

# Does Selfitis Exist?: “Development of a Selfitis Behavioral Scale”

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**Abstract:** *Selfie taken with a digital camera or smartphone is a self-portrayed digital photograph that is often shared on social media. Although this might sound like a normal part of the lifestyle, the excessive obsession to capture photos of oneself is classified as a mental disorder by the American Psychiatric Association (APA). This mental disorder was classified as ‘Selfitis’ by the American Psychiatric Association (2014). The stages of this disorder could be borderline, acute, and chronic. Empirical investigations have found different aspects of internal and external factors of the human mind that may instigate this behavior. This study aims to empirically explore this concept. Firstly, data is collected through focus group interviews from the students of Khulna University, and twenty-four items were generated for developing Selfitis Behavioral Scale. In the second phase, the Selfitis Behavioral Scale is developed and validated using the responses with Exploratory Factor Analysis. And five factors (Self-exhibition, Social enhancement, Environmental extension, Emotional modification, and Conventional Conformity) that play a role in three intensity levels of Selfitis are identified as well.*

**Keywords:** Selfitis, Social media, Self-Exhibition, Environmental Extension, Emotional Modification, Selfitis Behavioral Scale

## 1. Introduction

The term Selfie is defined in the oxford dictionary (2013) as “a photograph which is taken by oneself, normally a picture taken with a smartphone or webcam and shared on social networking sites” (Qiu et al., 2015). People try to excerpt memories and voucher their moments through selfies, but in this process, the selfie-takers portray them constantly in ways that lead them towards several abnormalities.

*Selfies appear as a double-edged phenomenon* (Diefenbach & Christoforakos, 2017). Individuals not only take selfies but also find it very difficult to resist sharing them on social media. It has become like a process of taking, posting, and viewing selfies continuously for many selfie-takers, and that ‘many’ include adolescents or adults no matter what gender it has. In modern days, the selfie has become an important phenomenon of culture, regardless of the context, situation, country, or people. Swann’s Self-verification theory (1987) stated that people seeking verification for self-views and selfies is one technique of portraying oneself in different preferable images. In this new generation world, traditional photography is replaced in a lump by this self-photography. Even before the concept of front cameras in smartphones, selfies were there, people took selfies using their Polaroid, cameras, or anything that can click a picture.

This increasing addiction towards selfies has initiated many types of research; according to APA this obsessive desire of capturing a photo of self is classified as psychological disorder ‘selfitis’. And this disorder is categorized based on the frequency of taking selfies and posting them on social media by individuals. Social networking sites are definitely allowing people to interact and connect and selfie is one way of showing a glimpse of lifestyle or reflex one’s personality in various contexts. Just like an addiction to the internet or social media, selfie addiction is also a candidate in this emerging line.

Past studies are conducted using the personality traits, in explaining the types of selfies taken. Like smiling cheerful pictures reflected extraversion, flashy attractive clothing, make-up, certain body postures reflect narcissism (Naumann

et al., 2010), Most people take selfies, not just for themselves; they have a platform called social media, where they can find a group of audiences, to express them in front of them through a certain impression (Barry et al., 2015). Some perceive that they can enrich their self-esteem and some merely want to present or express themselves by taking selfies and posting them on social media.

Now a question arises, “How individuals get addicted to selfie-taking behavior?”, “What are the factors that work to make people victim of the mental disorder selfitis?”, “Does ‘selfitis’ exist in this context of Bangladesh?”

There is no clinical way of knowing this phenomenon. If one is clicking an average of three selfies a day and posting on social media, then this behavior indicates selfitis (Andreassen et al., 2016). Now, it’s very important to find out whether people around us who seem to be very normal, is indulged in this mental disorder knowingly or unknowingly. The effects are enormous on an individual’s social and personal life. And this does not end here but leads to many more psychological aspects like depression, anxiety, stress, suicidal attitude, and so on (Andreassen et al., 2016).

The person-machine interactivity is never-ending, new technologies will come and new involvements will be created which at some point lead humans towards technological addiction (Griffiths et al., 2016). After this research on technological addiction, many types of research have taken place regarding mental health disorders resulting from technologies; internet addiction, social media addiction, or mobile phone addiction. Very few researches have taken place regarding the proof of the existence of selfitis. In this research, empirically the motivations that work behind capturing an abnormal number of selfies are going to be identified and linked with the categories of selfitis. The existence of selfitis is not fabled, to validate that a psychometric scale will be developed to measure sub-dimensions of selfitis.

## 2. Brief Overview of Selfie Behavior

In 2014, the news was published by the ADOBO CHRONICLES website where it stated that “*selfitis*” is a new mental disorder grouped by American Psychiatric Association (APA). Selfitis is defined to be the obsessive-compulsive desire to take photos of one’s self and post them on social media as a way to make up for the lack of self-esteem and to fill an intimacy gap (Balakrishnan & Griffiths, 2017). Selfitis has found to have three levels, who take selfies at least three times a day, take selfies at least three times a day and post each of them on social media and take selfies uncontrollably and post at least six photos a day on social media fall under borderline, acute and chronic levels successively (Vincent, 2014).

Researchers have investigated many areas of selfitis including the personal characteristics of the selfie-takers. Individuals having low self-esteem do more self-promoting activities on social media through selfies (Mohan et al., 2017). Getting positive feedback from social media aids an individual’s confidence regarding their appearance and positive attitude which for some people helpsto achieve higher self-esteem. A study showed every 8 out of 10 girls faced negativity on the social platform which has affected their self-esteem (Singh & Tripathi, 2017). Individuals tending self-objectification share more selfies on social media and positive feedbacks received there reinforce their behavior (Di Sia, 2017). Some individuals appreciate themselves and others based on their physical appearance rather than the traits of one’s personality, they try and project them in their intended way in the selfies. Extraverts upload selfies on social media in a nonrealistic style using altered colors or graphics edited (Qiu et al., 2015). Personal characteristics of humans were analyzed to see any association with selfitis behavior and the results found categories of personalities related to selfie behavior tends to be more strong for males (Fox & Rooney, 2015). The research shows dark traits like a psychopath, narcissism, or Machiavellism’s objectification in behavioral aspects in social networking sites where the male respondents have a more cogent impact. But in another study, the association between selfies and personality traits was analyzed and found that selfie owners are more likely to be females and younger (Qiu et al., 2015). However, a study in Thailand among 300 students did not show any significant difference between males and females regarding the association between selfie addiction and the different personalities related to it (Charoensukmongkol, 2016). People do not like to depend on others to click a picture while traveling or in other situations, most of them find the selfies relieving for that and they try to present and project themselves in their way in the self-clicked pictures (Diefenbach & Christoforakos, 2017).

“Socially anxious people who are afraid of personal interactions are found to have higher rates of internet usage” (Van Rooij et al., 2014). In another study, it was found that people with a higher degree of loneliness are more attracted to selfie-taking than interactive people (Charoensukmongkol, 2016). Investigation in these papers shows that Individuals try to find their solidity creating a bubble around them called social media, where they hide

behind a screen and post their life events and try to be involved with them socially. Individuals who are anxious, impulsive, and restless take excessive selfies, and it’s very unusual and difficult for them to wait to upload them on social media. Research shows, People having impulsivity or hyperactivity, share selfies more than other pictures or posts on social media (Singh & Tripathi, 2017). There is also a flipside to this addiction of clicking selfies in the form of being narcissistic. Constantly taking selfies in different contexts and situations make any individual especially the teenager conscious about themselves so much that they become obsessed with their physical appearance and self-admiration (Lobo & Gowda, 2016). The teenagers constantly sharing their selfies on social media is making themselves vulnerable to negative comments, judgmental attitudes, and abusive reactions (Safna, 2017).

In a qualitative research, Murray (2015) tried to link selfie addiction and social media exposure with the objectification of the female body and the pressure of being in the navel. With this increasing participation in social media, a selfie is one way of portraying individuals on the social platforms, and to gain attention from people the concentration has moved towards attracting the audience in every possible way, which is actually leading a whole generation of women apart from the core of Feminism (Murray, 2015). The teen or the younger generation constantly compares themselves to social networking sites. They measure their importance or love of others in the views or likes of their posts and if they do not receive their expected reaction that makes them vulnerable and embarrassed which in some cases leads to suicide. In social media people post selfies usually when they are enjoying, happy, or want to be famous, the people with lower self-esteem and depression seeing these post find their life more miserable, acutely turns suicidal (Di Sia, 2017). Individuals treat selfies as a tool of entertainment; the addiction comes to the later part when they start using them as a tool of self-presentation or self-expression. In this way, the selfie-takers become the artist and control the image of how others should perceive, however they may be lonely or sad or the life might not be the same as they try to project on the social platform. These kinds of situations have a great impact on the mental well-being of humans (P & Godwin, 2017).

Different individuals try to project the places in different unique ways imposing their personal views or perceptions of that place (Roberts & Koliska, 2017). This personal branding using social media where their beliefs, interests are expressed through self-clicked images, or sometimes self-discovering happens (Kucharska & Confente, 2017). Selfies have shifted the photographs serving as memory recorders to communication tools (Colman, 2010). Individuals more active in social media have more control over their self-presentational behavior behind a screen than in face-to-face communication with people (Krämer & Winter, 2008). So this is taken as an opportunity to establish the preferred aspect of the personality of oneself in front of the world and convey the best image of them. There is another section that is not interested in forming authenticity in their self-taken photographs. In the community or social circle where people belong, to be in continuous communication they become more active in using mobile phones or social network sites.

A large number of friends or a peer on social media leads to intensive use of social media, which at some point for people has become an addiction. And this kind of addiction harms employee productivity, mental health (Salehan & Negahban, 2013).

The selfie- culture is more encouraged as it is used as a marketing tool to reach consumers and interact with them. 'Marketing's task in the new consumer culture landscape is to furnish opportunities for consumer self-expression that subjectively feel creative and individualized.' (Hackley et al., 2018). In this digital era, most of the cell phone brands are using selfie campaigns as their marketing tool to reach their target consumers especially the youth. And these campaigns tag the brands as being more active according to the research (Sandhya, 2016). The companies want to be more engaged with the customer and build a better relationship for which they conduct these campaigns that do not really impact the long term brand personality. Selfies shot in private settings reveal rich details and cues that others are unaware of. Brands imperceptibly influence consumers using this strategy of four variations of brand selfies; simplistic, framed, revelatory, and constructed brand selfies (Presi et al., 2016). A study showed that selfie has a significant effect on the marketing of domestic tourism. People learn and know better about several tourist attractions through selfies. And even individuals are motivated to take selfies to connect with friends or family in that place and seeing that other people feel encouraged to be there (Mkwizu & Mtae, 2018). *The selfie can offer a brand the opportunity to create native and authentic engagement that humanizes the brand* (Olga, 2014). The brands are actually conducting short term selfie campaigns for being involved with their target consumers. In a way, the brands leverage the rate of selfies among normal people.

To extreme addiction to selfies, cases have been diagnosed by doctors that they become suicidal at a certain point, and death by selfies is increasing among the young generation every year 40% of which occurred in India (Safna, 2017). Depression and anxiety have a strong correlation with social media usage. Some individuals, who have predispositions to mental illness, share their life through selfies on social media to ease their symptoms. But the environment in social media increases or creates these feelings of depression, anxiety, and obsession (Bassett et al., 2016). Excessive revelation through selfies might reconnect someone with a huge number of people on the social media platform but it might also result in self-distance. Using selfies this exposure of oneself causes internal suppression of thoughts and emotions which fuels mental illness and depression leading to suicidal behavior (Hendry, 2014). The Russian Government has started a campaign to keep the young Russians out of dangerous selfies. The Russian interior ministry released a complete booklet warning about where they cannot take selfies (Maya Kosoff, 2015). Even in southern India, this kind of campaign started following some deaths in the craze for selfies (BBC India, 2017).

### 3. Method

In the first phase of the study, an exploratory design is used for investigating the reasons behind the addictive behavior

of selfitis and initial items are acquired. The items allocated are used in the second phase of the study as a questionnaire and the data are used for statistical analysis.

#### 3.1 Participants

The target population for this research is university students. In the first phase, the focus group unstructured interviews are conducted in groups, with respondents among the 5616 students of Khulna University. For the second phase, the samples are collected from the students of four universities in the southern part of Bangladesh. The population includes students from Khulna University, Jashore University of Science and Technology, Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Patuakhali Science and Technology University. The total population of the study is 26, 616 (Source: Wikipedia, 2018).

#### 3.2 Sampling

For the first phase of the study, the probability sampling method is used as the sampling technique. For determining the sample size we have used this equation,

$$n = \frac{Z^2 * p (1-p) / e^2}{1 + (Z^2 * p (1-p) / e^2 * N)}$$

Where,

Confidence level = 94%

Z value= 1.88

Population proportion, p= 0.5

Margin of error, e= 0.06

And population, N=5616 (students of Khulna University)

So, the minimum sample size is 235 and for this study 240 participants were participated.

**Table 1:** Categories of selfie-takers

<i>Borderline Group</i>	<i>Acute Group</i>	<i>Chronic Group</i>
Take selfies at least 3 times a day but do not post on social media.	Take selfies at least three times a day and post each of them on social media.	Take selfies uncontrollably and post at least six photos a day on social media.

(Source: The ADOBO Chronicles).

For the second phase of the study, the number of samples is ten times the number of expected items (Fabrigar *et al.*, 1999). As the number of items for the selfitis behavioral scale was twenty-four, the minimum number of respondents is 240, and 312 responses were actually taken.

$$\begin{aligned} & (\text{Number of items} \times 10) \\ & = (24 \times 10) = 240 \end{aligned}$$

#### 3.3 Procedure

To assess the sub-dimensions of selfies, the initiation for the development of the Selfitis Behavioral Scale is conducted. A sample of 240 Students were taken from the students of Khulna University, through five group interviews and three group online chats of twenty to forty minutes of unstructured nature (Example of the questions used in the interview was the following: "How many selfies do you take?", "Do you feel compelled to take selfies?", "what are the reasons that motivate you to take selfies?", "what are the situations or places where you take most of the selfies?"). And through these interviews, 45 statements were identified as the reasons for motivation for Selfitis among the participants

(Appendix A, Table 1). Conducting the screening process conceptually similar items were removed and 24 statements were finalized. These were applied in a questionnaire based on a 5 point Likert scale using the socio-demographic conditions (Appendix C). In the four selected universities through online survey 312 responses were collected among which 252 fell under the three categories of selfitis. With the responses of these 252 students using the IBM SPSS 23 software, exploratory factor analysis was conducted. Principle component analysis was carried out to reduce factors and five factors are identified. The varimax rotation is also used to observe the rotated loadings of factors. Cronbach's Alpha is carried out for the reliability test.

Using IBM AMOS 22 Confirmatory factor analysis is also carried out for scale validity. And finally, MANOVA is carried out if the factors differ across three selfitis intensity levels (borderline, chronic, acute). Scheffe's post hoc test is carried out to calculate the mean difference in total and within the group of the intensity level of selfitis in SPSS. And finally, an independent sample t-test is carried out to see if the factors differ between male and female.

#### 4. Analysis

##### 4.1 Socio-Demographic Characteristics

Table 2 shows that, among the 312 respondents, 252 students satisfied the three selfitis intensity levels. And these 252 respondents are basically between the ages of 18 to 26. The number of male respondents was a bit more than the female respondents. About 65% of respondents fall under the borderline level of selfitis. And around 32% fall under the acute level and only 3% fall under the chronic level of selfitis. So the results show that most of the individuals are in the borderline and of course they are at risk that they might go to an acute level in the future.

**Table 2:** Frequency distribution of Socio-demographic characters

Characteristics	Categories	Frequency	Percentage %
Age	16 to 20	84	33.4
	21 to 25	159	63.1
	25 to 30	9	3.5
Gender	Female	120	47.5
	Male	132	52.4
Family Structure	Nuclear	205	81.3
	Joint	47	18.7
Level of selfitis	Borderline	164	65.1
	Acute	80	31.7
	Chronic	08	3.2
Number of selfies taken per day	1 to 4 selfies	231	91.7
	5 to 8 selfies	15	6
	More than 8 selfies	06	2.4
Number of posts on any social media platform per day	None	164	65.1
	1 to 3 posts	79	31.3
	More than 3 posts	9	3.5

#### 4.2 Exploratory Factor Analysis

The principle component analysis with the KMO and Barlett's test was conducted with the 24 items included in the questionnaire. The results of KMO and Barlett's test showed adequate results to carry the analysis in Table 3 (Hox & Bechger, 1998). But the result showed adequacy for only six factors and nineteen items.

**Table 3:** KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.865	
Bartlett's Test of Sphericity	Approx. Chi-Square	1801.008
	df	276
	Sig.	.000

So again a principle component analysis with KMO and Barlett's test was carried out with Varimax rotation (Taherdoost *et al.*, 2014). The KMO showed 0.851 and Barlett's test showed 1365.581 which is adequate to be carried out. But the last factor had only one item, so item 23 has been excluded from the analysis.

The final principle component analysis with KMO and Barlett test with Varimax rotation which shows these five factors can explain 62.40% of the total variance. The five factors with eighteen items resulted in eigenvalues ranging from 1.7 to 9.23. The other items with lesser values have been eliminated from the analysis (Table 4).

**Table 4:** Results of Exploratory Factor Analysis on the Selfitis Behavior Scale

	Component				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Item 12.	<b>.822</b>	.041	.049	.125	.146
Item 4.	<b>.570</b>	.192	.330	-.142	.196
Item 17.	<b>.525</b>	.209	.000	.223	.006
Item 16.	<b>.505</b>	.189	.297	.137	.136
Item 11.	<b>.593</b>	.359	.282	.119	-.024
Item 1.	.163	<b>.583</b>	.008	.230	.066
Item 3.	.172	<b>.580</b>	.084	.030	.108
Item 7.	.216	<b>.532</b>	.296	-.083	.320
Item 2.	.077	<b>.504</b>	-.059	.195	.084
Item 10.	.160	.100	<b>.740</b>	-.051	.048
Item 8.	.148	.354	<b>.593</b>	.201	-.081
Item 9.	.213	-.170	<b>.569</b>	.109	.274
Item 13.	-.007	.033	-.142	<b>.584</b>	.373
Item 18.	.264	.243	.177	<b>.546</b>	-.013
Item 15.	.121	.065	.395	<b>.570</b>	-.074
Item 14.	.255	.462	.087	<b>.512</b>	-.078
Item 5.	.134	.150	.070	.197	<b>.759</b>
Item 6.	.243	.381	.202	-.079	<b>.580</b>
Variance %	14.782	12.838	10.962	10.053	7.432
Cumulative	14.782	27.52	38.582	48.535	56.068
Variance%	9.235	2.588	2.231	1.796	1.740
Eigenvalues					

Each of the five factors included at least three items and factor five had two items that explain enough sufficiency in the analysis and results (Byrne, 2001). All the items associated with their relative factors are all categorized and accumulated in Table 5.

**Table 5:** The Subscale categories of Selfitis Behavioral scale

Factors	Items associated
Self-Exhibition	Item 12, Item 4, Item 17, and Item 16, Item 11.
Social Enhancement	Item 1, Item 3, Item 7, and Item 2.
Environmental Extension	Item 10, Item 8, and Item 9.
Emotional Modification	Item 13, Item 18, Item 15, and Item 14.
Conventional Conformity	Item 5, and Item 6.

Conventional Conformity	0.575456	0.522446918
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4.3 Scale Validity and Reliability

4.3.1 Cronbach's Alpha Reliability Test

The Cronbach's alpha reliability coefficient for items that are more than 0.7 are considered to be acceptable (D'ATH, et al., 1994). From Table 6, we can see the Cronbach's alpha overall reliability is 0.860 which is higher than 0.70. That means the items are suggested to have higher internal consistency.

Table 6: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.861	.860	18

Table 7 shows, for each five factor's Cronbach's alpha, are identified and all of them are higher than 0.85.

Table 7: Subscales of the Selfitis Behavior Scale and Cronbach's alpha scores of the subscales

Items	Cronbach's alpha
Factor 01: Self-Exhibition	0.850
Factor 02: Social Enhancement	0.8532
Factor 03: Self extension	0.8560
Factor 04: Emotional modification	0.8562
Factor 05: Conventional Conformity	0.8555

4.3.2 Average Variance Extracted and Composite Reliability

The average variance extracted was calculated using the components of each item from the principle component analysis table. The squared rooted average variance extracted for any subscale components are accepted if the values are more than 0.5 (Sánchez-Franco & Roldán, 2005). Table 8 represents the values of average variance extracted and all of their values are greater than 0.5, so this confirms the convergent validity of the subscales in the Selfitis behavioral scale. Environmental extension carries the highest value for the average variance extracted. If the values of composite reliability in a scale are greater than 0.5 that concludes that the constructs of the scale are discriminant of each other (Awang et al., 2016). In table 7, the constructs of the scale show all of their values are greater than 0.5 which indicates the Selfitis behavioral scale is discriminant with each of the factors identified. And self-exhibition shows the highest composite reliability among all five factors.

Table 8: Square rooted AVE of items in selfitis behavioral Scale

Construct	√AVE (min0.5)	Composite Reliability (Min 0.5)
Self-Exhibition	0.568264	0.798847906
Social Enhancement	0.550601	0.554103476
Environmental Extension	0.701287	0.743464321
Emotional Modification	0.506675	0.597109158

4.3.3 Confirmatory Factor Analysis

The confirmatory factor analysis was performed using the Amos software where a model fit test was performed. Among lots of the goodness of fit test three types of categories have been identified for the Model fit test; incremental fit (CFI, TLI, IFI), absolute fit (RMSEA, GFI) parsimonious fit (Chisq/df).

Some researchers validate the value of Root Mean Square of Average if it is less than 0.08 (Browne et al., 1993). The value of the root mean square of average is 0.075 which is acceptable. For incremental fit tests the values should exceed 0.9 but in some cases of researches, it's been a piece of evidence that the comparative or incremental fit indexes do not exceed 0.9 but they still fulfill the requirements. So some researchers have also suggested the values for CFI, IFI, TLI are acceptable if above 0.8 (Doll et al., 1994). So the values for TLI, CFI, IFI all exceed 0.8 which is the indication of their acceptability. And different studies support chi-square should be less than 3 (Ullman and Filipas, 2001). Table 9 shows the value of the chi-square goodness of fit test is less than 3 which is acceptable.

Table 9: Confirmatory Factor Analysis

Model-fit test	Values
Root Mean Square of Average	.075
Incremental Fit Index	.852
Tucker-Lewis Index	.814
Comparative Fit Index	.848
Chi-square goodness of fit	2.395

4.4 Difference across Selfitis Intensity Categories

The hypothesis (H<sub>1</sub>) was to find out if the means of the factors differed across the three levels of Selfitis and for that MANOVA was conducted.

The results of MANOVA shows that four of the factors differs across the three intensity level of Selfitis. Among the five factors, social enhancement differed extensively among the three intensity levels of Selfitis (Table 10). Followed by Social enhancement, self-exhibition, Conventional conformity, and then Emotional Modification differed among the three intensity level of Selfitis. And Environmental extension did not vary at all in the three levels.

Table 10: Analysis of variance for the identified factors on the Selfitis Behavior Scale

Dependent variables	Mean	F	Sig.	Partial Eta square
Self-Exhibition	6.565	7.526	.001	.057
Social enhancement	9.765	36.040	.000	.225
Environmental Extension	1.826	1.988	.139	.016
Emotional Modification	4.739	5.941	.003	.046
Conventional Conformity	6.510	6.393	.002	.049

Table 11 shows the highest mean for all three intensity levels of Selfitis is in the factor ‘self-Extension’. The next highest mean for borderline, acute, and chronic levels is the factor ‘Emotional Modification’.

Table 11: Analysis of variance for the identified factors on the Selfitis Behavior Scale

	Level of Selfitis	Mean	Std. Deviation
Self-Exhibition	Borderline	2.5098	.94883
	Acute	2.9443	.91816
	Chronic	3.3000	1.00854
	Total	2.5717	.96530
Social Enhancement	Borderline	1.5793	.49905
	Acute	2.0316	.53464
	Chronic	2.7813	.78419
	Total	1.7600	.58898
Environmental Extension	Borderline	3.4919	.98486
	Acute	3.5751	.92137
	Chronic	4.0417	.70006
	Total	3.5671	.96208
Emotional Modification	Borderline	2.7119	.85918
	Acute	3.0633	.91503
	Chronic	3.4375	1.32119
	Total	2.8456	.91067
Conventional Conformity	Borderline	2.1037	.99149
	Acute	2.2911	1.04883
	Chronic	3.3750	1.21743
	Total	2.2032	1.03853

The post-hoc mean differences in three categories of Selfitis intensity level. Second factor social enhancement shows the highest mean difference between borderline and chronic levels. And Conventional conformity shows the highest mean difference between borderline and chronic categories (Table 12).

Table 12: Scheffe’s post-hoc mean differences across the three intensity categories

Dependent Variable	(I) 1. Level of Selfitis	(J) 1. Level of Selfitis	Mean Difference (I-J)	Std. Error	Sig.
Self-Exhibition	Borderline	Acute	-.4345*	.12888	.004
		Chronic	-.7902	.34073	.070
	Acute	Borderline	.4345*	.12888	.004
		Chronic	-.3557	.34915	.596
	Chronic	Borderline	.7902	.34073	.070
		Acute	.3557	.34915	.596
Social Enhancement	Borderline	Acute	-.4524*	.07129	.000
		Chronic	-1.2020*	.18847	.000
	Acute	Borderline	.4524*	.07129	.000
		Chronic	-.7496*	.19313	.001
	Chronic	Borderline	1.2020*	.18847	.000
		Acute	.7496*	.19313	.001
Environmental Extension	Borderline	Acute	-.1832	.13124	.379
		Chronic	-.5498	.34698	.287
	Acute	Borderline	.1832	.13124	.379
		Chronic	-.3666	.35555	.588
	Chronic	Borderline	.5498	.34698	.287
		Acute	.3666	.35555	.588
Emotional Modification	Borderline	Acute	-.3514*	.12232	.017
		Chronic	-.7256	.32340	.083
	Acute	Borderline	.3514*	.12232	.017
		Chronic	-.3742	.33139	.529
	Chronic	Borderline	.7256	.32340	.083
		Acute	.3742	.33139	.529
Conventional Conformity	Borderline	Acute	-.1875	.13926	.405
		Chronic	-1.2713*	.36817	.003

Acute	Borderline	.1875	.13926	.405
	Chronic	-1.0839*	.37727	.017
Chronic	Borderline	1.2713*	.36817	.003
	Acute	1.0839*	.37727	.017

Based on observed means the error term is Mean Square (Error) = 1.034. \*. The mean difference is significant at the .05 level.

#### 4.5 Difference across Five Factors for Gender

The hypothesis (H<sub>2</sub>) was to find out if the five factors are different for different genders or not. To do so independent sample t-test has been carried out. Levene’s test for equality of variances in Table 13 shows that except for social enhancement all the other p values are higher than the significance level. So the equal variances assumed are selected for the t-test of equality of mean for all four factors. And only for social enhancement equal variances not assumed is selected. Where the p-value is higher than the significance level for Self-exhibition, social enhancement, environmental extension, and conventional conformity, so the null hypothesis is accepted for these four factors. But for emotional modification, the p-value is less than the significance level, and the null hypothesis is rejected. So, the variances of emotional modification for Selfitis levels are not equal for female and male selfie-takers.

Table 13: Independent sample t-test

		Sig.	Sig. (2-tailed)
Self-Exhibition	Equal variances assumed	.499	.734
	Equal variances not assumed		.734
Social Enhancement	Equal variances assumed	.825	.110
	Equal variances not assumed		.111
Environmental Extension	Equal variances assumed	.025	.508
	Equal variances not assumed		.511
Emotional Modification	Equal variances assumed	.212	.001
	Equal variances not assumed		.001
Social Enhancement	Equal variances assumed	.721	.940
	Equal variances not assumed		.940

### 5. Findings

#### 5.1 Self-Exhibition

Previous studies show that individuals that are addicted to Selfitis have this conception that all their followers or friends in the social networking sites are very much interested in their lives and they find it important to share their experiences, different skills, or whatever is going on in their lives (Wickel, 2015). Self-Exhibition is done by sharing one’s achievements, skills, good feelings of life through selfies. From Table 10 it can be said self-exhibition has the highest mean in the chronic level among three levels of Selfitis. Though self-exhibition has lesser deviation inside the categories compared to other factors.

#### 5.2 Social Enhancement

Selfie taking is now a social phenomenon that has become a complete trend in societal issues. It has become like that habit that brings happiness and confidence in the members of society. Previous research has found that habits that bring

confidence to people may lead to excessive behavior and addiction (Ajzen, 2002). The highest mean value of social enhancement was 2.78 in the chronic level. And even social enhancement has the highest mean value of 9.76 among all the five factors. Social enhancement has one of the highest variances or mean differences among borderline and chronic levels.

### 5.3 Environmental Extension

A place or environment or even people are enriched or extended much more by branding it in a certain way in social media platforms through selfies. Researches show that human beings are very much influenced by society, and different creativity brings change and competition for the whole environment and people (Douglas & Fitzsimmons, 2005). Selfitis also comes from those creative ways that serve some artificial needs. So selfie-takers come with creative ways and try to redefine the environment or people they are with (Sutton & Keogh, 2000). The environmental extension has the lowest mean of all the five factors. This factor also does not differ across the three Selfitis intensity levels.

### 5.4 Emotional Modification

Emotional modification is done by taking selfies to get rid of boredom, find creative and attractive ways to present something or just for some mere entertainment. Emotional modification has a mean value of 4.793. The emotional modification does not differ majorly compared to other factors in the three intensity levels of Selfitis. Selfitis is one of those addictive behaviors that take part in changing the mood for better or worse. And this quality makes this addiction more addictive to individuals (Griffiths *et al.*, 2005).

### 5.5 Conventional Conformity

Conventional conformity is getting indulged into Selfitis behavior being encouraged by other people or bring a sense of bigger connectivity with people. This factor has a mean of 6.510. Conventional conformity has the highest variance among chronic and acute in the three intensity level of Selfitis. Individuals have this tendency of attaining a place in social groups and belong to society and its different groups. Selfie takers also have this tendency of getting acceptance of the society for which they follow certain conventional processes or rules. Individuals try and attain conventional conformity by even manipulating their behavior (Cialdini & Goldstein, 2004). So in the participation of attaining conformity or validation of society people get addicted to this selfie-taking behavior.

## 6. Conclusion

The taking of selfies was considered to be one of those fancy activities, but now its increasing propensity and importance conferred by communities and academics have given it a new dimension and an accustomed phenomenon of the culture. In this era, where life is embedded with technological aspects, researchers have found various facets of excess influence of technology on the human mind.

‘Selfitis’ is one of its results. In Bangladesh, the phenomena exist very much but are not addressed properly. With developing a selfitis behavior scale, this study explored the factors that actually trigger selfie addiction and find out whether selfitis exist. But because of the age group and number of samples, the study might be a little less representative.

The principle component analysis for this study resulted in five factors with KMO and Barlett’s enough adequacy. After exploratory factor analysis, six items were excluded and eighteen items were identified to be associated with the selfitis behavioral scale (Appendix B). And self-exhibition found to have the highest factor loadings. The reliability test of Cronbach’s alpha for all the factors were all above 0.85. And the validity tests average variance extracted, composite reliability, and confirmatory factor analysis all showed validity for the scale. The results of MANOVA showed that except for environmental extension all the other four factors varied across the three intensity levels of Selfitis. And the independent t-test showed only emotional modification is different for female and male selfie-takers.

This study is another addition to researches based on behavioral disorders because of technology. And also this empirical study gives data and enough proof of the existence of Selfitis. This research arguably gives adequate reliable information for further research and also validates the concept for researchers to work on this in some different contexts with other sections of people. This whole concept of Selfitis or addiction for selfitis may change as time evolves or the technology might further develop but this study will be potentially beneficial and useful in understanding the interaction of human and technological creations. Finally, the findings of this research show the reliability and validation of the Selfitis behavioral scale but more different confirmatory researches are necessary to validate this idea more adamantly.

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## Appendix A

**Table I:** Total items generated from the interviews

1. I take selfies to store memories.
2. Taking Selfie gives me mental peace.
3. Selfie taking is more out of habit for me.
4. Selfies are trendy for me.
5. I take selfies when I'm happy or in a good mood.
6. I take selfies to share my achievements.
7. I feel encouraged to take selfies when I see other people taking them.
8. I try to connect with more people on social media through selfies.
9. I try to get attention with my selfies.
10. I take selfies because I enjoy seeing other people's reactions.
11. I feel important when I take selfies and post them.
12. I want to be loved and accepted by posting my selfies.
13. Taking and posting selfies is more like showing off.
14. I take selfies of my extremely enjoyable moments.
15. When my make-up is good I take selfies.
16. Selfies are a way of letting people know about myself.
17. I share my happy moments to spread happiness with my selfies.
18. When I feel beautiful from inside I take selfies.
19. I take selfies to share them with my girlfriend/boyfriend.
20. I take selfies if I'm with someone famous or important.
21. I click and post selfies when I want to share any information or place with others.
22. I take selfies when I want to share how blessed and happy my life is.
23. I take selfies to share my make-up skills.
24. I take selfies when I'm bored.
25. If I'm wearing a good designer or a new dress, I take selfies.
26. I take selfies on my good hair days.
27. Sometimes for sympathy, I take and post selfies.
28. I make TikTok videos with my siblings or friends.
29. If I get any makeover like a hair cut or new color, I take selfies.
30. Selfies are just entertainment for me.
31. I feel inspired by sharing my work in progress situations on social media with selfies.
32. I share my selfies for validation from others.
33. I take selfies if I'm in any celebrated place.
34. Selfies work as a mirror for me.
35. I take selfies to show people anything rebellious that I've done.
36. I choose different poses and positions to stand out in my selfies.
37. I only take selfies under my peer group's pressure.
38. Clicking and posting selfies work as my personal branding.
39. Social media and Selfies are a way of connecting my old friends with my life.
40. Editing and posting selfies are very entertaining for me.
41. I take selfies when I'm not in my good moods.
42. Selfies bring creative importance for myself.
43. I take and share my selfies for likes and comments.
44. Selfie gives me better memories about my experience or occasions.

45. I take and post selfies for appraisals of people.

**Appendix B**

**Table 2**

Items associated with selfitis behavioral scale	
Item 1	Taking Selfie gives me mental peace.
Item 2	Selfie taking is more out of habit for me.
Item 3	Selfies are trendy for me.
Item 4	I take selfies to share my achievements.
Item 5	I'm encouraged to take selfies when I see other people taking them.
Item 6	I try to connect with more people on social media through selfies.
Item 7	I feel important and confident when I take selfies and post them.
Item 8	I take selfies to better enjoy the environment or place with my peers.
Item 9	I take selfies if I'm with someone famous or important.
Item 10	I click and post selfies when I want to share any information or any celebrated place with others.
Item 11	I take selfies when I want to share how blessed and happy my life is.
Item 12	I take selfies to share my skills (makeup, cooking, singing).
Item 13	I take selfies when I'm bored.
Item 14	If I'm wearing a good designer or a new dress, I take selfies.
Item 15	Selfies are just entertainment for me.
Item 16	I feel inspired by sharing my work in progress situations on social media with selfies.
Item 17	I take selfies to show people anything rebellious that I've done.
Item 18	I choose different poses and ways to stand out in my selfies.

These eighteen items are associated with the selfitis behavioral scale. These items can be used as 5 point likert scale (where 1= Strongly Disagree, 2= Disagree, 3= Neither Agree nor Disagree, 4= Agree, 5= Strongly Agree) and assess Selfitis behavior of people. The higher the sum of points for individuals the more likelihood of Selfitis.

**Appendix C**

**A survey on existence of Selfitis behavior, March 2019**

**Part-01**

**Direction:** Dear respondents, I'm a student of Business administration Discipline in Khulna University. I'm conducting this survey for academic purposes and all information from you will be treated with confidentiality. I would be highly obliged if you take out some time and give your valued insights.

**Socio-Demographic Information**

Please fill out the following items as accurately as possible. For multiple-choice questions please circle one answer only.

- 1) Name \_\_\_\_\_
- 2) Name of the University \_\_\_\_\_
- 3) Age \_\_\_\_\_
- 4) Gender  Female  Male
- 5) Family Structure  Nuclear  Joint
- 6) Number of siblings \_\_\_\_\_

**Level of Selfitis**

- 1) Number of selfies taken per day  
 1 to 4 selfies  5 to 8 selfies  More than 8 selfies  None
- 2) Number of posts on any social media platform per day  
 None  At least 1 to 3 times  More than 3 times.

**Part- 02**

For each of the questions below, circle the response that best characterizes how you feel about the statements; Where 1= Strongly Disagree, 2= Disagree, 3= Neither Agree Nor Disagree, 4= Agree, 5= Strongly Agree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I take selfies to store memories for future.	1	2	3	4	5
2. Taking Selfie gives me mental peace.	1	2	3	4	5
3. Selfie taking is more out of habit for me.	1	2	3	4	5
4. Selfies are trendy for me.	1	2	3	4	5
5. I take selfies when I'm happy or in a good mood.	1	2	3	4	5
6. I take selfies to share my achievements.	1	2	3	4	5

7. I'm encouraged to take selfies when I see other people taking them.	1	2	3	4	5
8. I try to connect with more people on social media through selfies.	1	2	3	4	5
9. I feel important and confident when I take selfies and post them.	1	2	3	4	5
10. I take selfies to better enjoy the environment or place with my peers.	1	2	3	4	5
11. I take selfies if I'm with someone famous or important.	1	2	3	4	5
12. I click and post selfies when I want to share any information or any celebrated place with others.	1	2	3	4	5
13. I take selfies when I want to share how blessed and happy my life is.	1	2	3	4	5
14. I take selfies to share my skills (make up, cooking, singing).	1	2	3	4	5
15. I take selfies when I'm bored.	1	2	3	4	5
16. If I'm wearing good designer or new dress, I take selfies.	1	2	3	4	5
17. Sometimes for sympathy I take and post selfies.	1	2	3	4	5
18. Selfies are just entertainment for me.	1	2	3	4	5
19. I feel inspired sharing my work in progress situations on social media with selfies.	1	2	3	4	5
20. Selfies work as a mirror for me.	1	2	3	4	5
21. I take selfies to show people anything rebellious that I've done.	1	2	3	4	5
22. I choose different poses and ways to stand out in my selfies.	1	2	3	4	5
23. I only take selfies under my peer group's pressure.	1	2	3	4	5
24. I take and share my selfies to be appreciated through likes and comments.	1	2	3	4	5