Relation between Personality Traits, Fear of Missing out, and Depression among Social Media Users

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Abstract

Background: Fear of missing out is a pervasive apprehension that others might be having rewarding experiences from which one is absent. **Aim**: Assess the relationship between personality traits, fear of missing out (FOMO), and depression among social media users. **Design**: A descriptive - correlational design. **Setting**: The study was conducted at Assiut and Qena city in Egypt utilizing web-based online. **Sample**: Included 385 social media users. **Tools** of the study included socio-demographic data, Ten-Item Personality Inventory-(TIPI), Fear of Missing out Scale (FOMO), and the Depression scale (DEPS). **Results**: (13.20 ± 9.041) of the studied persons who have depression were more than 11 hours using the net but (11.60 ± 7.435) of them were more than 20 times using the net. Persons who have openness to experiences were positively and significantly correlated with times of using the net ($r=.125*$ & $p=.029$). The FOMO is positively and significantly correlated with the depression scale, the FOMO is positively and non-significantly correlated with Extraversion and Openness to Experiences. **Conclusion**: extraverted individuals and persons who are open to experiences have positive relations with FOMO because they searching for new and they are afraid of missing any events via social media. Also, the person who spends much time using the internet and checks the internet more than one time per day is complaining of depression. **Recommendations**: Implementation of psycho-educational programs for social media users to teach them how they can manage their leisure time rather than checking social media.

Keywords: Depression, Fear of missing out, Personality traits & Social media users.

Introduction:

Technology nowadays is taken into account as the second life for building family, love, intimacy, and social life. Online, fall prey to the illusion of companionship, gathering thousands of Twitter and Facebook friends, and confusing tweets and wall posts with authentic communication. But this relentless connection ends up in deep solitude **(Turkle, 2017)**.

Social networking site (SNS) use is extremely prevalent in industrialized nations. In the United States, about 68% of citizens currently use Facebook, with about three-quarters of users reporting daily Facebook use. This includes sites and applications like Facebook, Instagram, Snapchat, Twitter, and WhatsApp **(Dempsey, O'Brien, Tiamiyu, & Elhai, 2019)**. According to using the internet in Egypt, there are more than half of the people use Facebook every month **(Galal, 2022)**.

Increased social media use among university students has recently raised awareness of a couple of new phenomena termed fear of missing out (FOMO). Fear of missing out refers to the fear that one misses out on information, events, experiences, or life decisions that might make one's life better. The method of relative deprivation creates FOMO and dissatisfaction. It reduces psychological well-being. FOMO led to negative social and emotional experiences, like boredom and loneliness. Also, it negatively impacts mood and life satisfaction, reduces self-esteem, and affects mindfulness **(Oberst et.al., 2017)**.

Personality traits reflect people's characteristic patterns of thoughts, feelings, and behaviors. Personality traits imply consistency and stability-someone who scores high on a selected trait like Extraversion is anticipated to be sociable in several situations and over time. The foremost widely used system of traits is termed the Five-Factor Model. This system includes five broad traits: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism **(Diener & Lucas, 2019)**.

Stead & Bibby, 2017 found that individuals high in introversion and neuroticism were the foremost active social media users. it had been suggested that these individuals have difficulty making solid social connections in real-life and thus prefer virtual

company; a situation where they feel more confident. However, newer research found that extroverts were the foremost involved in social media.

Furthermore, research into the implications of FOMO has also shown that FOMO is related to problematic online behaviors and online addiction. FOMO plays a vital role in the development of psychopathological symptoms like depression, and anxiety (**Wolniewicz et al. 2018**).

Depression severity is associated with greater FOMO. FOMO in turn correlates with excessive social networking site use to meet social needs. FOMO should be a mechanism mediating depression with social media, based on these prior findings. FOMO would represent an intermediary cognitive bias or affective response between psychopathology (e.g., depression) with specific internet feature use, such as social media (**King & Delfabbro, 2019**).

Significance of the study:

Liberty Mutual Insurance (2016) reported that 48% of young adults access social media whilst driving; there have been 300,000 injuries and a few 3,000 fatal accidents from distracted young drivers using mobile phones. This exceeds the number of young adults who are killed by drunk driving annually. What's more, 88% of youngsters who use their mobile phones whilst driving consider themselves to be 'safe' drivers.

Fear of missing out (FOMO) is defined as apprehension or concern of being disconnected, absent, or missing an experience that others (i.e., peers, friends, family) might receive or enjoy. Moreover, people with a poor spirit (e.g., depression) and life satisfaction are likely to confront FOMO. Relatively recent studies have linked FOMO with different FOMO negative psychological and physiological conditions, e.g., engagement in risky behavior, depression, and other emotional and physical problems (**Dhir et al, 2018).**

Research has found that three personality traits correlated with time spent using social media are neuroticism, extroversion, and openness. Also found that openness and extroversion were positively associated with social media use and emotional stability was negatively correlated with social media use. Moreover, as long as FOMO is said to social media use, it's predicted that personality contributes to FOMO (**Stead & Bibby, 2017**).

As mentioned above, nurses should play a vital role in the prevention, and modification of behavioral addictions. This results from the fact that the nurses bring healthcare as close as possible to where people live and work. For this reason, they accommodate health problems in physical, psychological, social, cultural, and existential dimensions.

Aim of the study:

This study aimed to explore the relationship between personality traits, fear of missing out, and depression among social media users.

Research questions:

1) What is the relation between personality traits and fear of missing out among social media users?
2) What is the relation between fear of missing out and depression among social media users?

Subjects and Method

Research Design:
A descriptive – correlational design was used in this study.

Setting:
The study was conducted at Assiut and Qena governate in Egypt utilizing a web-based online survey via WhatsApp, Facebook, and telegram. Assiut city has a resident of 4941348 and Qena city has a resident of 354852.

Sample:
The study participants were recruited via social media like WhatsApp, Facebook, and telegram. People were invited to participate in an online study.

Subjects:
People aged ≥15 years and more, living in Assiut and Qena city, were able to respond to an online questionnaire.

Sample Size:
The total number of populations in Assiut and Qena governorates was 5296200. The sample size was calculated by using the following equation (**Steven& Thompson., 2012).**

$$n = \frac{N \times P(1-P)}{[N-1 \times (d^2 \div Z^2)] + P(1-p)]}$$

N= total patient population size of 5296200
Z= confidence level is 0.95 and is equal to 1.96
D= the error ratio is = 0.05
P= the property availability ratio and neutral = 0.50

After calculation, the exact sample size was 385 persons. The study participants were recruited via social media like WhatsApp, Facebook, and telegram. People were invited to participate in an online study. (305 completed the questionnaire and 80 persons refused to participate)

Inclusion criteria: Social media users accept to participate in the study; and the age range between (15 to 60 years was selected).

Tools of the study:
The study data were collected by using the following four tools:

Tool (I): Personal Data Questionnaire:
This tool was developed by the researcher in the Arabic language. It includes personal data such as

age, sex, occupation, marital status, residence, level of education, and other data like time spent on social media and frequency of using the internet.

Tool II: Ten-Item Personality Inventory-(TIPI)

It was developed by **Gosling et al., (2003)** in the English language and used for measuring personality traits. It is comprised of 10 items, each consisting of a pair of descriptors that were scored from one (strongly disagree) to seven (strongly agree). Each dimension of the Big Five (E – Extraversion, A – Agreeableness, C – Conscientiousness, ES – Emotional Stability, and O – Openness) was represented by two items, one stated in a way that represents the positive pole of the dimension and the other stated in a way that represents the negative pole. The Cronbach alpha was (α = 0.90) . (Gosling et al., 2003).

TIPI scale scoring ("R" denotes reverse-scored items): Extraversion: 1, 6R; Agreeableness: 2R, 7; Conscientiousness; 3, 8R; Emotional Stability: 4R, 9; Openness to Experiences: 5, 10R.

Tool III: Fear of Missing Out Scale (FOMO): -

It was developed by **Przybylski (2013)** in the English language and consists of 10 items. This tool is used to measure fear and social anxiety among individuals. Each item in the FOMO was rated on a Likert-type scale, ranging from one= 'not true of me at all to Five= 'very true of me'. The Cronbach alpha was (α = 0.87 to 0.90) (Przybylski, 2013).

Tool IV: The Depression Scale (DEPS):-

It was developed by **Salokangas RK et al., (1995)** in the English language. This is a self-rating instrument with a very short introduction, 10 items, and four response alternatives scored 0–3: not at all, a little, quite a lot, extremely, to assess depression. The Cronbach alpha was (α = 0.91) **.**

Tools validity:

The study tools were tested for validity by a panel of five experts in the fields of Psychiatric and Mental Health Nursing. The modifications were finished as needed.

Tools reliability:

Cronbach's Alpha was used to assess the reliability of the tools, it was (0.90) for the Ten-Item Personality Inventory-(TIPI) & (0.87 to 0.90) for the Fear of Missing out Scale (FOMO) & (0.91) for The Depression scale (DEPS).

Ethical and legal considerations:

Before starting the study, ethical approval was obtained from the scientific research ethical committee of the faculty of Nursing, Assiut University (25-1-2022). The survey was done online through social media such as Facebook, WhatsApp, and telegram and distributed to Assiut and Qena governorate populations. Before data collection, Assiut and Qena governorate populations were informed about the aim and the nature of the study which didn't cause any harm or pain & an oral agreement for participation in the study was taken via social media such as Facebook, WhatsApp, and telegram. Also, they were assured that the information was confidential and used only for research purposes. The participants were informed that participating in the study was voluntary; they had the right to withdraw from the study at any time.

Pilot study:

A pilot study was performed on 10 % of the sample (40 participants from the Assiut governorate population) to assess the applicability and clarity of the tool. According to this pilot study, the required modifications were made and eliminated from the study.

Procedure: **Fieldwork:**

The actual fieldwork was carried out over two months from the beginning of March until the beginning of April 2022; was involving two phases:

The preparatory phase:

The researchers reviewed past and currently available literature relevant to the study topic to acquire in-depth theoretical knowledge of the various aspects of the problem then they prepared the tools for the study.

The implementation phase:

• After appraisal of the proposal of the study by an ethical and scientific committee of the faculty of nursing to get the official permission to conduct the study.

• Upon securing official permission to conduct the study. The researchers sent tools to the population via social media such as Facebook, WhatsApp, and telegram explained the purpose of the study, and took her oral consent for participation in the study, around 6-7 sheets of the online questionnaire were completed per day, Each online questionnaire lasted about 5 to 7 minutes.

Statistical Analysis:

The data was processed, coded, and tabulated after it was checked and prepared for computer entry. The computer software SPSS version 20 was used to calculate descriptive statistics such as number and percentage mean scores, and standard deviation. For finding relations in this study, Chi-square, P-value, and t-value were used.

Results:

Table (1): Frequency distribution of the studied participant according to their personal data (n= 305):

| Items	No	%
Age		
▪ 15 to less than20	18	5.9
▪ 20 to less than 25	**118**	**38.7**
▪ 25 to less than 30	82	26.9
▪ 30 to less than 35	30	9.8
▪ 35 to less than 40	31	10.2
▪ 40 to less than 45	12	3.9
▪ 45 to less than 50	5	1.6
▪ 50 to less than 60	9	3.0
Mean ±SD	28.7 ± 8.2	
Sex		
• Male	71	23.3
• Female	**234**	**76.7**
Marital status		
▪ Single	**155**	**50.8**
▪ Married	144	47.2
▪ Widdow	2	0.7
▪ Divorced	4	1.3
Residence		
▪ Ruler	**159**	**52.1**
▪ Urban	146	47.9
Education		
▪ Read and write	1	0.3
▪ Preparatory	1	0.3
▪ Secondary	22	7.2
▪ University	**143**	**46.9**
▪ High studies	138	45.2
Occupation		
▪ No work	19	6.2
▪ Governmental worker	**181**	**59.3**
▪ Farmer	2	.7
▪ Student	81	26.6
▪ Special worker	22	7.2
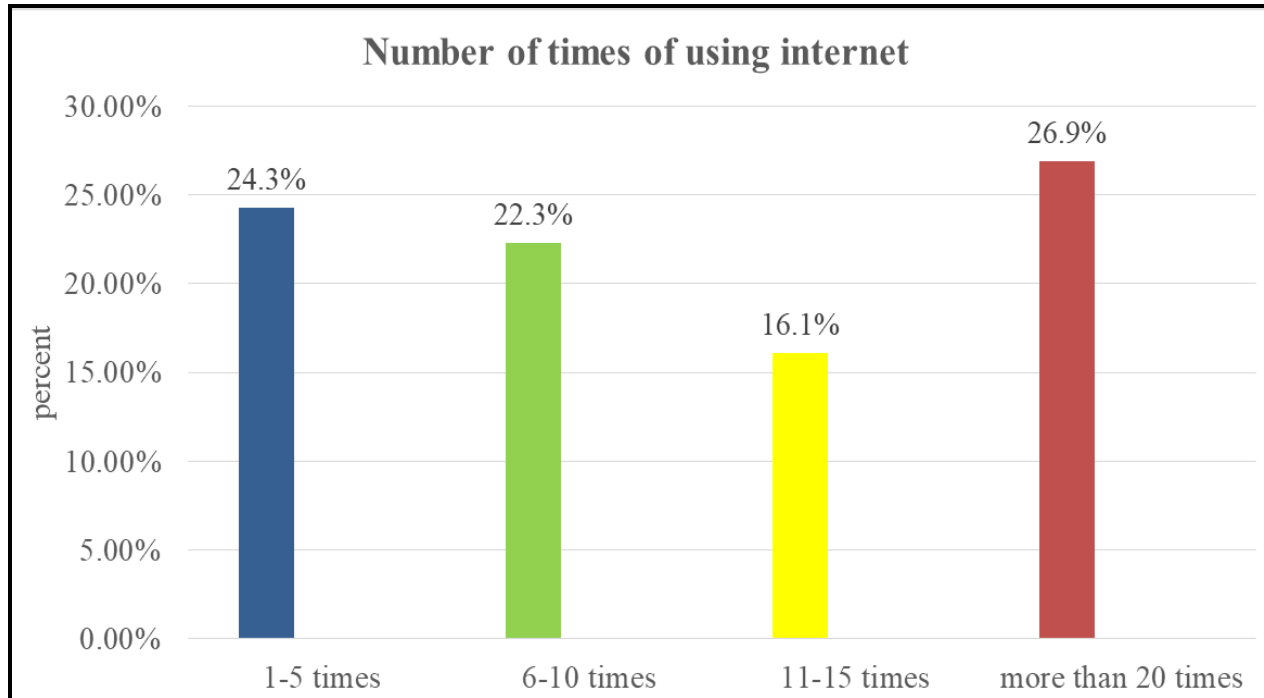
Figure (1): Percentage distribution of number of times using the internet among the studied participant (n=305):
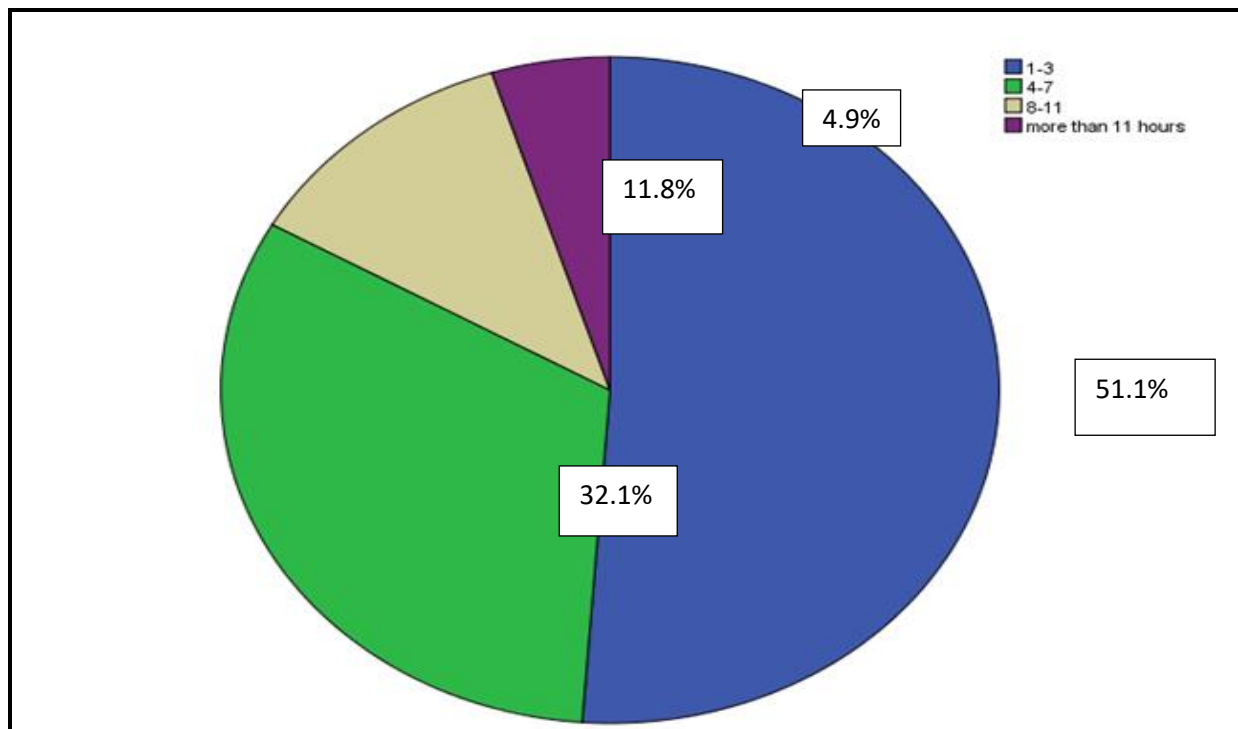

Figure (2): Percentage distribution hours of using the internet among the studied participant (n=305):

Table (2): Mean and SD of the studied participant according to their dimensions and **personality traits (n= 305):**

Personality traits dimensions	Mean	SD
Extraversion	8.1	2.5
Agreeableness	**11.8**	**2.1**
Conscientiousness	11.2	2.3
Emotional Stability	8.3	2.6
Openness to Experiences	9.5	2.5

Table (3): Distribution of mean and SD of depression with and number of times using the net(n=305):

Times of using net / Depression	N	Median	df	χ^2	p-value
1-5	74	7.00			
6-10	68	8.50			
11-15	49	10.00	4	10.55	**0.032 ***
16-20	32	9.00			
More than 20 times	82	**12.00**			

Kruskal Wallis Test

* Statistically significant difference (p<0.05)   *** Statistically significant difference (p<0.01)*

Table (4): Correlation between personality traits dimensions with the time of using net and hours of using net (n=305):

Personality traits dimensions	Times of using net		Hours of using net	
	r	p	r	p
Extraversion	-.038-	.503	.081	.160
Agreeableness	-.077-	.182	**-.123-***	**.031**
Conscientiousness	**-.139-***	**.015**	-.050-	.384
Emotional Stability	-.061-	.285	-.102-	.075
Openness to Experiences	.063	.274	**.125***	**.029**

*. Correlation is significant at the 0.05 level (2-tailed).   **. Correlation is significant at the 0.01 level (2-tailed).

Table (5): Correlation between personality traits dimensions Fear and social anxiety and depression among social media users (n=305):

		Fear and social anxiety	Depression	Extraversion	Agreeableness	Conscientiousness	Emotional Stability	Openness to Experiences
Fear and social anxiety	r	1						
	p							
Depression	r	.190**	1					
	p	.001						
Personality traits dimensions								
Extraversion	r	.067	-.130-*	1				
	p	.246	.023					
Agreeableness	r	-.049-	-.096-	-.041-	1			
	p	.394	.093	.480				
Conscientiousness	r	-.066-	-.296-**	.133*	.277**	1		
	p	.252	.000	.020	.000			
Emotional Stability	r	-.074-	-.410-**	-.042-	.153**	.204**	1	
	p	.198	.000	.466	.007	.000		
Openness to Experiences	r	.026	-.175-**	.201**	.057	.287**	.140*	1
	p	.647	.002	.000	.319	.000	.015	

*. Correlation is significant at the 0.05 level (2-tailed).   **. Correlation is significant at the 0.01 level (2-tailed).

Table (1): Illustrates the personal data of the studied participant. As regards age, about **38.7**% of the studied participant were age group from **21 to less than 25** years old. The mean age of the studied participant was **28.7 ± 8.2**. **(50.8%)** of the studied participant were single; **(52.1%)** of the studied participant were from rural areas; **(46.9%)** of the participant graduated from university;(**59.3**%) of the studied participant were governmental workers.

Figure (1): Percentage distribution of number of times using the internet among the studied participant (n=305):

Figure (1): Shows the percentage distribution of the number of times using the internet among the studied persons. About **(26.9%)** of the studied participant were more than 20 times using the internet.

Figure (2) shows the percentage distribution hours of using the internet among the studied persons. **(51.1%)** of the studied participant were **1-3hrs** of using the internet.

Table (2): Shows that, mean and SD of the studied persons according to their personality traits which indicated that **(11.7738±2.05787)** was agreeableness.

Table (3): Shows that there was a statistically significant difference between depression and the number of times of using the net **(p= 0.032).** It indicated that participants who used the net more than 20 times had the highest median **(12.00)** and chi-square **(10.55).**

Table (4): Shows that, the correlation between personality trait dimensions with the time of using the net and hours of using the net which indicated that the studied participant have conscientiousness were negatively and significantly correlated with times of using the net**(r=-.139-*& p=.015)** and the studied participant have agreeableness was negatively and significantly correlated with times of using net **(r=-.123-*& p=.031)** but the studied participants have openness to experiences were positively and significantly correlated with times of using net **(r=.125*& p=.029).**

Table (5): Shows that, the correlation between personality traits dimensions, fear, social anxiety, and depression among social media users. The fear and social anxiety are positively and significantly correlated with depression, the fear and social anxiety are positively and non-significantly correlated with extraversion and openness to experiences but the fear and social anxiety are negative and non-significantly correlated with agreeableness, conscientiousness, and emotional stability. Depression is negatively and significantly correlated with extraversion, conscientiousness, emotional stability, and openness to experiences but depression is negatively and non-significantly correlated with agreeableness. Extraversion is positively and significantly correlated

with conscientiousness and openness to experiences but Extraversion is negatively and non-significantly correlated with Agreeableness and Emotional Stability. Agreeableness is positively and significantly correlated with Conscientiousness and Emotional Stability but Agreeableness is positively and non-significantly correlated with Openness to Experiences. In addition, Conscientiousness is positively and significantly correlated with Emotional Stability and Openness to Experiences. Moreover, it was found that Emotional Stability is positively and significantly correlated with Openness to Experiences

Discussion:

This study aimed to explore the relationship between personality traits, fear of missing out, and depression among social media users. According to this study, there is a positive relation between extraversion personality traits and fear of missing out. it can be explained by extroverted participants looking forward to all new events and information, so they spend much of their time doing that and they are afraid of missing any events. this result agrees with **Bibby, 2008** who stated that extraversion and openness all predict the amount of social media use.

The present study reveals that most participants were younger persons. Similarly, **Blackwell et al., 2017** stated that FOMO is more common at a younger age. Also, it can be noted that male who experiences fear of missing out has a higher mean score and SD than female in this study. The explanation of these findings may be related to the cultural and social norms of our society which give males the freedom to expand their relations with their families, friends, and strangers, while females limit their relationships with others as they are aware of cyberbullying and they are prohibited to expand their relationships. On the other hand, one study illustrated that there were no gender differences in experiencing FOMO. **(Beyens et al., 2016)**.

According to the hours of using the internet, it is worth noting that social media users who spent much time on the internet had a higher mean score of depression than others. It can be interpreted by people who consume a large amount of social media posts and tweets starting by comparing themselves with others. Also, they regret missing time in non-productive sites. On the same line, **Baker, et.al, 2016** reveal that increasing use of social media could prompt a negative outcome. social media usage leads to mild depression or dysphoria.

The current study reveals that there is a positive correlation between extroverted personality and FOMO. The main explanation for this result is that extrovert individuals communicate frequently with others and their relations are expanded. In contrast

with this finding, one study showed that there is a negative relation between extraversion and FOMO. **(Hamutoglu, Topal, & Gezgin, 2020)**

Also, this study stated that there is a negative relation between conscientiousness and FOMO. It can be interpreted by the consciousness that individuals use the internet for specific purposes and they have a lower risk for internet addiction. In the same line, **Stead & Bibby (2017)** reported that there is a negative relation between conscientiousness and FOMO.

Moreover, this study shows that there is a negative relationship between emotional stability and FOMO. it can be explained by emotionally stable individuals being less likely to experience FOMO because they aren't complaining of anxiety, depression, or stress, while others who are less emotionally stable are more likely to use social media extensively. Similarly, **Altuwairiqi et. al. 2019** reported that FOMO is a problem with using social media, and is associated with negative life experiences and feelings, such as a lack of sleep, reduced life competency, emotional tension, negative effects on physical well-being, anxiety, and a lack of emotional control.

According to the present findings, there is a positive relationship between openness to experience and FOMO. This result may be related to these individuals who were interested and open to something new. They can access easy to all sites at low costs and they can obtain any information at any time, so this allows for problems with internet use they are searching all the time for events and news via the internet and they suffer from FOMO.

Conclusion:
The present study explored the relationship between personality traits, FOMO, and depression among social media users. Based on the obtained results, it can be concluded that extroverted individuals and persons who are open to experiences have positive relations with FOMO because they search for new ones and they are afraid of missing any events via social media. Also, it can be concluded that a person who spends much time using the internet and checks the internet more than one time per day complains of depression.

Recommendations:
Based on the results of the current study, the following recommendations are suggested:
1- Implementation of psycho-educational programs for social media users to teach them how they can manage their leisure time rather than checking social media.

2- Depression management techniques such as meditation, physical exercises, or restoring regular sleep patterns are necessary for social media users

3- Awareness programs for individuals are necessary to illustrate the relation between depression and FOMO to help them avoid this type of relationship.

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