Project

Does everyone around me has a perfect life?
A survey on how scrolling through positive
social media contents can induce negative
emotions among Bangladeshi young adults.

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A survey on how scrolling through positive social media contents can induce negative emotions among Bangladeshi young adults.

Prepared For

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September 22, 2020

Letter of Transmittal

September 22, 2020

Ahmed Imran Kabir
Adjunct Faculty
School of Business and Economics
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Subject: **Submission of the Project**

Dear Sir:

I would like to submit my project titled "Does everyone around me has a perfect life? A survey on how scrolling through positive social media contents can induce negative emotions among Bangladeshi young adults", which has been prepared as a requirement for the completion of the BBA Program of United International University.

This project is a research paper which I have made by collecting first-hand, primary data through an online questionnaire-based survey. The goal of this paper is to find out the relationship between passive use of social media and different negative emotional outcomes. The paper focuses on the role of negative social comparison which is a dominant mediating factor to induce negative emotions among individuals, especially young adults. To achieve this goal, some statistical tests were implemented to analyze the collected data from 80 respondents.

While working on the project, I have tried to follow each and every guideline that you have advised. It has been a very enlightening experience to work in this project, as it has provided me with a variety of knowledge on how to collect, analyze and present data for research purposes. I believe, this research project will be greatly helpful to pursue my desired career ahead.

Sincerely,

Rifat Afrin

ID: 111 161 213

ACKNOWLEDGEMENT

First of all, I would like to express my heartfelt gratitude to my project supervisor, Ahmed Imran Kabir, for his support and guidance to complete this project. With his continued supervision in each step, I have successfully completed this entire project on time.

Also, I would like to thank my family, friends and all my well-wishers for their unconditional love, encouragement and support. Without these, I would not have succeeded in any of my work.

Finally, I shall be grateful to those people who will read this paper and get benefit from it at present and in future.

DECLARATION

I am Rifat Afrin, student of School of Business and Economic (MIS) of United International University, Bangladesh, do hereby declare that this research project titled, "Does everyone around me has a perfect life? A survey on how scrolling through positive social media contents can induce negative emotions among Bangladeshi young adults" is an original work and has not been previously submitted for any degree, diploma, title, or recognition. All the ideas, quotations and/or any other material from other people's work has been acknowledged in the references.

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Abstract:

The use of different social media platforms, such as – Facebook, Instagram, Snapchat, Twitter and TikTok has increased dramatically over the last decade. As a result, they have made a huge impact on the users, specifically, the young adults (20-29 years old). Though these media have many positive aspects like connecting with people and getting updates about the outside world, their negative sides cannot be overlooked. On social media, the users mainly post the "best things" about their lives. Also, people spend most of their time on social media by passively following others' updates. Therefore, others' positive self-presentations can make some viewers perceive, everyone around them lives a "better" and "happier" life. This perception can lead them to evaluate themselves and their lives in a negative way. Hence, seeing others' happiness on social media can make the viewers feel sad. In other words, scrolling through these social media feeds and stories invoke the viewers social comparison behavior, which subsequently gives birth to different negative emotional consequences. The current study therefore examined the relationship between passive social media usage and negative emotions through negative social comparison, in light of Festinger's social comparison theory. The study also investigated the dimensions of comparison on social media context and examine the group of individuals who are most vulnerable to negative social comparison. An online survey was conducted on 80 participants with a set of questionnaires. The main focus was on the role of passive use in negative social comparison behavior and negative emotions. The results indicated that there is a strongly positive association between passive use of social media and negative social comparison and there is moderately positive association between negative social comparison and negative emotions. Some helpful suggestions were also discussed to avoid negative comparison on social media when passively viewing other's positive contents.

Keywords

1. **Introduction:**

Does everyone around me has a perfect life? A survey on how scrolling through positive social media contents can induce negative emotions among individuals.

Social media sites such as – Facebook, Instagram, Snapchat, and Twitter reveal information about other's personal life, mostly, the positive sides. These positive self-presentation of people on social media give other viewers a misconception that everyone around them is living a better and a happier life, especially when they do not know these people personally (Chou & Edge, 2012). Some of these positive self-presentation social media activities include: posting a picture in which a person looks their best, (Manago, Graham , Greenfield, & Salimkhan, 2008) sharing photos of enjoying a quality time with friends (Zhao, Grasmuck, & Martin, 2008), showing off awesome and branded stuffs they possess, sharing flattering pictures of their romantic relationships, posting about their glorious achievements, and the list continues. Such positive contents that people share on social media can hurt other users' self-perception since an individual's self-perception is often shaped by how they are doing compared to others.

According to social comparison theory (Festinger, 1954), people compare their abilities and opinions with others who are either better off or worse off than themselves. Social comparison is a spontaneous and unconscious process (Niu, Sun, Zhou, Kong, & Tian , 2016) which means people involve in comparing oneself to others beyond their own knowledge. Social comparison behavior can have more serious consequences in context of social media, because here the viewers are more exposed to the personal information of others than in reality. Therefore, it becomes difficult to avoid negative social comparison as they can see best moments of other users of their seemingly perfect life. Thus, passively browsing these media makes them feel inferior because the viewers hardly realize that people only flaunt about their best moments online while concealing their worst experiences. Although, people actively posting on social media about their happiness might not intent to hurt anyone's feelings, but their positive contents can invoke other's negative emotional consequences and reduce their subjective well-being. (Tandoc Jr., Ferrucci, & Duffy, 2015)

Many prior studies mainly focused on the relationship between the use of social media and self-esteem, subjective well-being, body image, depression, through upward social comparison. One study by (Kalpidou, Costin, & Morris, 2011) found people who spend more time on Facebook tend to have lower well-being. The reason could be a major amount of time on social media is spent on

viewing the positive contents from different attractive profiles (Pempek, Yermolayeva, & Calvert, 2009). While browsing the social media passively, the users get to see how other's life experiences seem to be perfect which give birth to negative feelings such as envy, anxiety, loneliness or at large, depression (Steers, Wickham, & Acitelli, 2014; Krasnova, Widjaja, Buxmann, Wenninger, & Benbasat, 2015; Tandoc Jr., Ferrucci, & Duffy, 2015; Grieve & Watkinson, 2016).

The current study emphasizes on the relationship between the passive use of social media and negative emotional consequences where negative social comparison is the mediator. Most prior studies have focused on the impact of using Facebook on some negative emotional outcomes such as lower self-esteem envy, anxiety and depression. Along with these, the current study estimates there could be some other negative emotions worth studying, for instance; sadness, loneliness, irritation, inferiority, failure, dissatisfaction, misfortune and same by passive use of social media. Moreover, the current study examines whether and how the passive use of social media inducing negative feelings are subject to individual differences based on their demographic characteristics. The focus is on passive social media use because active use of social media might not induce negative emotions that much. Active use of social media promotes narcissistic behavior among individuals and they tend to focus more on sharing posts and pictures about themselves rather than passively browsing others' life online. On the other hand, when people use social media passively, they browse other's profile details or concentrate too much on newsfeeds or stories to see how others are doing. Seeing these positive updates of others especially when their posts are worth comparing, the audience often engage in negative comparison with their online peers and feel inferior to them. Therefore, it is assumed that the more people spend time on passive social media use, the more they will encounter negative emotions by comparing their lives with others' in a negative manner.

Since only a few prior studies have focused on the relationship between passive social media use and negative emotions in individuals through negative social comparison, some research questions can evolve as follows:

1. Which individuals are most vulnerable to negative comparison on social media?
2. What do people compare on social media the most?
3. What negative emotions are experienced from negative social comparison?

2. Literature review

2.1 Social Comparison

According to social comparison theory, people compare themselves with others to evaluate their abilities and opinions (Festinger, 1954). Social comparison is an automatic process which is forced upon people by their social environment (Mettee & Riskind, 1974; Mussweiler & Rüter, 2003). There can be two types of social comparison; upward social comparison and downward social comparison. Upward social comparison means when people compare themselves with someone superior to them on a particular dimension. In contrast, downward comparison means when people compare themselves with someone inferior to them on a particular dimension. (Nosanchuk & Erickson , 1985)

Both upward and downward social comparison can lead to many positive and negative emotional consequences. (Smith R. , 2000) For example, if others perform better in general or with a specific attribute such as intelligence, physical attractiveness, athletic ability, an individual will feel worse; when others are worse-off than the self, individuals will feel better. (Liu, Li, Carcioppolo, & North, 2016). On the other hand, upward social comparison can motivate some individuals for self-improvement making them feel better (Wood, 1989) and downward social comparison can make people feel sympathetic or worried for others. (Park & Baek, 2018) According to Festinger, people generally prefer to compare themselves with others who are better-off. In other words, people tend to make upward social comparison more than downward social comparison.

Social comparison itself is not problematic when people make positive upward comparison because it can motivate others to do better. But upward comparison provides a reference point against which a person's own situation may be perceived as inferior. As a result, people are more likely to compare themselves in a negative manner when they engage in upward social comparison. Subsequently, this negative comparison harms an individuals' emotional wellbeing inducing negative feelings (Frison & Eggermont, 2016).

Previous studies found that social comparison when made negatively can be detrimental to well-being and elicit negative feelings such as dissatisfaction with life, (Emmons & Diener, 1985), frustration, (Aspinwall & Taylor, 1993), discouragement and depression (Wheeler & Miyake, 1992), jealousy (Salovey & Rodin, 1984), hostility (Testa & Major, 1990) etc. among

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many individuals. All in all, people who make negative social comparison frequently, tend to be more unhappy and develop more destructive feelings and behavior. (Vaisman, 2018)

2.2 Passive use of Social Media and Negative Social Comparison

In context of social media, negative social comparison can exacerbate the impact on emotional consequences. The activities participated on these platforms opens the door of negative social comparison for people. The users of social media engage in different types of activities such as; (a) active use- engaging in activities that facilitate direct communication with others (for example, uploading or sharing photos and links, updating status, commenting on others' posts, instant messaging etc.) and (b) passive use- passively consuming content without directly communicating with others (for example, scrolling through the newsfeed, checking stories and stalking or browsing other's profile etc.) (Brikjær & Kaats, 2019). These activities, especially passive use of social media can pose an ample opportunity for some viewers to compare themselves with their online peers (Feinstein, et al., 2013). Therefore, this study focuses on the relationship between passive social media use and negative emotions of individuals through negative comparison.

Social media platforms are disproportionately filled with positive contents from other user's lives, where the negative contents are rarely exposed (Barash, Ducheneaut, & Isaacs, 2010). These platforms promote narcissistic behavior allowing people to share only the positive things about themselves (Mehdizadeh, 2010). As a result, when other users log into social media accounts, the newsfeed is often flooded with their friends' posts showing off perfect happiness and flawless life. Seeing that others are apparently doing better than oneself on one or more dimensions can be aversive for most viewers (Jordan, et al., 2010). While passively browsing, the viewers hardly realize that these social media friends selectively allow contents in their profiles where they can represent themselves in the best light (Rosenberg & Egbert, 2011) by filtering out their negative life experiences (Gonzales & Hancock, 2011). The viewers perceive that others live a happier and better lives, especially when they do not know these people in person. (Chou & Edge, 2012). Thus, scrolling through only the positive contents can unconsciously invoke the passive users' negative social comparison behavior that everyone around them lives a perfect life without any sorrows or hardships. The authors of a study show that, in reality, people tend to underestimate negative experiences of others and overestimate

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their positive experiences, which causes negative emotions to proliferate. In social media context, others' positive self-presentation plays a vital role to exacerbate envy feelings, since it promotes narcissistic behavior, with most users sharing only the best parts about them and their lives. (Mehdizadeh, 2010) Therefore, our first hypothesis is;

H1: Passive use of social media is positively associated with negative social comparison.

The most recent evidence suggests that when people continuously passively follow others on social media, it can lead them to various negative emotional consequences, such as exhaustion, annoyance, irritability and overload. (Burke, Marlow, & Lento, 2010) found a significant relationship between social media content consumption and perceptions of loneliness. These findings pose a great threat to passive users of social media lowering their subjective well-being and life satisfaction. Some other emerging researches suggest that passive use of social media is related to greater depressive symptoms (Frison & Eggermont, 2016; Escobar-Viera, Shensa, & Bowman, 2018; Nisar TM, Prabhakar G, & Ilavarasan PV, et al., 2019), lowered affective well-being (Verduyn, et al., 2015), social anxiety symptoms (Shaw, Timpano, Tran, & Joormann , 2015), increased loneliness, reduced social capital (Burke, Marlow, & Lento, 2010) and envy (Verduyn, Ybarra, Resibois, Jonides, & Kross, 2017) than active use. Some other researchers found that both active and passive Facebook use are related to increased social comparison and increased negative outcomes (Faelens , Hoorelbeke , & Fried , 2019). Therefore, our second hypothesis is;

H2: Passive use of social media is positively associated with negative emotions.

Despite having clear evidences that negative social comparison may lead to poorer well-being in general, little research exists on this process in the context of social networking. Prior studies have shown that people who make social comparisons on social media report greater depressive symptoms (Feinstein, et al., 2013). People who used social media like Facebook most frequently would have poorer self-esteem and that this relationship would be mediated by upward social comparison made through these social media sites. (Jordan, et al., 2010) found that upward social comparison with social media peers can produce envy, which illustrates the negative outcomes of passive following. Moreover, another study has shown that people who regularly engage in social comparison are more likely to experience feelings of envy, regret, guilt, defensiveness, and inadequacy. Also, they tend to lie and blame others or have unmet cravings. (Vaisman, 2018). Therefore, our third hypothesis is;

H3: Negative social comparison behavior is positively associated with negative emotions.

The purpose of the current study is to evaluate the relationship between passive use of social media and negative emotions among the young generation through negative social comparison. Previous studies mainly focused on depressive symptoms by passive use of Facebook. The current study tries to find out many other negative emotions which can prove to be dominant through passive use of all the social media platforms in general, when users engage in social comparison with others in a negative way. In this case, only passive browsing may not dictate a relationship with negative emotions. Because, people might follow others on social media and still be unaffected by their positive updates when they are not making any comparison. An individual will experience different negative emotional outcomes only when they engage in negative social comparison with others on social media. Therefore, our fourth hypothesis is;

H4: Negative social comparison mediates the relationship between passive social media use and negative emotions.

2.3 Dimensions of Comparison on Social Media:

Throughout their lives, people compare themselves to almost everyone around them. These comparison targets include friends, relatives, distant acquaintances, (Liu, Li, Carcioppolo, & North, 2016), peers, neighbors, social media influencers, even models and celebrities. In addition to real life social comparison, people tend to engage in social media comparison even more, because here they are more exposed to others' personal information mostly in the positive light. Passively browsing people's lives on social media generates stronger social comparison behavior among individuals and often making them feel life is unfair to them. (Krasnova & et al., 2015). The newsfeed and stories others on different social media platforms provide one-sided view of vacations on beaches, marriage proposals, career promotions increasing the possibility of lower self-evaluations and lower well-being among the participants. (Panger, 2014)**.** In addition to that, the users also compare themselves with their social media peers regarding academic success, salary level, and life achievements, health status, (Mussweiler & Rüter, 2003), beauty standards, popularity and the list goes on.

Despite having many dimensions of online social comparison, only a few were discussed in prior studies. Most of the studies focused on appearance related social comparison behavior through social networking sites. Along with appearances, there are many other dominating

factors that can have substantial negative emotional outcomes through social comparison. Many other dimensions which portray positive contents on social media were not given much attention in other studies. For example, material possessions, friends and family, romantic relationships, travel and leisure, achievements etc. are some significant factors that people compare themselves with others while passively browsing social media. To fill this gap, the current study emphasizes on these domains of online social comparison briefly.

2.3.1 **Appearances:** Appearance comparison involves comparing oneself with others in terms of other's attractive figure, and facial structure, beauty standards, and clothing style. It is the most common factor that people compare themselves to on social media than anything else. When users (mostly female users) make appearance-based comparison on social media, they go an extra mile in comparing every detail of the target's face, hair, skin (Fardouly, Diedrichs, Vartanian, & Halliwell, 2015) and body weight. The reason is these people post enhanced portraits of themselves where the details are quite noticeable making the viewers to engage in more frequent comparison and elicit more negative emotions like body dissatisfaction, lower self-esteem, envy, also depression.

Compared to men, women focus more on their appearance on social media. (Haferkamp, Eimler, & Papadakis, 2012) They are more prone to compare their appearances to others (Leahey, Crowther, & Mickelson, 2007) which in turn generates higher level of body dissatisfaction (Keery, Van den Berg, & Thompson, 2004; Myers & Crowther, 2009; van den Berg, Thompson, Obremski-Brandon , & Coovert, 2002; Vartanian & Dey, 2013). Thus, such comparison based on appearances can make these individuals concerned about their body images which may further lead to envy, body dissatisfaction, lower self-esteem, and even depression.

2.3.2 **Romantic Relationships:** Couples on social media love to share their virtual romance, sometimes too excessively. On social media, they brag about their relationship by updating relationship status, and posting happy couple photos, wedding and honeymoon photos which portray their perfect romantic life. Though their intention might not be to hurt anyone, but their perfectly crafted love life on social media can emotionally bring down many viewers on their friend list. People hardly talk about their insane arguments, break-ups or divorces on social media. As a result, the passive social

media users can go through these picture-perfect posts and unwillingly make negative social comparison and elicit negative feelings.

2.3.3 **Family and friends:** A lot of people post happy photos where they appear like they have got the best family and/or friends in the world. Photos with parents, children, life-partners, friends, cousins etc. can cause some sort of negative comparison behavior among some individuals who are not lucky enough in these matters.

2.3.4 **Material Possessions and affluent lifestyle:** Rich kids on internet constantly keep on showing-off their affluent lifestyle on social media. They tend to post pictures of their branded stuffs starting from expensive watches, bags, cellphones, electronic gadgets to luxurious apartment and cars. Moreover, they post the pictures of having lunch or dinners in classy restaurants, celebrating birthday parties on fancy hotels, throwing grandiose bachelor's/ bachelorette parties to show-off their lavish lifestyle. These highlight reels on social media can invoke negative emotions in most viewers through negative social comparison.

2.3.5 **Achievements:** Personal achievements might be another dominant parameter for negative comparison on social media. People love to share their academic, professional and other accomplishments on social media. Such positive contents can be photos of graduation, good grades, scholarships, skills certificates, admission in top universities, medals and trophies earned in sports or other competitions, starting new jobs, getting good internship opportunity, getting promotion in work, starting up a lucrative business etc. While these achievement photos can motivate some people, they can also lead individuals to feel inferior and miserable when negatively compared to their successful peers.

2.3.6 **Travel and leisure:** People love to share their awesome life experiences on social media by posting the pictures of their splendid vacations spent in beaches, trip to foreign countries. Additionally, they post about their leisure and hangouts, such as going to exhibition, museum, movies, football matches, stayover, get-togethers, reunions, concerts etc. These positive contents of social media friends mislead other users to the idea that how great and perfect others' lives are giving birth to negative emotional consequences in them.

3. **Methods**

3.1 Participants and Procedures:

An online survey through an extensive questionnaire were conducted consisting of 80 participants (32 males, and 48 females). Before participating, the participants were assured that it was an anonymous survey where their data will be kept confidential. Primarily, the questionnaire was constructed to measure different social media usage pattern, negative social comparison behavior and negative emotions. A pilot study with 20 participants (8 males, and 12 females) were conducted to examine the questionnaire and generate ideas to work with a bigger sample. The pilot study suggested that most social media users (85%) are aged 20-29 years. This age range has also been highest rated in depression diagnoses. (Jelenchick, Eickhoff, & Moreno, 2013). Therefore, people from this age range were chosen as the target population for this study. Moreover, young adults falling in this age group are more vulnerable to experience negative emotions through social comparison on social media compared to others. Some of the reasons include their developing identities, the importance they attach to social relationships, the uncertainties they face about the future, and the academic stress they are under (Subrahmanyam, Reich, Waechter, & Espinoza, 2008).

3.2 Measures

3.2.1 **Passive Use of Social Media:** Five popular social media were chosen to conduct this study, Facebook, Instagram, Snapchat, Twitter and TikTok. The participants were asked close-ended questions. This study was mainly interested to know "how" people used their time on social media, instead of "how much" time they spent. To determine the respondents were asked to answer few Likert items, such as "I spend most of the time on social media by scrolling through the feeds, stories, snaps and tweets", "I browse other's profile when I find them attractive". The participants answered on a 5-point Likert scale, ranging from "1 = strongly disagree" to "5 = strongly agree".

3.2.2 **Negative Social Comparison Behavior:** To measure how often and how much the participants engaged in social comparison behavior. The emphasis was put on "negative" social comparison that is, the degree to which people experienced thinking

that others are better off when viewing others' updates on social media. They were asked to what extent they agree with these statements: "I compare myself with my social media friends, followers and even strangers", "Though unintentionally, sometimes I compare myself with public figures", "I feel like other people have a "better", and "happier" life than me, based on what I see on social media". Participants answered on a 5-point Likert scale, ranging from "1 = strongly disagree" to "1 = strongly agree".

3.2.3 **Negative Emotions:** To measure negative emotions, the most important variable of this study the questionnaire was dissected into two sections. In the first section, the participants were asked how often they encountered "negative emotions" by seeing others positive contents (on different dimensions) on social media, to which they answered on a 5-point Likert scale ranging from "1 = Never" to "5 = Always". In the second section, the respondents were asked to choose (one or more) negative emotional outcomes they experience while browsing others' positive updates on social media. These options included, "sad", "envious", "irritated", "lonely", "unsuccessful", "unfortunate", "inferior", "ashamed", "lowered self-esteem", "dissatisfied", "anxious", "stressed", "depressed", or "none of these". It was found 91.25% respondents reported they have experienced at least "one" of these negative emotions while passively consuming positive contents of others on social media. The results also showed that people mostly felt sad (57.5%) when they passively followed others on social media and made comparison.

3.2.4 **Control Variables:** To simplify the hypothesized relationships of this research model, several demographic factors need be controlled. The demographics of social media users are some dominant factors that alters the usage pattern from one person to another, therefore needed to be controlled for further analysis (Arjan, Pfeil, & Zaphiris, 2008). These user demographics include gender, age, marital status, occupation and socioeconomic status. Demographics can have a significant influence on social media user behavior. For example, in previous studies women were found to be more active users of social media which make them more likely to engage in upward social comparison and experience negative consequences (Nolen-Hoeksema & Rusting, 2003). It is also found that 90% of social media users falls between the age group of 18

to 29 (Clement, 2020). Also, different age group might have different social media preferences. Similarly, people from different occupation, marital status, and socioeconomic status can differently respond to negative comparison behavior on social media.

3.3 Conceptual Framework for the Research:
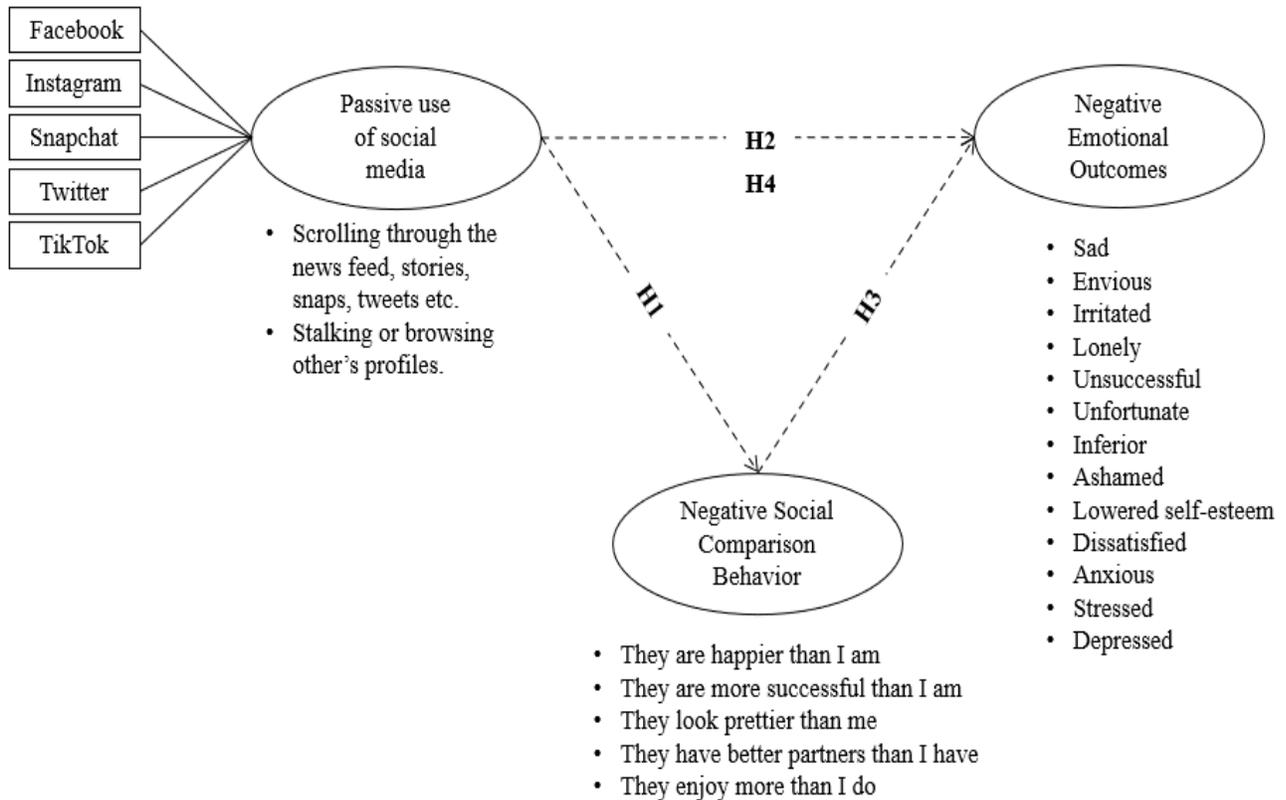
Figure 1: Conceptual Framework

Figure 1 shows the conceptual framework designed for this study. It illustrates the relationships between the hypothesized variables. When the users of different social media (Facebook, Instagram, Snapchat, Tweeter, and TikTok) uses them passively (by scrolling through the feeds, stories, snaps or tweets), they might engage in negative social comparison behavior (others are better off than I am), which can further lead them to different negative emotional consequences.

3.4 Data analyses:

To analyze the collected data a number of statistical approaches were adopted. First, the reliability for each variable (passive use of social media, negative social comparison and negative emotions) was tested. Second, descriptive statistics was conducted to determine the frequency and major percentage of social media user groups in terms of their demographic characteristics, such as gender, age, marital status, occupation and socioeconomic status. Third, the Spearman correlations were calculated to examine the bivariate relationship between passive use of social media and negative social comparison. Fourth, a linear regression analysis was conducted to study the impact of the coefficients of the independent variables on the dependent variable. In this study, passive use of social media and negative social comparison were considered as the independent variables, whereas, a range of negative emotions arising from these predictors was the dependent variable. All of these statistical analyses were conducted using SPSS version 26.

4. **Results**

The results of the study are divided into two parts. In part 1, the research questions were answered from research findings. In part 2, the results of the hypotheses tests are shown and interpreted.

Part 1

The online survey questionnaire for this research accepted responses actively for around three weeks. The collected responses within this time had 80 participants. They provided with complete information on both independent variables (passive use of social media and negative social comparison) and dependent variable (negative emotional outcomes). There was no missing value in the dataset. From the descriptive statistics it was found that 60% of the participants were female, 90% belonged to the age group of 20-29 years, 67.5% were students, 60% were single, and 42.5% were upper middle socioeconomic status.

Table 1: Frequency table by demographic characteristics of the social media users

	Frequency	Percent
Gender		
Male	32	40.0
Female	48	60.0
Total	80	100.0
Age		
13-19	3	3.8
20-29	72	90.0
30-39	3	3.8
60 and above	2	2.5
Total	80	100.0
Marital Status		
Single	48	60.0
In a Relationship	21	26.3
Engaged	2	2.5
Married	6	7.5
Widowed	1	1.3
Divorced	2	2.5
Total	80	100.0

	Frequency	Percent
Occupation		
Student	54	67.5
Professional	2	2.5
Clerical or office worker	1	1.3
Business owner	10	12.5
Manager/Executive	4	5.0
Healthcare Service	1	1.3
Housewife	3	3.8
Unemployed	4	5.0
Other	1	1.3
Total	80	100.0
Socioeconomic Status		
Lower	5	6.3
Upper lower	12	15.0
Lower middle	24	30.0
Upper middle	34	42.5
Upper	5	6.3
Total	80	100.0

Which individuals are most vulnerable to negative comparison behavior on social media?

To find out which group of individuals are the most vulnerable to negative social comparison behavior, a descriptive crosstabulation analysis was performed on the sample data of 80 respondents. For measuring the negative social comparison across all the demographics of the social media users, the participants had to answer three Likert items. The options for each item ranged from, "1 = strongly disagree" to "5 = strongly agree". Therefore, the lowest and the highest score for negative social comparison would be "3" and "15", respectively. The results in **Table 1** illustrates the participants' highest score (15) across all the demographics which assumably indicates these individuals are most likely to engage in negative social comparison, as they have selected "strongly agree" to each negative social comparison item. It can be observed that out of all the 16 participants checking strongly agree to each item of the scale are mainly, female (100%), age 20-29 years (100%), single (56.3%), student (56.3%), and upper middle (50%). Therefore, it can be deduced that these specific individuals are the most vulnerable to negative comparison behavior on social media.

Table 2: Cross-tabulation analysis: negative social comparison * social media user demographics

Negative Social Comparison * Age					
NSC (15)	Male		Female		Total
Count	0		16		16
Percentage (%)	0		100**		100

Negative Social Comparison * Age					
NSC (15)	13-19	20-29	30-39	60 and above	Total
Count	0	16	0	0	16
Percentage (%)	0	100**	0	0	100

Negative Social Comparison * Marital Status						
NSC (15)	Single	In Relationship	Engaged	Married	Widowed	Divorced	Total
Count	9	5	1	1	0	0	16
Percentage (%)	56.3**	31.1	6.3	6.3	0	0	100

Negative Social Comparison * Occupation						
NSC (15)	Student	Professional	Clerical	Business owner	Manager/ Executive	Unemployed	Total
Count	9	0	1	5	0	1	16
Percentage (%)	56.3**	0	6.3	31.3	0	6.3	100

Negative Social Comparison * Socioeconomic status						
NSC (15)	Lower	Upper lower	Lower middle	Upper middle	Upper	Total
Count	1	2	4	8	1	16
Percentage (%)	6.3	12.5	25	50**	6.3	100

NSC = Negative Social Comparison

**Group of individuals from different demographics with higher negative comparison tendency.

Research Question 2:

What do people compare on social media the most?

This study mentioned six common comparison dimensions: appearances, romantic relationships, family and friends, achievements, material possessions and affluent lifestyle, travel and leisure etc. The participants were asked, "what are the dimensions you find yourself compare the most with others on social media?". They were allowed to select more than one dimension. According to the responses from 80 participants, it was found (as shown in **Figure 2**) that 70% respondents checked "travel and leisure" as the most compared dimension on social media. The subsequent dimensions include achievements (52.5%), appearances (51.20%), material possessions and affluent lifestyle (46.30%), romantic relationships (43.8%), family and friends (28.7%).
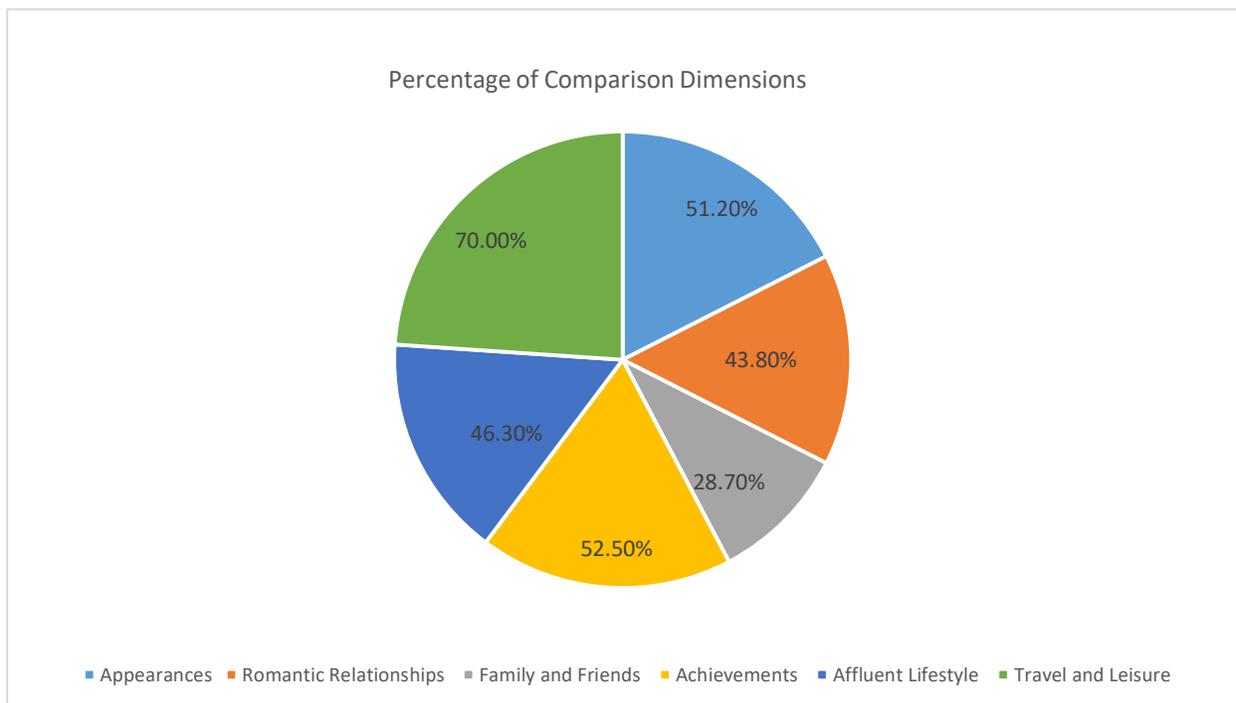

Figure 2: Percentage of Comparison Dimensions on Social Media

Research Question 3:

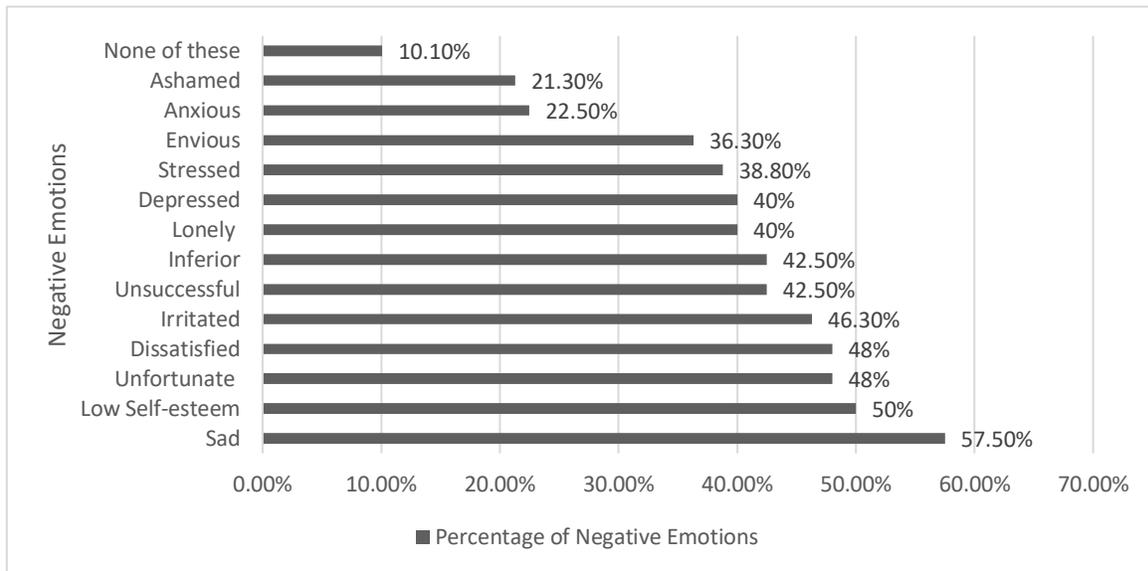### What negative emotions are experienced from negative social comparison?

Figure 3: Percentage of negative emotions experienced from passive use of social media

Most previous studies have mainly focused on stress, anxiety and depression resulting from social media use. Along with these negative consequences, when the users passively browse others' profile and positive updates, they often feel sad, irritated, unfortunate, inferior, dissatisfied, lonely, unsuccessful, low in self-esteem, ashamed and so on. This paper tries to measure these unstudied negative emotions from negative social comparison when users passively follow others. The participants of this study were asked, "what negative emotions occurred to you while browsing others' updates on social media?" They were allowed to choose more than one option. The results are displayed in **Figure 3,** which shows the participants experienced a wide range of negative emotions. Most experienced negative emotion was, sad (57.5%), followed by low self-esteem (50%), unfortunate and dissatisfied (48%), irritated (46.3%), unsuccessful and inferior (42.5%), lonely and depressed (40%), stressed (38.8%), envious (36.3%), anxious (22.5%), ashamed (21.3%).

Part 2

As mentioned in data analyses part, this study has calculated Cronbach's alpha to test all the variables' internal reliability. The results are illustrated in **Table 3**. The table shows, Cronbach's α scores for all variables were from 0.654 to 0.925, all of which is close to 0.70 or higher, which means the internal reliability of all the variables are highly acceptable.

Table 3: Reliability test for each variable (Cronbach's alpha)

Variables	Item	Cronbach's α
Passive use of social media	PuSM-1	0.65
	PuSM-2	
	PuSM-3	
Negative Social Comparison	NSC-1	0.87
	NSC-2	
	NSC-3	
Negative Emotions	NE-1	0.93
	NE-2	
	NE-3	
	NE-4	
	NE-5	
	NE-6	
	NE-7	
	NE-8	
	NE-9	
	NE-10	
	NE-11	
	NE-12	
	NE-13	

In order to test the hypotheses from **H1** to **H3**, first a correlation analysis and then a regression analysis were conducted. For **H1**, both Pearson's correlation and Spearman's rank-order correlation test was used to measure the bivariate relationship between passive use of social media and negative social comparison. Spearman's rho was determined as both the variables were ordinal and contained Likert scale items. The results in **Table 4** show that, passive use of social media is positively associated with negative social comparison behavior and the correlation between the variables is statistically significant (Spearman's rho 0.70, p-value < 0.01). As a consequence, **H1** is supported.

Table 4: Spearman's rank-order correlation

Variables	1. PuSM	2. NSC
1. PuSM	-	
2. NSC	0.70***	-

PuSM = Passive use of social media and NSC = Negative social comparison

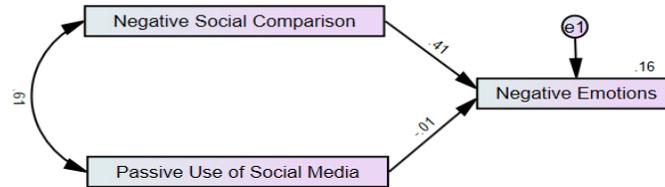*p < .05. **p < .01. ***p < .001

Figure 4: Pearson's Correlations (Passive use of social media, negative social comparison and negative emotions)

The Pearson's correlation (r = 0.61, p-value < 0.001) also shows a moderately positive relation between passive use of social media and negative social comparison justifying **H1**.

H2 and **H3** states that both passive use of social media and negative social comparison are positively associated with negative emotional outcomes. To justify these hypotheses, a multiple regression analysis was done to evaluate how much negative emotional outcomes an individual experienced, when they either passively used social media or engaged in negative social comparison while using any social media. Here, passive use of social media and negative social comparison were considered as the independent variables and a range of negative emotions was the dependent variable. Multiple Pearson's correlation coefficients were calculated to see how all the three variables correlated with one another. The results in **Table 5** illustrates, **H2** was supported, a weak but positive correlation was found (r = 0.24, p-value < 0.05) between passive use of social media and negative emotions, the correlation was statistically significant. Also, **H3** was supported, as there was there was a moderate and positive correlation (r = 0.41, p-value < 0.001) between negative social comparison and negative emotions, the correlation was statistically significant.

Table 5: Pearson Correlations (Passive use of social media, negative social comparison and negative emotions)

Variables	3. PuSM	4. NSC	5. NE
3. PuSM	-		
4. NSC	.61***	-	
5. NE	.24*	.41***	-
M	12.46	10.84	36.93
SD	2.61	3.72	12.61

PuSM = Passive use of social media, NSC = Negative social comparison, and NE = Negative Emotions

*$p < .05$. **$p < .01$. ***$p < .001$

The ANOVA results in **Table 6** shows, F test was highly significant which indicates the model is linear ($F = 7.55$, p-value < 0.01). As a result, the null hypotheses, "There is no relationship between Passive use of social media and negative emotions" and "There is no relationship between Negative social comparison behavior and negative emotions" can be rejected.

Table 6: ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2058.078	2	1029.039	7.550	.001
	Residual	10495.472	77	136.305		
	Total	12553.550	79			-

The regression analysis results from **Table 7** shows that 16.4% of total variability in different negative emotions can be explained by passive use of social media and negative social comparison (independent variables). The adjusted R^2 is 0.142 (14.2%), which is close to $R^2 = 0.164$ (16.4%) indicates the model is strong.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F Change	Sig. F Change
1	.405 [a]	.164	.142	11.675	7.550	.001

Table 8 illustrates the regression coefficients. The unstandardized coefficients (B values) of the variables shows for one unit increase in passive use of social media; the negative emotional outcomes decrease by 0.03 unit. On the other hand, for one unit increase in negative social comparison; the negative emotional outcomes increase by 1.38 units. The standardized coefficients

(Beta values) shows that if passive use of social media increases by one standard deviation, the negative emotion score decreases by 0.01 and if negative social comparison on social media increases by one standard deviation, the negative emotion score increases by 0.41. The negative regression coefficients for passive use of social media verifies it cannot be assured that passive following increases negative emotions. It means even though people browse positive social media feeds or stories they might not experience negative emotions. Whereas, the positive regression coefficients for negative social comparison, justifies that it can significantly induce emotions among people. Thus, the fourth hypothesis **(H4)** is also supported, which states, Negative social comparison mediates the relationship between passive social media use and negative emotions among people.

Table 8: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	22.285	6.397		3.484	.001
	PuSM	-.028	.633	-.006	-.044	.965
	NSC	1.383	.444	.408	3.113	.003

5. **Discussion**

Social media can serve to both positive and negative emotional consequences for an individual's subjective well-being. Most of the prior researches have mainly emphasized on the positive consequences of social media use because it enhances wellbeing through social interactions. (Valkenburg, Peter, & Schouten, 2006) Only a few emerging studies is yet investigating the negative consequences. Therefore, to contribute with the emerging studies, the focus of this study is to explore the negative emotions that individuals experience through making social comparison when they use these platforms passively. To achieve this goal, Festinger's social comparison theory was applied in context of social media to understand and evaluate the hypothesized relationships, and determine the magnitude of negative emotional outcomes among individuals on several dimensions. Particularly, the result of positive content-viewing was analyzed that associated with negative social comparison behavior, giving birth to many negative emotions. Moreover, the purpose of this study is to understand the fact that it is not *"how much"* time spent on social media, but *"how"* the time spent on social media is more important to investigate. Few studies have already showed that social information consumption or passive browsing, the most dominant activity on social media (Pempek, Yermolayeva, & Calvert, 2009) can be more threatening than the social media itself.

The present study has also contributed to the new branch of study on the nature of social media use, by concentrating more on the passive usage. Previous researchers, for example, (Kramer, Guillory, & Hancock, 2014) distinguished between negative and positive contents on social media newsfeed, but did not shed light on the usage pattern. (Tandoc Jr., Ferrucci, & Duffy, 2015) found that heavy users of Facebook experienced higher envy, which in turn lead to depressive status among the college students. Hence, unlike other studies, this study focuses mostly on passive use across five social media platforms and their consequences by showing that only passive use is linked to negative social comparison behavior; which subsequently induces negative emotions among young adults.

The current study has divided the common comparison factors in six major dimensions- appearances, romantic relationships, family and friends, achievements, material possessions and affluent lifestyle, travel and leisure etc. Majority of the positive contents on social media may fall within any of these dimensions. The current study has found that positive content-viewing can have a serious impact on numerous negative emotional consequences. When people browse social

media passively, they come across positive contents of others. These positive social media contents (texts, photos, or videos) can be others' self-presentation about their *"beautiful appearances", "success in job", "money", "graduation", "skills or abilities", "romantic life", "vacation or trip", "happy family", "lavish lifestyle"* etc. These contents on social media can make people intentionally or unintentionally fall victim to negative social comparison behavior, because others' lives seem to be "happier" and "better" (Chou & Edge, 2012). As a consequence, people often feel "inferior" when they compare themselves with others.

The results of the current study claim that negative emotions might come mostly from Facebook as 98% of the total respondents uses Facebook. Of them, 85% agreed that this medium is accountable for maximum negative social comparison behavior. "Travel and leisure" (70%), was the most compared dimension on social media. Furthermore, among all the listed negative emotions, *"sadness"* (57.5%) was the most common among individuals. By confirming the mediating role of "social comparison" in the relationship between passive social media use and negative emotions, the findings of current study significantly enrich established literature on the role of social media in asserting users' mental well-being. Though, this study was limited to a particular region, it is expected that these findings are appropriate across culture, because social comparison is an unavoidable phenomenon for every human being which breeds negative emotions. To my best knowledge, this is the first study to show that passive social media use is related to a great number of negative emotions, whether for short term or long term. For example, negative emotions can sometimes be temporary or short-term, like a drop in mood, or it can be extended for a longer period. A subtle mood swing can make people feel sad, irritated, or envious when they view positive contents on newsfeed or stories. When they ruminate on this behavior of negative comparison, they can face worse feelings like lowered self-esteem, lonely, stressed, anxious, even depressed.

As found from the study, negative emotions are inevitable from passive social media use, therefore, the magnitude must be controlled. To avoid negative comparison from passive following on social media, the users can adopt several strategies. For example, they can (1) stop adding people they do not know personally, (2) stop following people whose contents can induce negative emotions (3) remove or unfollow friends / followers with too many positive contents, (4) remind oneself that people only post the "best parts" of their lives on social media, (5) shout aloud *"stop"* to refrain oneself from comparison whenever they catch themselves comparing with others on social media.

In short, the current study expands the area of investigation about social media on different context. Firstly, the study examines how passively using social media can have negative emotional impacts on individuals through negative social comparison. Secondly, the study discusses on the domains which fuel to such negative comparison behavior. Thirdly, the study answers to several research questions such as which group of individuals are most vulnerable, what is the most compared dimension on social media, what is the most experienced negative emotions from social comparison on social media and which social media causes maximum social comparison behavior. Finally, the study also suggests few techniques to avoid social comparison on social media and minimize negative emotional consequences.

6. **Limitations and Future Research**

Despite the strengths and newness of this study, there are some limitations that must be acknowledged. Firstly, the results of the study entirely relied on the self-reported responses of the participants. Therefore, the authenticity of the data cannot be guaranteed. Though the questionnaire assured the confidentiality of data collection, yet people might not want to reveal their true emotions in fear of being judged. Second, this study was geographic-specific, where all of the participants were from Bangladesh. Though the results should be the same across cultures, because "social comparison" is a common phenomenon in every society, across all cultures. Yet, future studies can explore different cultures to measure negative social comparison behavior with a larger sample size. Also, different culture might prefer different social media, which can reveal different results. Third, only the young adult users (age 20-29) of social media have been used as the population of interest of this study. As a result, a lot of other age groups have remained unstudied, which should be further investigated in future studies. Because, there are many active social media users of other age groups as well, such as teenagers, middle-aged adults and senior adults. Fourth, only passive use of social media is highly emphasized in this study, but the users can actively use social media and still experience negative emotions. Though, the study has these limitations, the unique findings of it has significant contributions for future studies. By studying the mediating role of negative social comparison between passive use of social media and different negative emotional outcomes, this paper establishes an empirical framework for researchers with a clear understanding of these variables.

7. **Conclusion**

Most prior studies focused on how much time young individuals spend time on social media, to evaluate the relationship between social media and mental health. In contrast, the current study paid more attention to "*how*" and "*doing what*" this time was spent. Because, there is a difference between actively using social media instant messaging, uploading photos or videos, updating status, and passively following others' lives by scrolling through the positive feeds or stories. Based on the responses of 80 participants, the current study demonstrates the first evidence for indicating the role of passive social media use in inducing many negative emotions in young adults through social comparison. Arising as a consequence of passive following, such as browsing others' profiles and scrolling through the positive contents in newsfeed, stories, snaps or tweets of others, a wide range of negative emotions were emerged. Negative social comparison behavior was measured across five social media platforms including Facebook, Instagram, Snapchat, Tweeter and TikTok. Though, the results showed that all these media were not equally accountable. Also, not all the young adults are negatively affected by these dark sides of comparison on social media. Despite negative social comparison behavior can be unavoidable, it can be minimized if the users realize that others self-representation is not as good as they look when they passively follow them.

8. **Appendix**

Questionnaire

A survey on how passive use of social media can induce negative emotions through negative social comparison.

(Please be honest while answering. This is an anonymous survey where your responses will be kept confidential without judgement.)

Gender:

- o Male
- o Female

Age:

- o 13-19
- o 20-29
- o 30-39
- o 40-49
- o 50-59
- o 60 and above

Marital Status:

- o Single
- o In a Relationship
- o Engaged
- o Married
- o Widowed
- o Divorced
- o Separated
- o Other

Occupation:

- o Student
- o Professional
- o Clerical
- o Business owner
- o Manager/Executive
- o Healthcare service provider
- o Public service provider
- o Housewife
- o Unemployed
- o Other

Socioeconomic Status

- o Lower
- o Upper lower
- o Lower middle
- o Upper middle
- o Upper

Social media in use:

Which of these following social media do you use? (Check all that applies)

- o Facebook
- o Instagram
- o Snapchat
- o Twitter
- o TikTok
- o Other

Likert scale items:

Passive use of Social Media:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I spend most of the time on social media by scrolling through the news feed and stories.					
I browse other's profile when I find them attractive.					
I consume other's social media contents more than I create my own.					
Negative Social comparison on Social Media					
I compare myself with my social media friends, followers and even strangers.					
Though unintentionally, sometimes I compare myself with public figures.					
I feel like other people have a "better", and "happier" life than me, based on what I see on social media.					
Negative Emotions NE: sad, envious, irritated, lowered self-esteem, unsuccessful, unfortunate, lonely dissatisfied, anxious, stressed, depressed.	Never	Rarely	Sometimes	Often	Always
(Appearance) Photos or videos of people with beautiful facial structure and attractive figure.					
(Romantic Relationships) Photos or videos of couples on date, vacation, honeymoon.					
Photos or videos of romantic gestures.					
Photos or videos of other's wedding.					
(Family and Friends) Photos or videos of people with their awesome family and friends.					
(Achievements) Photos or videos of academic achievements.					
Photos or videos of sports achievements.					
Photos or videos of professional achievements.					
(Affluent Lifestyle) Photos or videos of branded accessories, expensive gadgets, luxury car or apartments.					
Photos or videos in expensive hotels, resorts or restaurant.					
Photos or videos of grand parties.					
(Travel and Leisure) Photos or videos of vacations and trips to beaches, foreign countries etc.					
Photos or videos of concerts, football matches, movies or exhibitions.					

As discussed above, what are the dimensions you find yourself compare the most with others on social media? (Check all that applies.)

- o Appearance
- o Romantic Relationships
- o Family and Friends
- o Achievements
- o Affluent Lifestyle
- o Travel and Leisure

How many dimensions have you selected?

- o 0
- o 1
- o 2
- o 3
- o More than 3

Which of these negative emotions occurred to you while browsing others' updates on social media? (Check all that applies.)

- o Sad
- o Envious
- o Irritated
- o Lonely
- o Unsuccessful
- o Unfortunate
- o Inferior
- o Ashamed
- o Low self-esteemed
- o Dissatisfied
- o Anxious
- o Stressed
- o Depressed
- o None of these.

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