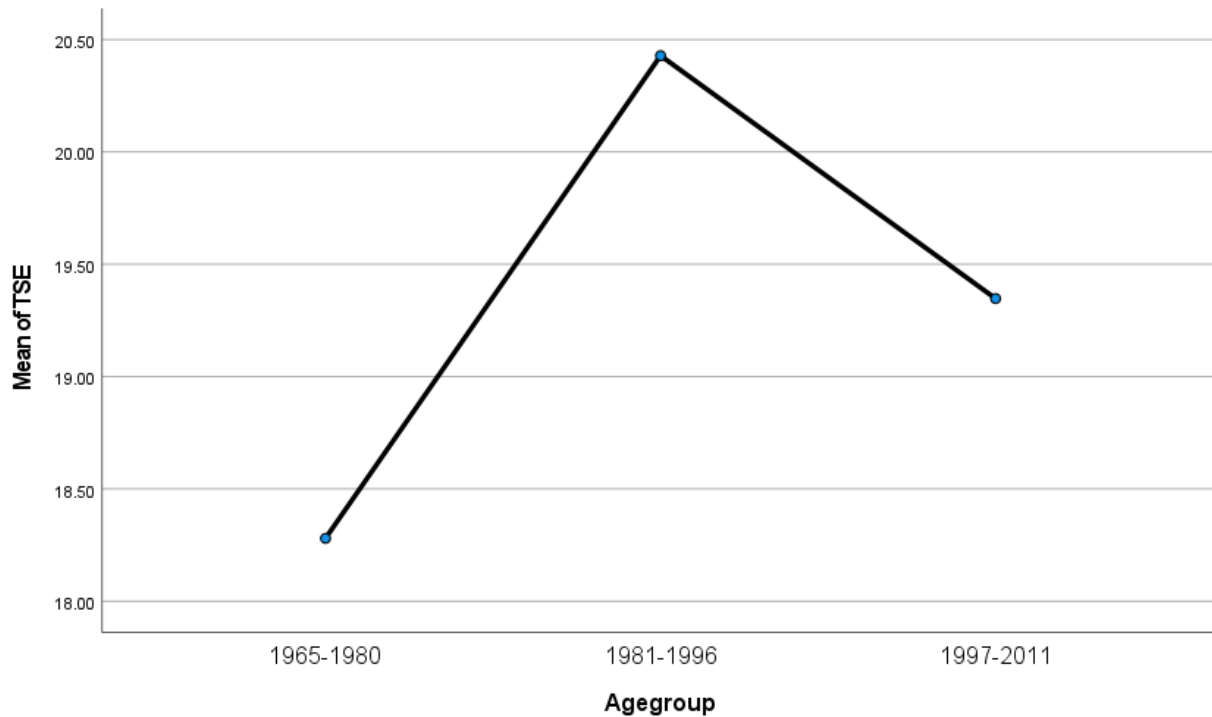
This means plot highlights the significant differences across Millennials and GenZs on Social Anxiety.

5.2. Means Plot for FOMO:



The plot shows that Millennials have scored the least on FOMO as compared to GenZs and GenX.

5.3. Means Plot For Self-Esteem



The plot shows that Millennials scored more on self-esteem as compared to other two generations.

6. Discussion

The study was designed to explore the intricate relationship among variables; FOMO, Self-Esteem and Social Anxiety. Self-esteem was taken as a moderator to see whether it moderates the relationship among the relationship between FOMO and Social Anxiety. But there were also differences between the GenZs and the Millennials in terms of their Social Anxiety and FoMo. A cross sectional data was collected from a sample of 190 respondents (online and/or face-to-face).

Our sample included 81 males (41.3%) and 109 females (55.5%). The sample consisted of people from various educational levels such as 1 school going, 4 matric, 19 Intermediate, 81 undergraduates and recently graduated, 41 master holders, 27 MPhil Scholars and 17 PhD Scholars. Three generational cohorts were included GenX, Millennials, and GenZs having N= 25, 70, and 95 respectively. Thus, Gen X was 12.8%, Millennials 35.7%, and GenZs 48.5%.

Three highly reliable and validated scales were administered on the participants namely Social Interaction Anxiety Scale (SIAS), Rosenberg's Self-Esteem Scale (RSES) and Fear of Missing out

Scale (FOMOS). The reliability on the scales was computed primarily to determine if the scales were reliable or not on our sample.

The Social Interaction Anxiety Scale (SIAS) having a 5 point Likert Scale comprised of 20 items. The internal consistency and good reliability on our sample was confirmed by the Cronbach's Alpha Coefficient of .86 ($r=.86$). In other words, it indicates that the results on SIAS can reliably indicate about the participant's social anxiety. The mean score on SIAS was 23.4 with a standard deviation of 12.35 ($M=23.4$, $SD=12.35$) indicating that there is a variation of responses among the respondent's social anxiety. The Minimum score a person scored on the scale was 1 and the maximum score of 62 showing that the sample covers a large range of responses. It suggests that the sample accurately covers the demographics the study aimed to sample as there are individuals who have no Social Anxiety at all to those who have moderate and high social anxiety levels.

The Rosenberg's Self-esteem scale (RSES) having a 4 point Likert Scale comprised of 10 items. The items scored on this were 0-3 (from Strongly Disagree to Strongly Agree). RSES had a reliability Coefficient of .66 ($r=.66$) which indicates moderate internal consistency and slightly adequate amount of reliability on our sample. As the scale had fewer items, the mean score on RSES was 19.60 with a standard deviation of 4.52 ($M=19.60$, $SD=4.52$) indicating that there is an array of responses among the participant's self-esteem. The Least score a person scored on the scale was 4 and the maximum score of 34 indicating that the sample covers a variety of responses but not as much as they were in their social anxiety levels (evident from table 2)

The Fear of Missing out Scale (FOMOS) was administered having 10 items and scoring from 1 to 5 (Not At All to Very True of Me). The scale had good Cronbach's alpha reliability of .70 ($r=.70$) as shown in table 2. The mean score of the respondents on FOMOS was 21.45 ($SD=6.00$). The maximum score was 39 and the minimum score on FOMO scale was 10. It puts together also a good sample of answers: those with less FOMO as well as mid to high FOMO.

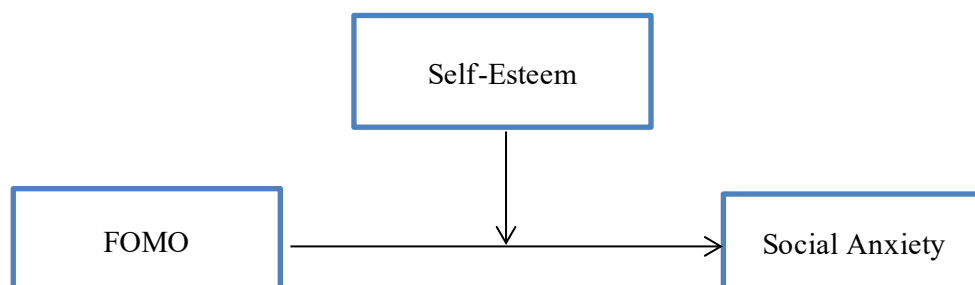
Since the scales are capable of reliably predicting Social Anxiety, FOMO and Self Esteem in our sample, they can be used to measure these variables in future studies. So that we can go on to test our hypothesis.

However, hypothesis 1 in our study was that there will be negative correlation between the Self-esteem and FoMo. The results in table 3 indicate that there is negligible non-significant correlation between Self-esteem and FOMO in our sample ($r=.02$) suggesting that there is no significant correlation between people. It argues that FoMo could be independent of personal self-esteem. This is consistent with our findings that the relationship between FoMo and self-evaluation does not appear to be correlated in our sample, which is similar to Barry et al. (2017) who found that FoMo is independent of global self-esteem. Based on their research, they argue that FoMo can be attributed to a need for social monitoring and belongingness rather than a lack of self-perception, and that FoMo is not synonymous with self-perception of "feeling bad about yourself" (low self-evaluation), which supports the rejection of Hypothesis 1.

Our second hypothesis was that there will be a positive correlation between FoMo and Social Anxiety. From table 3, there was a weak positive and significant correlation between FOMO and Social Anxiety ($r=.30$, $p<.01$) which indicated that there was a significant increase in the variables when FOMO increased. That is, people who suffer from Social Anxiety also suffer from Fear of Missing Out. It corroborates our study hypothesis H2.

The third hypothesis of our study was that there will be negative correlation between Self-esteem and Social Anxiety. The results (shown in table 3) indicate that there is a significant negative correlation between Social Anxiety and Self-esteem ($r=-.34$, $p<.01$) suggesting that Increase in Social Anxiety is related with decrease in self-esteem. Individuals with high self-esteem have less Social Anxiety and those with low self-esteem have higher Social Anxiety. H3 is accepted.

The fourth hypothesis was that Self-esteem (W) will moderate the relationship between FoMo (IV) and Social Anxiety (DV).



For this purpose, Andrew F. Hayes PROCESS macro Model 1 was used to compute Moderation Analysis. This model tested whether or not self-esteem moderates the relationship between FOMO and SA. From the results that are evident on the table 4, it can be concluded that there was no moderation. While the overall model is statistically significant $F(3, 186) = 15.91, p < .001$ and explains about 20.4% of the variance in TSA ($R^2 = .20$), the interaction between our variables is not meaningful ($b = .0041, t(186) = .138, p = .8902$). The data shows that the effect of FOMO on Social Anxiety is the same for both high and low levels of Self-esteem as the p value was very high .8902 and the 95% confidence interval included zero [$CI = -.0547, .0630$]. In other words, these factors can coexist and neither is becoming a more dominant factor. The result is not in support of our hypothesis (H4).

A research carried out by Rohmawati.Z, et al (May, 2025) had a study about the relationship between self-esteem and social anxiety with fear of missing out in college students that was very similar to ours. They found that both Social Anxiety and Self-esteem are similarly correlated with FOMO but Social Anxiety is more prominent in predicting FOMO. Their regression analysis indicated that the effect of Social Anxiety to FOMO (or vice versa) is a direct effect. In the model, the role of self-esteem and social anxiety are regarded as independent psychological antecedents. This is in line with our finding that FOMO on Social Anxiety "has no effect" in relation to levels of self-esteem.

Fifth hypothesis is that there will be significant difference between GenZs and Millennials on FoMo. The results indicated that the t value was non-significant at .01 level for FOMO ($t(163) = .43, p = .09$) which means there was no significant difference between the GenZs ($n=95$) and the Millennials ($n=70$) regarding FOMO. The mean score of GenZs on FOMO was 22.25 with a standard deviation of 6.06 ($M=22.25, SD= 6.06$). In contrast the mean score for Millennials on FOMOS was 20.24 ($SD=5.59$). It suggests that there is at least a difference between the mean scores, but not significant between cohorts. Based on Cohen's d value (5.87) it can be inferred that effect size is large as indicated in the table 5. Does not support our study hypothesis (H5).

The discovery indicates that it's no longer a fad among teens, but a standard digital experience. This finding is aligned with the foundation work of Przybylski et al., (2013) who suggest that FoMo is a dispositional trait instead of just a result of a particular birth year, and is associated with

universal human needs and drives for social belonging and relatedness. Also, as explained by Roberts and David (2020), there is a “digital leveling” phenomenon, whereby Millennials have fully integrated and embraced into the same digital environments as Gen Z, and thus are not only spending more hours on social media as a whole, but being subjected to similar psychological triggers. Overall, our results lend credibility to the academic body, which has been growing that as soon as a certain level of digital immersion is reached, the 'ceiling effect' of social media platforms creates a similar level of FoMo for emerging adults as it does for established adults.

The 6th hypothesis suggested that there will be significant differences between GenZs and Millennials on Social Anxiety. The *t* value for Social Anxiety was significant at .001 level ($t(163) = .23, p = .00$) which showed there were significant differences between the cohorts, namely GenZs ($n=95$) and Millennials ($n=70$). The mean score of GenZs on Social Interaction Anxiety Scale (SIAS) was 25.7 with a standard deviation of 12.90 ($M=25.70, SD=12.90$). While, Millennials had a mean score of 20.24 with a standard deviation of 11.36 ($M=20.24, SD=11.36$). The Cohen's *d* value is 12.27 (As seen in table 5) which is considered to be a large effect size, supports and accepts our study hypothesis (H6).

The means plot depicts the difference in each generational cohort (GenZs, Millennials and GenX) on the 3 variables of the study (FOMO, Social Anxiety and Self-Esteem). Fear of Missing Out and Social Anxiety are the lowest among Millennials (1981-1996), and then increases significantly among Gen Z (1997-2011). Self-esteem is going in the opposite direction, with Millennials seeing their highs and Gen Z their lows – Gen X is the “middle ground.” Interestingly, Millennials have the highest Self-Esteem. and the lowest scores of Gen Z, but higher scores than their counterparts, the SA (Social Anxiety) and FOMO (Fear of Missing Out) scores. The mean response for Self-Esteem is actually the lowest for Gen X as compared to the other three groups.

The results indicate that Gen Z is the most vulnerable group in this study as they have the highest level of Social Anxiety and FOMO. It looks like millennials are the most resilient in terms of these specific metrics, with the lowest level of anxiety, and the highest self-esteem and FOMO. Gen X are in the middle of the anxiety and FOMO zones, but have less self-esteem than the younger generations.

7. Conclusion

In summary, this study shows a complex and multi-layered world of digital possibilities in which social anxiety and the "Fear of Missing Out" (FOMO) are closely related, but have distinct internal dynamics. However, a person's self-esteem is a large part of their social anxiety, but surprisingly is not a shield against the pressures of FOMO. This means that the need to connect is a strong social drive that is more potent than self-concept. It is disruptive to social anxiety no matter if the person has a positive or negative self-image.

Moreover, when comparing the generational differences, although Gen Z and Millennials may feel the "pull" the same, the anxiety felt in its social context is different. The results indicate that fostering confidence should not be the only focus of mental health support as social triggers, which may cause anxiety in today's climate of constant connectivity, should be targeted as well in the future.

8. Limitations

Besides the unique findings of our study there are some limitations to the study. First, the participation of Gen X was much lower than that of Gen Z and Millennials, making it difficult to compare them and make generalisations of the whole adult life. Second, since the sample was mainly composed of educated people, the results presented may not be a realistic representation of the experiences of those with other educational or socio-economic backgrounds. Last, because much of the data was gathered in the midst of Peshawar, Pakistan, the findings are specific to the culture of this area. To determine whether these patterns would occur at a larger geographic and educational level, future research studies should look for a larger population that is more diverse geographically and educationally.

9. Suggestions

Based on the above results, some suggested ideas for further research are:

1. Qualitative Exploration: interview participants to get an understanding of the dynamics that underlie why self-esteem is not enough to prevent FOMO.
2. Generalizable Cohorts: Future studies may include different cohorts groups using stratified

sampling or quota sampling so that there is an equal representation of all the cohorts in the sample increasing the generalizability of the results.

3. Platform-Specific Impact: Explore whether there are differences in the extent of FOMO or Social Anxiety between these generations on different platforms (e.g., TikTok vs LinkedIn).

4. Longitudinal Tracking – Track a cohort of Gen Z participants over a 5-year period for changes in their Social Anxiety scores as they go through various life stages and see if this eventually aligns with the scores of Millennials in those same life stages.

10. Practical Implications:

The findings from this research provide a reality check with regard to digital mental health. As long as there have been people, we've been telling them that if they would just "work on their self-esteem" then they would not be affected by social pressure as much. But, this information indicates otherwise.

Therapists should not only build the self-esteem of their clients, but should be aware that self-esteem is not a kind of "buffer" against anxiety provoked by FOMO. They, however, should tackle digital boundaries in the first place. If it is not high self-esteem that is preventing FOMO from causing anxiety, it is not thinking better of oneself but literally physically and mentally unplugging from the source of the FOMO.

FOMO-Anxiety Loop: Targeting this loop, it is important to work with Social Anxiety and FOMO through the lens of "Digital Literacy" in high-school and university counseling. This requires education for students that the "anxiety" they are experiencing is not a personal problem, but is a normal reaction to a "attention economy" that makes users feel they are losing out at all times. This way we can solve the issue of FOMO-Anxiety relationship, rather than only the individual's confidence.

When it comes to the difference between Gen Z and Millennials, Social Anxiety is different, and, while their FOMO levels are comparable, that's a different way of processing the stress. Workplace wellness programs for the Millennial generation may need to target "professional FOMO" and Gen Z may need to be targeted for "social/lifestyle FOMO."

References

- [1] Alt, D., & Boniel-Nissim, M. (2018). Links between adolescents' deep and surface learning approaches, problematic Internet use, and Fear of Missing Out (FoMO). *Internet Research*, 28(5), 1170–1183. <https://doi.org/10.1108/IntR-01-2017-0016>
- [2] Barry, C. T., Sidoti, C. L., Briggs, S. M., Reiter, S. R., & Lindsey, R. A. (2017). Adolescent social media use and mental health from adolescent and parent perspectives. *Journal of Adolescence*, 61, 1–11. <https://doi.org/10.1016/j.adolescence.2017.08.005>
- [3] Barlow, D. H. (2002). *Anxiety and its disorders: The nature and treatment of anxiety and panic* (2nd ed.). Guilford Press.
- [4] Beyens, I., Frison, E., & Eggermont, S. (2016). “I don’t want to miss a thing”: Adolescents’ Fear of Missing Out and its relationship to adolescents’ social needs, Facebook use, and Facebook-related stress. *Computers in Human Behavior*, 64, 1–8. <https://doi.org/10.1016/j.chb.2016.05.083>
- [5] Dhir, A., Chen, S., & Nieminen, M. (2018). Predicting adolescent FoMO, social media engagement, and sleep quality. *Psychiatry Research*, 268, 178–185. <https://doi.org/10.1016/j.psychres.2018.07.008>
- [6] Elhai, J. D., Yang, H., Fang, J., Gallinari, E. F., & Hall, B. J. (2018). Depression and anxiety symptoms are related to problematic smartphone use severity in Chinese young adults: Fear of Missing Out as a mediator. *Addictive Behaviors*, 87, 155–164. <https://doi.org/10.1016/j.addbeh.2018.06.020>
- [7] Graham, O., & Lews, M. (2025). *Exploring the Interrelationship between Fear of Missing out, Self-Esteem, and Anxiety among Gen Z Social Media Users*. <https://doi.org/10.20944/preprints202505.1401.v1>
- [8] Gupta, M., Sharma, R., & Arora, P. (2021). Fear of missing out and social media: A systematic review of its relationship with psychological well-being. *Journal of Technology in Behavioral Science*, 6(3), 590–604. <https://doi.org/10.1007/s41347-020-00174-6>
- [9] Jan, M., Soomro, S. A., & Ahmad, N. (2021). The impact of self-esteem and social comparison on Fear of Missing Out among university students. *Pakistan Journal of Psychological Research*, 36(1), 45–60. <https://doi.org/10.33824/PJPR.2021.36.1.4>

- [10] Li, S., Wang, J., & Zhang, L. (2024). *Bidirectional associations between fear of missing out and problematic social media use: A three-wave longitudinal study*. *Computers in Human Behavior*, 148, 107938. <https://doi.org/10.1016/j.chb.2023.107938>
- [11] Li, Y., Zhang, J., Luo, Z., Tao, D., & Wen, L. (2025). The Impact of Different Sports on Reducing Mobile Phone Addiction: A Systematic Review and Network Meta-Analysis. *Addiction Biology*, 30(9). <https://doi.org/10.1111/adb.70087>
- [12] Mattick, R. P., & Clarke, J. C. (1998). Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. *Behaviour Research and Therapy*, 36(4), 455–470. [https://doi.org/10.1016/S0005-7967\(97\)10031-6](https://doi.org/10.1016/S0005-7967(97)10031-6)
- [13] O'Day, E. B., Heimberg, R. G., & Rodebaugh, T. L. (2021). *Social anxiety, social media use, and FoMO: Associations with psychological distress*. *Journal of Anxiety Disorders*, 84, 102491. <https://doi.org/10.1016/j.janxdis.2021.102491>
- [14] Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of Fear of Missing Out. *Computers in Human Behavior*, 29(4), 1841–1848. <https://doi.org/10.1016/j.chb.2013.02.014>
- [15] Roberts, J. A., & David, M. E. (2020). The social media party: Fear of missing out (FoMo), social media intensity, connection, and well-being. *International Journal of Human-Computer Interaction*, 36(4), 386–392. <https://doi.org/10.1080/10447318.2019.1646517>
- [16] Rohmawati, N., Noviekayati, I., & Santi, N. N. (2021). Hubungan antara self-esteem dan kecemasan sosial dengan fear of missing out (FoMO) pada mahasiswa [The relationship between self-esteem and social anxiety with fear of missing out (FoMO) in college students]. *Jurnal Psikologi Indonesia*, 10(2), 155–166. <https://doi.org/10.55927/mudima.v5i5.271>
- [17] Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.
- [18] Rozgonjuk, D., Sindermann, C., Elhai, J. D., & Montag, C. (2021). Individual differences in Fear of Missing Out (FoMo): Age, gender, and the Big Five personality traits. *Personality and Individual Differences*, 171, 110546. <https://doi.org/10.1016/j.paid.2020.110546>
- [19] Servidio, R., Griffiths, M. D., & Monacis, L. (2024). *Fear of missing out and problematic social media use: A serial mediation model of social comparison and self-esteem*. *Addictive Behaviors Reports*, 19, 100536. <https://doi.org/10.1016/j.abrep.2024.100536>
- [20] Suryavanshi, M., Sood, S. (21 November 2025). *A Study on Nomophobia, Fear of Missing Out, Emotional regulation among GenZ and Millennials*. *International Journal of Global*

Mental Health, Innovation, Policy, Action, Culture & Transformation, 1(2).

<https://psychopediajournals.com/index.php/impact/article/view/1207/848>