

The Moderating Role of Self-Efficacy in the Relationship Between Problematic Smartphone Use and Academic Procrastination.

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Introduction

Academic performance may play a pivotal role in one's life. Considering this, it is vital to gain an understanding of the constructs which have been related to it. Academic procrastination, self-efficacy and problematic smartphone use are three constructs which have been shown to effect one's academic performance.

Academic Procrastination

It has been suggested that over 70% of college students procrastinate in relation to studying for exams, engaging in research, and completing assignments¹
 Academic procrastination may be simply understood as the postponing of tasks²
 The reasons for which one may engage in this behaviour are varied and may include perceived task characteristics and individual competencies³
 This behavior may have negative impacts upon one's academic performance⁴ and may lead to feelings of anger, shame or sadness⁵ as well as burnout¹²



Problematic Smartphone Use

Problematic smartphone use may be defined as an inability to regulate one's use of their smartphone, eventually resulting in negative consequences in their day-to-day life⁴
 Excessive smartphone use is associated with depression and anxiety⁵
 Problematic smartphone use has also been shown to predict academic procrastination¹⁰ and negatively impact one's academic performance¹¹.



Self-efficacy

Self-efficacy lies at the heart of Bandura's Social Cognitive Theory⁶, relating to one's beliefs surrounding their own abilities and competencies to produce given attainments. Self-efficacy can play a role in one's motivation⁷, work performance⁸ and health behaviours⁹
 Low self-efficacy has also been linked to academic procrastination¹² and problematic smartphone use¹³



Limitations of previous research

Research conducted on the relationship between problematic smartphone use and academic procrastination involves participants from just one university .

Limited research exploring the mechanisms at work within this relationship.

Although age, gender and academic level have been shown to affect problematic smartphone use and academic procrastination, research exploring this relationship have not controlled for these variables.

Aims and objectives

Aim: This research seeks to examine the relationship between problematic smartphone use and academic procrastination in an Irish context involving students from a variety of universities, exploring the impact self-efficacy has on this relationship whilst controlling for extraneous variables

Method

Design and measures

- This study employs a quasi-experimental design
- An online survey was used to collect data which involved of a demographic questionnaire which collected data based on participants gender, age and academic level, as well as measures of the following variables:

Independent variable

- Problematic Smartphone Use.
- Measured using the 'Smartphone addiction survey – short version'¹⁵

Moderator variable

- Self-Efficacy
- Measured using 'The New General Self-Efficacy Scale'¹⁶

Dependent variable

- Academic Procrastination
- Measured using 'The Modified Irrational Procrastination Scale'¹⁷

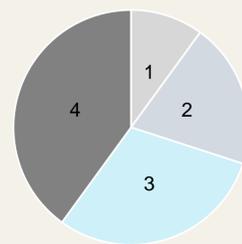
Ethics

- Participants were provided with an information sheet before participating in this study.
- All data was anonymised and participants were informed that they could withdraw from the study at any point.
- Participants were fully debriefed after the study.

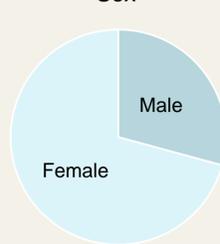
Participants

- 154 undergraduate students from 17 different higher education institutions across Ireland took part in this study.

Academic level - Year of study



Sex



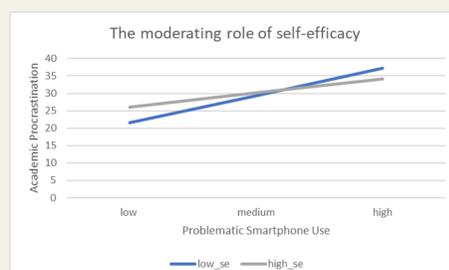
Results

Relationships between Problematic Smartphone Use, Academic Procrastination and Self-Efficacy

- Pearson's product moment correlation was used to examine the relationships between the three variables
- There was a significant positive correlation between problematic smartphone use and academic procrastination ($r = 0.684, p < .01$)
- A significant negative correlation was found between self-efficacy and problematic smartphone use ($r = -0.175, p = .03$)
- A significant negative relationship was also found between self-efficacy and academic procrastination ($r = -0.181, p = .025$)

The Moderating Role of Self-Efficacy

- A moderation analysis was conducted using the Process plugin (version 3.3) in SPSS.
- Age, gender and academic level were entered as covariates.
- The results of this moderation analysis showed that there was a statistically significant moderator effect of self efficacy as evidenced by the addition of the interaction term explaining an additional 4.7% of the total variance, $p = .001$.
- Simple slope analysis revealed that there was a statistically significant linear relationship between problematic smartphone use and academic procrastination for both those with high self-efficacy ($b = 0.348, se = .060, p < .0001$) as well as those with low self-efficacy ($b = 0.683, se = .059, p < .0001$)



Discussion & conclusion

Problematic Smartphone Use and Academic Procrastination

The results of this study are in line with previous research as problematic smartphone use was found to predict academic procrastination. This suggests that one engages in excessive use of their smartphone to avoid completing academic tasks.

The Role of Self-Efficacy

The results of the correlation analysis showed that self-efficacy was significantly negatively correlated with both academic procrastination as well as problematic smartphone use. Although these relationships may be considered small, they are in line with previous research in the area. It appears that if one does not believe in their own abilities, they are more likely to engage in excessive use of their smartphone and postpone academic tasks, possibly because they may consider themselves unable to successfully complete them.

The moderation analysis showed that self-efficacy significantly moderates the relationship between problematic smartphone use and academic procrastination. The simple slope analysis showed that the effect of problematic smartphone use on academic procrastination is greater for those with low than high self efficacy. It is evident that particularly for those high problematic smartphone use, if they have low-self efficacy they are more likely to procrastinate than those with high self efficacy.

Implications

Implications for Future Research

- Future research may consider the other variables which may affect this relationship
- Future research may also investigate which areas of self-efficacy affect this relationship

Practical Implications

- Education providers may attempt to inform students of the harmful effects of excessive smartphone use as this may cause students to procrastinate
- Education providers may also look at improving student's self-efficacy as for those with high problematic smartphone use, this may act as a buffer between problematic smartphone use and academic procrastination

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