

## Relationship between internet addiction and online fear of missing out among Mumbai youth

Aditi Shah<sup>1\*</sup>, Dr. Avinash DeSousa<sup>2</sup>, Ms. Pragya Lodha<sup>3</sup>

### ABSTRACT

The present study examined the nature of internet addiction and online fear of missing out as well as the relationship between the two variables among the youth of Mumbai city. The study sample consisted of 111 participants, between the age range of 18 to 30 years. Past researches have indicated that psychological attributes like depression, anxiety, mood swings, procrastination, loneliness etc are some of the pervasive consequences associated with Internet Addiction and Online Fear of Missing Out. The data was collected using Modified Fear of Missing out Scale and Internet Addiction Scale. To verify the hypothesis, Descriptive Statistics, Pearson product-moment correlation coefficient test and simple linear bivariate regression test were computed. Results indicated a significant and a moderate positive correlation between Internet Addiction and Online Fear of Missing Out ( $r(109) = .511, p < .01$ ). The regression analyses showed that online fear of missing out explained 26.1% variance of Internet Addiction ( $R^2 = .261, F(1,109) = 38.55, p < .001$ ). The regression equation for predicting the internet addiction from online fear of missing out was  $\hat{y} = -37.27 + 0.55x$ . Thus, there is a significant relationship between internet addiction and online fear of missing out.

**Keywords:** *Internet Addiction, Online Fear of Missing Out, Young Adults*

The Internet has become a part and parcel of our lives. With the extensive range of information, resources and services it offers, it is nearly impossible to imagine the 21st century without the internet. As of January 2020, approximately around 4.54 billion people were active internet users, with India being the second highest country in terms of internet users (Clement, 2020). IAMAI in its report “India Internet 2019” stated that there are around 451 million active users in India. Mumbai had topped the list with 11.7 million internet users. It was also found that around 72% of the urban population (i.e. approximately 139 million) used the internet daily.

The unregulated usage of the internet by some people brings us to a phenomenon called “Internet Addiction”. Internet Addiction in simple terms can be described as any compulsive

<sup>1</sup>University of Mumbai, Mumbai, Maharashtra, India

<sup>2</sup>Founder Trustee and Consultant Psychiatrist, Desousa Foundation, Mumbai, Maharashtra, India

<sup>3</sup>Research Assistant, Desousa Foundation, Mumbai, Maharashtra, India

\*Responding Author

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online activity which interrupts day to day functioning and causes significant distress in various life domains over a lengthy period of time. Various studies have been done to gauge the prevalence of internet addiction among different populations in India. Anand et al. (2018) conducted a research among 1763 medical students in 3 south Indian cities, found that around 27% of the participants had mild internet addiction, 10.4% had moderate and 0.8% had severe internet addiction. In a research done by Gedam et al. (2017), the total prevalence of internet addiction was found to be 19.85% (N = 846), wherein 19.5% students met criteria for moderate IA and 0.4% for severe addiction. Results from study done among Bangalore college students (N = 515) showed 34% with moderate internet addiction and 8% with severe addiction. Overall prevalence of severe internet addiction in India ranges from 0.3% to 11.8%. (Suchandra, 2018).

Internet Addiction is also found to be associated with depression, anxiety, psychopathology, psychological distress, substance abuse, lower psychological well-being etc (Anand et al., 2018; Maheshwari et al., 2018; Sharma & Sharma, 2018; Gedam et al., 2017; Yadav et al., 2013; Goel et al., 2013).

Tata Communication, in a report titled “World Connected II” (2018), stated that in the conducted survey it was found that around 46% (N = 2,117) of Indian users would spend 6 hours or more online daily and around 82% (N = 2,117) of internet users from India admitted experiencing Fear of Missing Out when they were offline, which was highest globally. Another research conducted by Muslim University and the Indian Council of Social Science Research (ICSSR) titled, “Smartphone Dependency, Hedonism and Purchase Behavior: Implications for Digital India Initiatives” among 20 central universities across India found that students on average would check their smartphone around 150 times on day to day basis; adding around 63% of students use their phones for 4 – 7 hours daily. Fear of missing out can be described as a pervasive apprehension that one might be missing opportunities for interactions, experiences, or investments, along with a belief or perception that others are having more rewarding experiences than they are. Online Fear of missing out refers to pervasive apprehension that others experience more regarding experiences than them in online context. Fear of missing out has been linked to internet addiction, social media addiction (Franchina et al, 2018; Przybylski et al., 2013; Hetz et al., 2015; Coco et al., 2020), depression, anxiety (Elha et al., 2020; Baker et al., 2016; Oberst et al., 2017), negative affect (Elhai et al., 2019), lower life satisfaction (Przybylski et al., 2013), substance abuse (Riordan et al., 2015) etc.

### ***Statement of problem***

Internet addiction and online specific fear of missing out both have serious consequences such as depression, anxiety, mood swings, procrastination, loneliness, feelings of guilt, isolation, agitation etc. Thus overall, it affects one’s productivity as well as mental health. There have been very few studies carried out in Mumbai exploring internet addiction and fear of missing out among young adults. Few studies that have studied internet addiction focus more on adolescent age groups and studies which have attempted exploring ‘fear of missing out’ construct have measured it as a general trait and not as state trait (online specific). Thus, this research attempts to understand internet addiction and online specific fear of missing out among young adults of Mumbai city.

### ***Rationale***

Mumbai accounts for one of the top cities with respect to active internet users. Also, with the fast paced lifestyle, extreme competitiveness, population and dense collections of various

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cultural populations in metro cities like Mumbai, young adults are particularly vulnerable to mental health issues. Hence, this study tries to explore internet usage patterns and online fear of missing out among Mumbai city young adults, so that necessary steps can be taken in order to help youths improve and take care of their mental health.

### **METHODOLOGY**

#### *Objective*

- To study the relationship between internet addiction and online specific Fear of missing out.

#### *Hypotheses*

- There is a significant relationship between Internet addiction and online specific Fear of missing out.

#### *Variables*

The variables under study were –

- Internet Addiction
- Online specific Fear of Missing out.

#### *Operational Definition*

**Internet Addiction:** The score of internet addiction as obtained on Internet Addiction Test (IAT) by the young adults on whom the IAT would be administered in Mumbai City.

**Online Specific Fear of Missing out:** The score of online specific fear of missing out scale as obtained on Fear of Missing Out modified scale by the young adults on whom the modified FoMO scale would be administered in Mumbai City.

#### *Participants*

The sample consisted of young adults within the age range of 18-30 years residing within Mumbai city.

**Sample Size:** 111 participants

#### *Inclusion criteria*

1. Young adults between the age range of 18-30 years.
2. Young adults currently residing in Mumbai city for at least past 1 year.
3. Young adults who have access to, know and are using internet services.
4. Young adults who understand English language.

#### *Sampling Method*

Mixed sampling methods were employed in order to collect the data for the purpose of this research study.

1. Snowball Sampling Technique: It is a non-probability sampling technique in which existing study participants will aid in recruiting future participants from among their acquaintances.
2. Convenient Sampling: A sampling technique wherein the participants will be selected on the basis of the convenience of reaching out to them for the purpose of this research study. These include participants who are acquaintances and participants within the known reach of the researcher.

### ***Instrumentation***

Two measures were used in this study:

**1) Modified Fear of Missing Out Scale (Online Specific) for Online Fear of Missing Out:** To measure Fear of missing out (online specific) we have used the modified FoMO scale developed by Elisa Wegmann, Ursula Oberst, Benjamin Stodta, and Matthias Branda (2017). This modified scale assesses the bifactorial construct of FoMO on the basis of the original FoMO scale (Przybylski et al., 2013), plus additional items. The original Przybylski et al scale measured general FoMO. The modified scale measures FoMO as a bifactorial construct, one factor measuring general FoMO as a predisposition (trait-FoMO) and another measuring specific online FoMO as a state that is developed during the use of Internet-communication applications (state-FoMO). A five-point Likert scale (1 =totally disagree, 5 =totally agree) was used. The scores range from 12 to 60. The reliability of both subscales was good (trait-FoMO:  $\alpha = 0.821$ ; state-FoMO:  $\alpha =0.813$ ).

**2) Internet Addiction Test (IAT) for Internet Addiction:** Internet Addiction Test (IAT) - This is a 20-item scale, developed by Dr. Kimberly Young. It is regarded as the first validated measure for internet addiction. The items are rated on a 6 point likert scale, where 0 = not applicable, 1 = rarely, 2 = occasionally, 3 = frequently, 5 = often and 6 = always. It is a self-report questionnaire for adolescents and adults, which measures mild, moderate and severe levels of Internet Addiction. The score range is 0 to 100. Higher scores reflect greater levels of internet addiction. A total score between 0 and 30 is considered as a normal Internet user, between 31 and 49 as a mild Internet user, between 50 and 79 moderate internet addiction, and between 80 and 100 as severe internet addiction. Additionally, it also measures electronic entertainment and social media addiction presence as well as general use of electronic devices. The reliability and validity of this scale is good ( $\alpha=0.90$ ). Escape, Compulsion, Neglecting duties, Anticipation, Lack of Control, and Social Avoidance, are the six areas which are tapped by the Internet addiction test. Upon conducting factor analysis, Widyanto and McMurrin (2004) extracted 6 factors, namely: salience, excess use, neglecting work, anticipation, lack of self-control, and neglecting social life.

### ***Procedure***

The survey was done online using Google Forms. The Google form link was sent to various people; interested candidates were requested to be a part of the study and were also requested to send the form to their contacts as well. Participants' consent was taken and they were assured of anonymity and confidentiality of their participation.

### ***Research Design***

A quantitative correlation study was employed using a survey method. A correlation study was used to find if there exists a relationship between internet addiction and online specific fear of missing out. For further analyses, regression was carried out to see online FOMO as a predictor for Internet addiction.

### ***Ethical Considerations***

1. The participation of the individual will be voluntary and will be provided with consent form.
2. The participant will have the right to withdraw their participation whenever they wish to.
3. The details/responses collected from participants shall be kept confidential and anonymous.
4. The participants will be debriefed about the purpose of study at the end of the study.

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5. No sort of harm will be done on the participant.
6. The collected data will be used only for research purposes.

### RESULTS

The data were entered into SPSS 22.0 (Statistical Package for the Social Sciences for Windows) to conduct statistical analysis. In the analysis of the data, arithmetic mean, frequency, standard deviation, variance, skewness, kurtosis, Pearson product-moment correlation coefficient test, and simple linear bivariate regression test were used. The results were assessed at significance level of  $p < .05$ .

The total scores of participants ( $n=111$ ) averaged 38.19 ( $s= 14.61$ ) for Internet Addiction and 25.40 ( $s= 7.98$ ) for Online Fear of Missing out. The variance was 213.52 and 63.70 for Internet Addiction and Online Fear of Missing Out respectively. For Internet Addiction, the lowest score was 6 and highest score was 71 and for Online Fear of Missing Out, the lowest score was 13 and the highest score was 46. Table 1 shows the calculated descriptive statistics. To fix the skewness, log transformation was carried out for the variable Online Fear of missing out. Table 2. Shows the calculated descriptive statistics for the transformed online fear of missing out variable.

*Table 1 Descriptive Statistics for Internet Addiction and Online Fear of Missing Out.*

Variable	Internet Addiction	Online Fear of Missing Out
N	111	111
Range	65.0	33.0
Minimum	6.0	13.0
Maximum	71.0	46.0
Mean	38.19	25.40
Standard deviation	14.61	7.98
Variance	213.52	63.70
Skewness	.144	.559
Standard Error (Skewness)	.229	.229
Kurtosis	-.638	-.342
Standard Error (Kurtosis)	.455	.455
Median	38.00	24.00
Mode	40.0	23.0

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*Table 2 Descriptive Statistics for Transformed Online Fear of Missing Out variable.*

Variable	Statistics	Std. Error
Mean	1.3836	.01300
Median	1.3802	
Variance	.019	
Standard Deviation	.13694	
Minimum	1.11	
Maximum	1.66	
Range	.55	
Skewness	-.050	.229
Kurtosis	-.668	.455

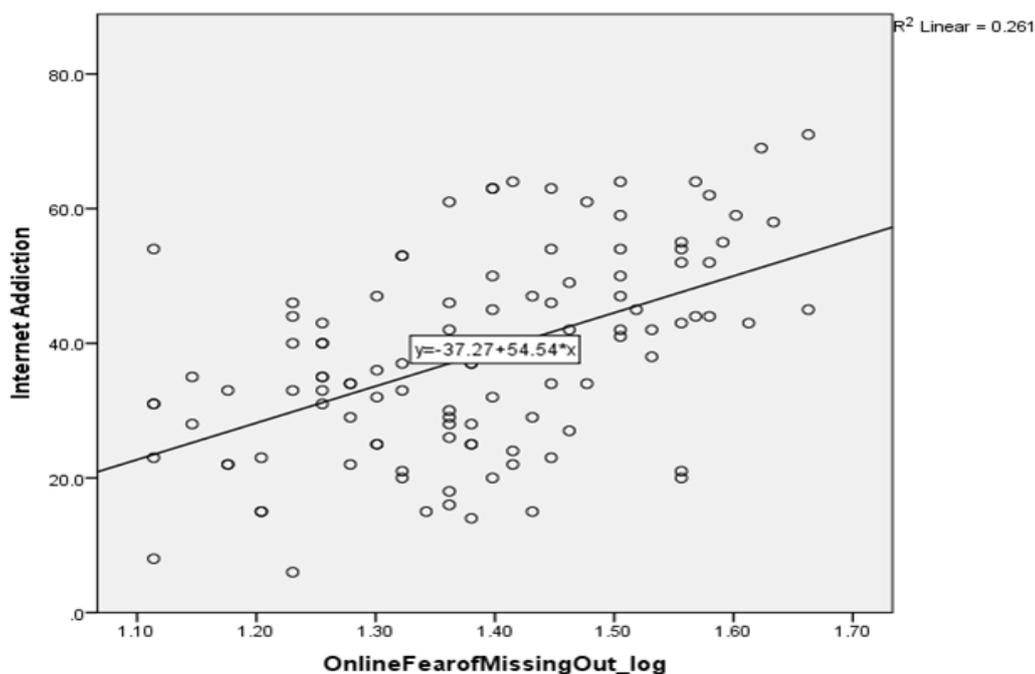
A Pearson product-moment correlation was conducted to examine the relationships between internet addiction and online fear of missing out. For Online fear of missing out, a log transformation was done to achieve normality. A moderate positive relationship was found between online fear of missing out and internet addiction,  $r(109) = .511, p < .01$ . The calculated correlations are presented in Table 3 and a scatterplot of online fear of missing out and Internet addiction is in Figure 1. These findings indicated that online fear of missing out explained 26.1% of the variance in internet addiction.

*Table 3 Correlations between Internet Addiction and Online Fear of Missing Out.*

		Internet Addiction	Online Fear of Missing Out
Internet Addiction	Pearson Correlation	1	.511**
	Sig. (2-tailed)		.000
	N	111	111
Online Fear of Missing Out	Pearson Correlation	.511**	1
	Sig. (2-tailed)	.000	
	N	111	111

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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**Figure 1 : Relationship between Internet addiction and Online Fear of missing out.**

A Bivariate regression was conducted to examine how well online fear of missing out could predict level of internet addiction. For Online fear of missing out variable, a log transformation was done to achieve normality. A scatterplot showed that the relationship between online fear of missing out and internet addiction was positive and linear and did not reveal any bivariate outliers. The results from regression suggested that online fear of missing out explained 26.1% of the variance in Internet Addiction,  $R^2 = .261$ ,  $F(1,109) = 38.55$ ,  $p < .001$ . This is a weak relationship (Cohen, 1988). The regression equation for predicting the internet addiction from online fear of missing out was  $\hat{y} = -37.27 + 0.55x$ . Thus, for every 1 unit increase in online fear of missing out scores, internet addiction scores increase by 0.55. Table 4, 5 and 6 display the various calculated statistics for regression and Figure 2 represents the residual scatterplot for regression.

**Table 4 Results of ANOVA for Regression.**

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	6136.019	1	6136.019	38.547	.000 <sup>b</sup>
Residual	17351.008	109	159.184		
Total	23487.027	110			

a. Dependent Variable: Internet Addiction

b. Predictors: (Constant), Online Fear of Missing Out\_log

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**Table 5 Model Summary for Regression.**

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.511 <sup>a</sup>	.261	.254	12.6168	2.339

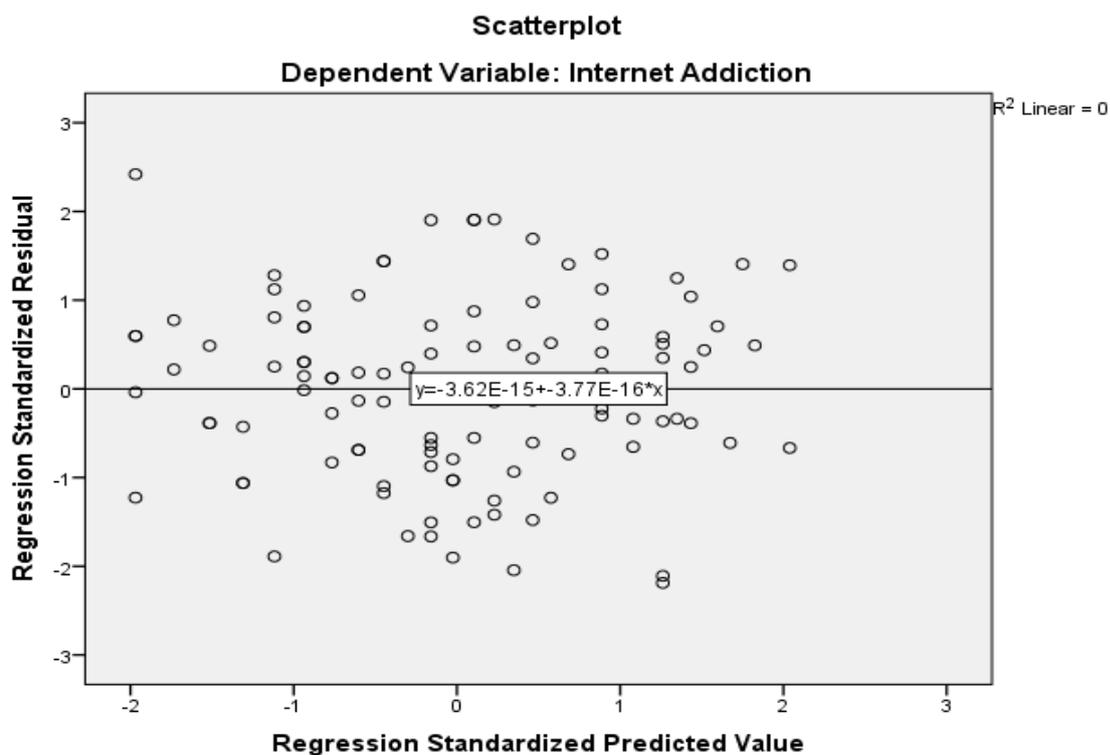
a. Predictors: (Constant), Online Fear of Missing Out\_log

b. Dependent Variable: Internet Addiction

**Table 6 Regression Coefficients.**

Coefficients <sup>a</sup>					
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-37.274	12.214		-3.052	.003
Online Fear of Missing Out_log	54.541	8.785	.511	6.209	.000

a. Dependent Variable: Internet Addiction



**Figure 2: Residual Scatterplot for Regression**

## DISCUSSION

In this study, online Fear of missing out and Internet Addiction among Mumbai youth were explored and the relationship between them was examined. Research results showed a positive significant linear relationship between Internet Addiction and Online Fear of Missing Out. These results were similar to those studies which found positive correlation between Internet addiction and fear of missing out among nursing students (Kargin et al., 2020). It was also in line with those studies which suggested fear of missing out as a sole variable being able to predict social media addiction (Blackwell et al., 2017); where it was observed that problematic smartphone use was directly related to Fear of missing out, anxiety, and need for touch and inversely associated with depression. (Elhai et al., 2016). Wolniewicz et al., 2018 had also reported that Fear of missing out was most strongly associated with both problematic smartphone use and social smartphone use. In the current study, a significant relationship was found between the variables and online fear of missing out explained 26.1% of the variance in internet addiction. These results suggest there are other variables which significantly explain the 73.9% variance in internet addiction. A unique feature of this study was that it studies fear of missing out in a specific context (state based) i.e. online and not as a general trait.

### *Limitations and Scope for Further Research:*

In this study, the chosen sample was from Mumbai city, thus representative of urban, metropolitan areas. The sample size in the study was small; hence a larger sample size is suggested for better generalization. Also, in the current study, gender, personality, and socio-economic status were not controlled. Future researches can explore the impact of these variables on internet addiction, online fear of missing out and the relationship between them. It would be interesting to explore these variables and their relationship implications in specific domains/areas such as academics, mid-life crisis, digital marketing etc.

## CONCLUSION

With very few researches studying online fear of missing out, the present study aimed to explore relationship between online fear of missing out and internet addiction. The results indicated that there is a significant, moderate positive relationship between the two variables, with online fear of missing out predicting about 26.1% of variance in internet addiction. As people are spending a great deal of time on internet and the sales techniques, applications and website interface designs are been shaped in a way that trigger fear of missing out, this study contributes a valuable finding.

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The author declared no conflict of interest.

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