# Age and Perceived Social Media Addiction as predictors of the Desire for Attention

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## Abstract

Social media platforms, utilized by many, is a topic of interest for researchers. Similarly, narcissism, which has a relationship with social media addiction is also of interest. The current study examined the relationship between perceived social media addiction, age/year, and a specific aspect of narcissism, attention-seeking desire. This is the first study to the best of the researcher's knowledge that has examined the variables in conjunction and has examined students from the Middle East, specifically, a Gulf country. Perceived social media addiction was divided into low, medium, and high. Although previous studies examined age with narcissistic tendencies, such as attention-seeking behavior, the current study looked at smaller age ranges, with each age range corresponding to a specific university year (Freshman, Sophomore, Junior, Senior). Results indicated that although perceived social media addiction was not a significant predictor of attention-seeking desire, Freshman students were five times more likely to define themselves as attention-seeking compared to Senior year students. This finding may be due to the age difference between the two years, or it may be related to the transitions that students in these years are experiencing.

**Keywords**: Social media, perceived social media addiction, attention-seeking desire, age.

## INTRODUCTION

Social Media Addiction

The use of electronics has increased over the years. Today most people utilize some form of social media platform. There are many purposes for the use of such platforms. Among the listed reasons are the sharing of information found relevant by the user, finding friends or members with similar interests, and connecting with members easily (Alsubaie & Lyndon, 2020; Okdie & Ewoldsen, 2018; Steinsbekk et al., 2021; Vahedi & Zannella, 2019). Social media platforms provide both immediate and continued interaction (Conroy et al., 2012). In fact, in today's age, online relationships have become as important as face-to-face communications (Edwards, 2016) and people have been preferring the use of social media platforms for interactions between family, friends, and acquaintances (Kuss & Griffiths, 2017).

With the rise of the number of people utilizing social media, researchers have begun to study it more closely, especially since a large percentage of students spend excessive time on the Internet and social media applications (Cotten, 2008). Among the topics studied by social psychologists are social media addiction and media attendance. When asked, students identified as addicted to social media, listed the following as reasons for being addicted: lack of friends, feeling of fulfillment, and fear of missing out (Aksoy, 2018). The more that a person utilizes technology, the more likelihood that they will be dependent on it (Arpaci et al., 2015).

Behavioral addictions include binge eating, gambling, video gaming, etc. Social media

addiction is a type of behavioral addiction as well (Griffiths, 2005). Although researchers initially examined Internet addiction (Grau et al., 2019), overtime different components of the Internet were examined, which includes social media platforms (Allahverdi, 2021c; Stavropoulos et al., 2017). Over the years more and more social media platforms have emerged, including Facebook, Instagram, Twitter, Tik Tok, etc. (Greenwood et al., 2016; Kircaburun & Griffiths, 2018).

Although there is no agreed upon definition of social media addiction since it is not included in the Diagnostic and Statistical Manual of Mental Disorders (DSM), the definition by Marlatt, Baer, Donovan, & Kivlahan (1988) can be utilized if addiction is to be defined in a general sense to include both behavioral addictions and other forms of addictions:

"...a repetitive habit pattern that increases the risk of disease and/or associated personal and social problems. Addictive behaviours are often experienced subjectively as 'loss of control' – the behaviour contrives to occur despite volitional attempts to abstain or moderate use. These habit patterns are typically characterized by immediate gratification (short term reward), often coupled with delayed deleterious effects (long term costs). Attempts to change an addictive behaviour (via treatment or self-initiation) are typically marked with high relapse rates" (p. 224).

Research shows that behavioral addictions can be just as harmful as other forms of addictions, such as the utilization of drugs (Griffiths, 2005). Social media addiction, a form of behavioral addiction, is related to a lack of self-esteem (Malik & Khan, 2015), hostility, depression (Widyanto & Griffiths, 2006), lower grade point scores in academics (Choi, 2018), among other mental health effects (Sujarwoto et al., 2019). Moreover, addiction is more possible when reinforcement is given immediately and this occurs with social media since it utilizes the behavior-feedback loop (Edwards, 2016). The impact of social media can vary based on the level of self-control a person has, the frequency with which one engages with social media platforms, and the time spent on the platforms once utilized (Grau et al., 2019; Martin et al., 2013). Moreover, if a person spends excessive time on social media platforms and is unable to control themselves, the self-discrepancy theory

can kick in, where a person's view of themselves does not match their own behavior (Higgins, 1987; Peloza et al., 2013). Individuals feel guilty about their social media use due to the existing discrepancy. In fact, Turkle discusses how the overreliance on technology has led to a decrease in social skills.

Narcissism

While previously there was a lack of consensus on defining narcissism, with the addition of the third edition of the Diagnostic and Statistics Manual (DSM-3), a consensus has been reached. When taking a closer look at narcissism, it can be characterized as (1) lack of empathy (2) the excessive need for admiration from others (3) the belief in the grandiosity of self (American Psychiatric Association, 2013). Thus, narcissism can be defined as an individual with characteristics that focus on self-importance and feeling special, which can lead to an expectation of service and is also related to a lack of empathy. It is related to being engulfed by the notion of being unique (Choi, 2018).

There are different measures for examining narcissism and non-pathological narcissism. Samuel & Widiger (2008) examined five different measures for assessing non-pathological narcissism and found Narcissism Personality Inventory (NPI) to have more empirical support compared to the other measures. Therefore, when deciding to examine a defining aspect of narcissism for the paper, the question was retrieved from NPI-16.

The NPI-16 assesses self-esteem, extroversion, dominance, and self-importance (Edwards, 2016; Corry et al., 2008). Research on narcissism mainly focuses on the two antagonistic traits of grandiosity and attention-seeking (Wright et al., 2013). A component of self-importance that the NPI-16 measures is related to the need for attention, which was utilized for the current study.

Social Media and Attention-Seeking

Users of social media "play an active role in choosing and using the media" (Edwards, 2016, p.27). Social media platforms provide an opportunity to create a positive image of one's self in a bounded system, allowing for goal-oriented behavior. The goal of narcissists is to gain admiration from people online. Attention can be quantified by examining mentions,

shares, and likes provided by others (Dewall et al., 2011) and individuals who want attention will often repetitively check their posts and engage in attention-seeking in a manner to either receive a desired feedback or empathy (Edwards, 2016). It is vital to examine psychological processes as part of "the debate on the controversial conceptual and operational definitions of behavioral addictions" (Boursier et al., 2020).

One of the main theories utilized by social psychologists is the Needs and Motivation Theory, which refers to Maslow's hierarchy of needs. This theory is organized in the form of a pyramid listing biological/physical at the bottom followed by security/safety, social/belonging, ego/self-respect, and self-actualization. Social media utilization fulfills the need to present one's self and to belong. To fulfill these two needs, social media platforms can be used to receive admiration and validation from others. This can be especially important for narcissists who believe they are special and important (Nadkarni & Hofmann, 2012). The excessive need for attention has been coined as attention addiction by some researchers. This excessive need for attention can ruin lives and lead to individuals letting go of valuable face-to-face relationships for online relationships that are constructed (Edwards, 2016).

It is important to note that social media platform use is normative behavior and therefore it is unreasonable to expect only narcissists to utilize social media platforms. However, previous research has supported the existence of a link between narcissism and excessive use of social media (Steinsbekk et al., 2021). Although this is the case, there has not been any research conducted on attention-seeking behavior which is a behavior exhibited by narcissists, its relationship with self-attributions, and how people perceive themselves as addicted to social media. Moreover, in general, there is a lack of research in examining personality behaviors and their relationship with social media (Edwards, 2016).

To date, there are a few studies that have looked at perceived social media addiction. These studies have focused on its relationship with the social media disorder scale, the difference among majors, the frequency of use of certain social media platforms, and its relationship with boredom (Allahverdi, 2021a; Allahverdi, 2021b; Allahverdi, 2021c; Allahverdi, 2022a; Allahverdi, 2022b). Thus, none of the studies have examined its relationship with attention-seeking behavior. The current study adds to the limited existing literature on perceived social media addiction and examines one aspect of non-pathological narcissism, which is the desire to be the center of attention.

Narcissism and Age

Transitions are important when viewing self-perception and self-perceptions impact the portrayal of narcissism. Thus, with this perspective, students can be expected to portray different levels of wanting to be the center of attention based on their transitions. For example, for college students, Freshman year corresponds to a transition from high school while Senior year corresponds to slowly transitioning out of college into a newer role. How society views a specific age group or these transitions has an impact on individuals (Carter & Douglass, 2018) and their behavior portrayal. Unfortunately, research on narcissism has lacked in examining the relationship between narcissism and age/year (Edwards, 2016).

Twenge & Campbell (2008) discuss how college-aged students were more narcissistic compared to older individuals. Research has also shown that narcissism decreases with age (Battegay & Mullejans, 1992; Edwards, 2016). What about examining closer age ranges and comparing the different student college years? The current study aimed to respond to this question.

Research Question

1. Does perceived social media addiction and age/year predict the desire to be the center of attention?

## Methodology

Participants

Student age/year, perceived social media addiction, and attention-seeking desire was measured through hard copy surveys. This ensured that each student completed the survey once instead of multiple times. The total number of students was 338. Twenty-five of the students had missing data and were thus removed. This resulted in a response rate of 92.6%. All

participants were students who attended a public university in the Gulf region of the Middle East. The total percentage of females was 64% compared to 36% for males. Although there is a drastic difference in the percentages, the percentage of students in each gender category is representative of the university at large.

Unlike the system in the United States where student ages can vary for the different university years, the system of the selected university expects students to apply right after high school. Therefore, Freshman year students are 18-19, Sophomore year students are 20-21, Junior year students are 22-23, and Senior year students are 24-26. Senior year students are allowed to repeat their year if they fail, therefore, the student age range is larger compared to the other years.

Procedures

The current study utilized random sampling to ensure that the selected sample was representative of the university. Through simple random sampling, each student had an equal chance of being picked, ensuring the representativeness of the sample. Ethical standards were followed to promote and ensure the rights of human subjects and verbal consent was received before beginning. The study was conducted according to the principals expressed in the Declaration of Helsinki. The data once collected through hard copies were transferred to SPSS. Once it was entered into the system, another researcher double-checked the data. No student names were utilized and each student was referred to with a random number, ensuring anonymity. The data was then stored by the researcher, preventing access from the outside.

Measures

Perceived Social Media Addiction Scale (PSMA; Eijnden, Lemmens, & Valkenburg, 2016).

Perceived social media addiction was assessed similarly to Eijnden et al. (2016). However, instead of viewing perceived social media addiction utilizing a five-point Likert scale, students were asked how addicted they felt from zero to one-hundred, which was then divided into the following three categories: none/low addiction (0-33), medium addiction (34-66), and high addiction (67-100). This change was made to the five-point Likert scale so that there would be more variability among the groups, due to the reduction of categories.

This measure was especially selected due its high correlation with the Social Media Disorder (SMD) scale. The SMD is one of the most commonly utilized measures for social media addiction. It was created utilizing the Internet Gaming Disorder (IGD) criteria found in the Diagnostic and Statistical Manual (DSM). "Social media addiction and Internet Gaming Disorder (IGD) are two forms of the same overarching construct of Internet addiction and should therefore be defined by the same set of diagnostic criteria" (Eijnden et al., 2016) since social media addiction is currently not in the DSM. Although the SMD is a 27-item scale, the perceived social media addiction is composed of only one question and is thus less time consuming. Therefore, the current study utilized the one item measure and assessed perceived social media addiction.

The following question was asked: "To what extent do you feel addicted to social media?".

Attention-Seeking (from the NPI-16; Ames, Paul, & Cameron, 2006).

Attention-seeking was measured in the current study utilizing question nine of the Narcissistic Personality Inventory-16 (NPI-16), which is a shortened version of the NPI-40. It has a "very notable face, internal, discriminant, and predictive validity" (Ames et al., 2006, p. 440). It is the most utilized measure of the trait narcissism (Gentile et al., 2013). However, since the NPI-40 measure is time consuming and is difficult to fill, many researchers employ the NPI-16 measure instead.

The measure assesses subclinical narcissism and is unidimensional. From this measure, questions one and nine assess attention-seeking behavior. However, although both questions have the same option one choice "I like to be the center of attention", the other choice given is "It makes me uncomfortable to be the center of attention" for question one and "I prefer to blend in with the crowd" for question nine. While question one refers to being uncomfortable, question nine refers to the opposite of being the center of attention, which is blending in with the crowd. Therefore, question nine was selected from the measure to examine the attention-seeking desire vs. its opposite.

The participants determined which of the following best described themselves:

( ) I like to be the center of attention

( ) I prefer to blend in with the crowd

## Findings and Discussion

Findings

Forward logistic regression was conducted for the predictors of age/year and perceived social media addiction for the outcome variable of attention-seeking desire. Data screening determined the lack of outliers. The model created included one dependent variable or criterion variable of either wanting or not wanting attention and two independent or predictor variables of age/year and perceived social media addiction that was significant (see Table 1). The model correctly classified 61 percent of the cases. Together the two variables accounted for 3.6% (Nagelkerke R2 ) of the variance in attention-seeking or non-seeking membership (Table 2). To examine the multicollinearity of the identified variables, a correlation matrix was created (Table 3). Multicollinearity refers to the independent variables being correlated with each other which can undermine or affect the significance of an independent variable. There was no significant correlation among the independent variables. This was also supported when the tolerance and Variance Inflation Factors (VIF) were examined.

Table 1. *Regression Coefficients*

|              | B     | Wald  | p     |
|--------------|-------|-------|-------|
| Year (1)     | 0.747 | 4.945 | 0.026 |
| Year (2)     | 0.434 | 1.876 | 0.171 |
| Year (3)     | 0.211 | 0.461 | 0.497 |
| Addiction Perception (1) | -0.229 | 0.313 | 0.576 |
| Addiction Perception (2) | -0.378 | 2.314 | 0.128 |
| Constant     | -0.453 | 4.231 | 0.04 |

Table 2. *Variance Accounted for by the Model*

| Step | 2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |
|------|------------------|----------------------|---------------------|
|      | 415.058          | 0.027                | 0.036               |

A Homer-Lemeshow test was calculated to examine the goodness of fit of the logistic model against actual outcomes. The Homer-Lemeshow test yielded a $\chi2(6)$ of 2.035 and was not significant (p>0.05) suggesting the data provided an adequate overall fit of the model (Table 4). Thus, the regression results indicated that the overall model fit of the two predictors was statistically reliable in determining whether someone was attention-seeking or not (-2 Log-Likelihood = 415.058). Compared to Senior year students, Freshman students were significantly five times more likely to define themselves as attention-seeking. However, Sophomore and Junior students were not significantly different from Senior year students although examination of descriptive statistics showed that both the Sophomore and Junior students had more students in the attention-seeking category compared to the Senior students.

Table 3. *Correlation Matrix of Predictor Variables*

|                | Freshman | Sophomore | Junior | Low perceived | Medium perceived |
|----------------|----------|-----------|--------|---------------|------------------|
| Freshman       | 1        |           |        |               |                  |
| Sophomore      | 0,319    | 1         |        |               |                  |
| Junior         | 0,329    | 0,342     | 1      |               |                  |
| Low perceived  | 0,03     | 0,074     | -0,044 | 1             |                  |

| Medium perceived | 0,072 | -0,06 | 0,018 | 0,263 | 1 |

Table 4. *Homer-Lemeshow Test*

| Step | Chi-square | df | Sig. |
|------|-----------|-----|-------|
| 1 | 2,035 | 6 | 0,916 |

Discussion

The current study asked if perceived social media addiction and age/year predicted the desire to seek attention. This is the first study to the best of the researcher's knowledge that has examined these variables together. Findings indicated a significant difference between Freshman (18-19 age group) and Senior (24-26 age group) students. The Sophomore (20-21 age group) and Junior (22-23 age group) years were not found to differ significantly from the Senior year students.

Previous research has shown college-aged students to be more likely to portray narcissistic tendencies compared to older individuals (Twenge & Campbell, 2008). This was supported by Kristinsdottir et al. (2021) who found that age, specifically younger age, was found to be related to narcissism. Based on these results, it can be said that due to the larger age range between Freshman and Senior students, there is a statistically significant difference in the desire to attract attention. Since Sophomore and Junior students are closer in age to Senior students, there is no statistically significant difference between them. It is also important to note that this is the first study to the best of the researcher's knowledge that has examined close age ranges rather than examining generational age differences and thus adds to the existing literature.

Research shows that self-concept or perception of one's self has a relationship with narcissism (Farzand et al., 2021). Transition has also been related to how people perceive themselves and its relationship with attention-seeking behavior (Sened et al., 2019). Moreover, Wigfield et al. (1991) discuss how transitions from elementary school to junior high impacted the self-perceptions of the students. Therefore, another explanation for the statistically significant difference is related to transitions. Since transitions are important and related to a person's self-perception and self-perception, in turn, is related to narcissism, it can be said that the significant difference is due to the transition that Freshman students have recently gone through and the transition that the Senior students are going through. Thus, due to the transitions of these two years, the students' self-perceptions are impacted which in turn is related to the portrayal of the narcissistic tendency of wanting attention.

Edwards (2016) refer to how social networking site (SNS) users "seek various types of feedback as a result of the communication created by them in the form of social media posts" (p. 25). These expectations and the feedback-loop that results from the algorithms can lead to addiction (Burhan & Moradzadeh, 2020). Due to posting on social media platforms and receiving instant feedback and attention, attention seeking behavior slowly increases overtime. Moreover, other features of social media also support attention-seeking behavior, such as taking selfies (Edwards, 2016). While a statistically significant result was found in age/year, this was not the case for perceived social media addiction. This may be partially due to the way perceived social media addiction was categorized in the current study (low, medium, high). Moreover, attention-seeking tendencies may be more related to actual social media addiction rather than perceived social media addiction.

In the future, attention-seeking desire should be examined with actual social media addiction rather than perceived social media addiction to determine if there is any significance. The current study utilized the perceived social media addiction scale by Eijenden et al. (2016) after making slight adjustments. In the future, the Social Media Disorder (SMD) scale or the commonly utilized Internet Addiction Test (IAT), such as the one by Mahamid and Berte (2019), can be employed to determine if there is any significance.

Furthermore, since Facebook use has been related to attachment anxiety, which leads to attention-seeking behavior, future studies can examine whether social media addiction is related to attachment anxiety (Edwards, 2016).

It is possible for there to be a statistically significant relationship between attachment anxiety and social media addiction since previous research shows a significant relationship between Fear of Missing Out (FOMO) and addiction, which is a form of anxiety (Bloemen & Coninck, 2020; Pontes et al., 2018).

Bowen (2021) examines attention-seeking behavior from a different angle. He postulates that people do not actually want the attention itself but rather what the attention brings. Among the things that attention can supply are affection, acceptance, safety, etc. Examining the percentage of attention-seeking behavior and determining whether it has a relationship with what attention brings, whether providing those things will reduce attention-seeking behavior, can be useful.

The current study utilized a university system where each of the student years corresponded with a specific age due to the difference in structure compared to other countries such as the United States. In the future, examining whether Freshman and Senior year students are statistically significantly different from each other in the desire for attention even when there is a large variability in age is important. For example, what if the Freshman age is 25 or 30? Would there still be a statistically significant difference between the two university years? Is the statistical significance due to the transitions that each of these years are going through or due to the age of the students?

The uses and gratifications theory, which is a type of communication theory, can be utilized in the future as well. This theory addresses the two questions of "what does media do to people?" and "what do people do with media?". The uses and gratifications theory can be used to determine which social media platforms satisfy which needs.

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