

Abstract

The present study examined the role of gender in the relation between delay discounting and excessive social media use among college students. Participants recruited from Penn State University at Hazleton Campus, completed an online survey where they were asked how many hours on average, they engage in using social networking sites. They were also asked to complete a delay discounting task where they chose between a smaller amount of hypothetical money to be obtained immediately and a larger amount of hypothetical money to be obtained after a varying delay. We found that there is a statistically significant positive correlation between social media use and delay discounting in males, but there is no significant difference in females. Our results demonstrate that gender does play an important role in the relation between excessive social media use and delay discounting.

Introduction

Background

- The average user spends an hour a day on social media sites like Facebook and Instagram, and excessive social media use among young adults is associated with problems in their psychological health and well-being (Meshi et al., 2019)
- There is a clear parallel between the symptoms of substance use and behavioral addictive disorders and the symptoms of excessive social media use which can include:
 - Difficulty making value-based decisions, sleeping problems and problems maintaining stable social and interpersonal relationships (Delaney et al., 2018; Meshi et al., 2019)
- People who have reported having a high dependency on social media tend to make more impulsive choices (Delaney et al., 2018)
 - Choose smaller, short-term hypothetical monetary rewards over larger rewards for which one must wait for (delay discounting)
- No previous research has examined whether the relation between excessive social media use and delay discounting differs depending on gender.

Purposes of this study

- To determine whether college students who use social media excessively make more impulsive choices and if the relation between the two differs depending on gender.

Method

Participants

- 143 undergraduate students from introductory psychology courses participated for course credit.

Procedure

- Participants completed online surveys hosted by Qualtrics:
 - Demographics (age, gender, & years of college education)
 - Questionnaire for social media use: *How many hours per week do you usually engage in using social networking sites (e.g., Facebook)?*
 - Delay discounting task
- Groups: social media use (high vs. low) x gender (female vs. male)
 - High social media group: Upper 25%
 - Low social media group: Lower 25%

Table 1. Demographic Characteristics

Categories	Female		Male	
	High	Low	High	Low
n	30	16	7	21
Age	19.00 (1.63)	19.13 (2.77)	18.71 (1.11)	20.18 (2.81)
Education	1.65 (0.95)	1.33 (0.82)	1.14 (0.37)	1.81 (0.91)
Soc. med. use	59.90 (29.55)	3.13 (1.96)	43.71 (13.03)	2.50 (2.06)

Note. The numbers are means (and SD). Soc. med. = Social media

Results

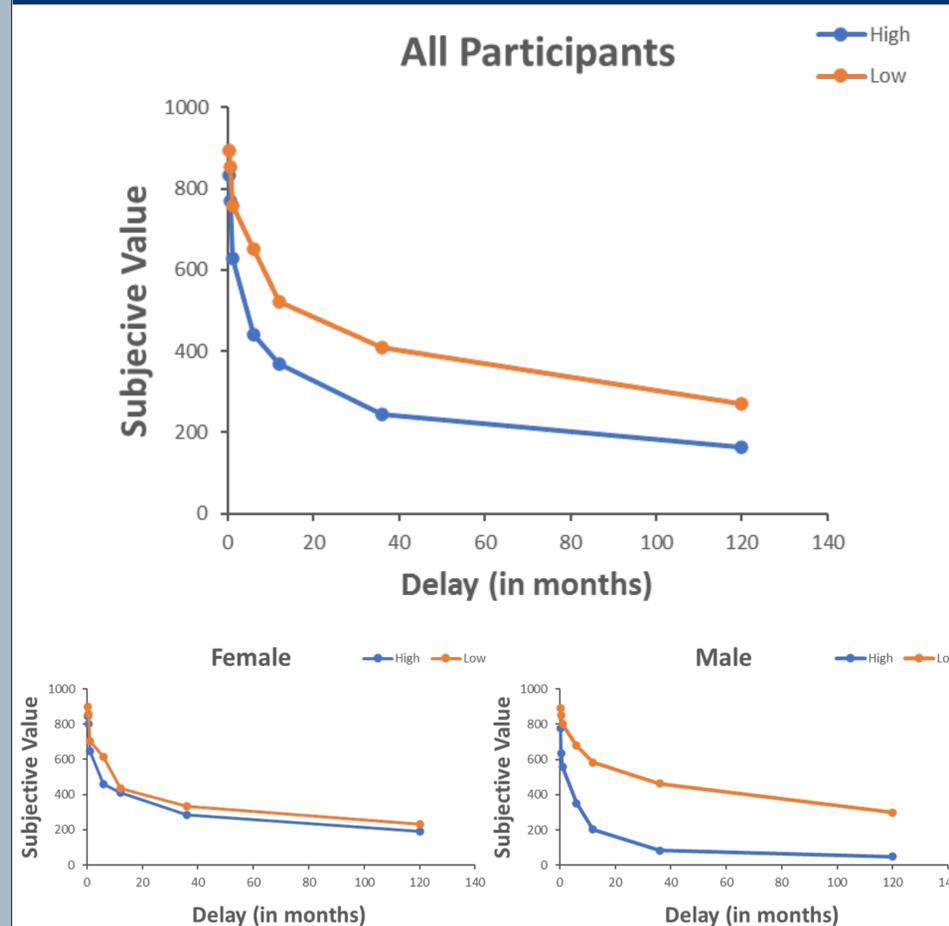


Figure 2. Mean subjective value of delayed hypothetical monetary rewards as a function of social media use for both genders (top panel), males (lower-left panel) and females (lower-right panel). High = High social media use group. Low = Low social media use group.

Table 2. Results of t-Test on AUC for All Groups

Gender	High	Low	t	p
Both	0.26 (0.27)	0.40 (0.28)	2.12	.037
Female	0.30 (0.29)	0.34 (0.30)	4.38	.663
Male	0.11 (0.09)	0.44 (0.27)	4.94	< .001

Note. The numbers are means (and SD).

Table 3. Results of t-Test on AUC and Social Media Use for Female and Male

Measure	Female	Male	t	p
AUC	0.33 (0.28)	0.36 (0.27)	-0.75	.457
Social media use	28.7 (29.8)	13.5 (14.2)	4.09	< .001

Note. The numbers are means (and SD).

Method (cont.)

Delay discounting task

- A computer-based task where the participants chose between a smaller amount of hypothetical money to be obtained immediately over a larger amount of hypothetical money to be obtained after a varying delay (Blessington & Hayashi, 2020)
 - Smaller-immediate money: Values ranging from \$1 to \$1000
 - Larger-delayed money: Always \$1000. The delay values included 1 week, 2 weeks, 1 month, 6 months, 1 year, 3 years and 10 years

Figure 1 shows three panels of the delay discounting task. Each panel asks 'Which one you prefer?' and compares an immediate amount of money versus a larger amount of money received after a specific delay. Panel 1: \$1 now vs. \$1000 1 week later. Panel 2: \$300 now vs. \$1000 1 year later. Panel 3: \$600 now vs. \$1000 10 years later.

Figure 1. Simplified version of the delay discounting task

Data analysis

- Area under the curve (AUC): Space under the delay-discounting graph, ranging from 0 (most impulsive) to 1 (least impulsive)
- Statistical test: Independent samples t-test

Discussion

Summary of the findings

- When both genders were combined, high social media users discounted delayed hypothetical money more (showed lower AUC and were more impulsive) than low social media users
- With respect to the role of gender, there was a significant positive correlation between social media use and delay discounting in males, but there was no significant difference in females

Implications and significance of findings

- Prevention and intervention strategies for excessive social media use may need to be optimized for each gender
- Given this matter, strategies focusing on impulsive decision making may be effective for excessive social media users.
 - Ex) Mindful-based interventions are shown to decrease discounting of delayed reinforces (Morrison et al., 2014)

Future direction

- Future research should evaluate a larger and more diverse population of older adults, given that they too, can be highly dependent on social media.

References

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