

Academic Procrastination: the role of Self-Regulation, Anxiety,
Internet Use and Gender

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Declaration

Declaration

‘I declare that this thesis that I have submitted to Dublin Business School for the award of BA (Hons) Psychology is the result of my own investigations, except where otherwise stated, where it is clearly acknowledged by references. Furthermore, this work has not been submitted for any other degree.’

Word count: 8184

Signed: Ronan O’Sullivan

Date: 20th March 2020

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Abstract

The aim of this study was to examine the roles self-regulation, anxiety, internet use and gender play in academic procrastination. Participants were male and female undergraduate students (N = 97) from various courses and colleges who completed a self-report questionnaire containing both quantitative and qualitative questions. The analyses revealed that self-regulation was negatively correlated with academic procrastination, while internet use had a positive correlation with it. No significant correlation was found between academic procrastination and anxiety. Neither was there a significant difference between males and females in academic procrastination levels, or any of the other variables. Self-regulation was found to have a significant negative relationship with internet use. A weak positive correlation as found between internet use and anxiety. Limitations of the current study as well as some possible avenues for future research were discussed. Academic procrastination is a serious, widespread problem for millions worldwide and so requires ongoing research.

Introduction

Academic Procrastination

Academic procrastination is a common and potentially serious problem for students all over the world. It can be defined as “a deliberate delay in a practical course of study or learning in spite of the expected deterioration” (Steele 2007). In this same study performed by it was found that 80 – 90% of college students procrastinate, mainly during coursework. Not only this, but it was also found that procrastination is on the rise amongst the general population. In 1978 only 5% of the population identified as chronic procrastinators, versus roughly 26% of the population at the time of Steele’s study. Despite its increasing prevalence in people’s lives, there is still no consensus on the root cause and consequences of procrastination.

Beswick, Rothblum and Mann (1988) attempted to examine some of the potential causes of procrastination. They examined the role of indecision, irrational beliefs about self-worth, and low self-esteem in 245 first year psychology students. Small but significant correlations were found between the three variables and two measures of procrastination: time to submit a term paper and self-reported procrastination. Both anxiety and depression were also found to significantly correlate with these measures of procrastination. The researchers noted that while only 6% of the sample submitted their term paper late, 62% wished to decrease their procrastination. This may indicate perhaps an inaccurate and unnecessary concern on the part of students, or more likely a recognition that procrastination may lead to poorer grades and unnecessary stress even if they are able to complete their task. This was supported in the study in that there was a negative correlation between self-reported procrastination and final course grade. This study was later used as a starting point by Steel and Klingsieck (2016) in order to provide an updated view of academic procrastination. They argued that while the main personality trait controlling procrastination is conscientiousness, the other four major traits

(openness, agreeableness, extraversion, neuroticism) determined how it manifested. These traits were measured by way of the reason's students gave for their procrastination and comparing them with their scores on the Big Five Personality Test. Conscientiousness was found to be strongly related to procrastination, and when controlling for it no other personality trait was significantly related to procrastination. However, true to their hypothesis the activities and reasons given for procrastination were significantly related. In particular, extraversion (41%) and openness to experience (32%) were found to be common reasons for procrastination. However, few reasons were given for agreeableness and introversion, which Steele posited maybe due to the study being limited to academic contexts. Furthermore, the reasons for procrastination were gauged using open ended questions, meaning use of different coding methods may produce vastly different results. As such, future research would benefit from the development of a standardised questionnaire for personality traits and procrastination.

It is also important to note that there are multiple types of procrastination. Ferrari (1992) investigated procrastination using two scales: Lay's (1986) General Procrastination Scale (GP or GPS) and McCown and Johnson's (1989) Adult Inventory of Procrastination (AIP). Finding no correlation between the two, he suggested that they were measuring two different types of procrastination. The GPS measured arousal-based procrastination (putting off something to seek thrills), while the AIP measured avoidance-based procrastination (putting off to protect self-esteem or due to fear of failure). He would later add a third type, decision-based procrastination (putting off making decisions), measured using Mann's (1982) Decisional Procrastination Questionnaire (DPQ). While popular, Steel (2010) found little to no support for the model, using both meta-analysis and factor analysis of over 4000 respondents. In particular, the distinction between avoidant and arousal procrastination was not supported, instead suggesting procrastination is based off irrational delay. Steel (2007) also suggested that it is a personality trait, rather than a specific response to circumstances.

The more widely accepted types of procrastination are active and passive put forward by Chu and Choi (2005). Passive procrastinators are the ‘traditional’ procrastinators. They do not intend to procrastinate, but inevitably do so due to their inability to make decisions. Active procrastinators are capable of making decisions and acting on them, but delay some tasks to focus on things they deem more important at the time. Passive procrastinators are more likely to feel pressured, overwhelmed and pessimistic about their ability to complete their tasks, while active procrastinators thrive on the pressure of working to a deadline at the last minute, feeling motivated rather than fearful. In this sense active procrastinators are a more ‘positive’ type of procrastinators. They experience less stress and are more likely to complete their tasks than their passive counterparts.

Academic Procrastination and Self-Regulation

Self-regulation has been defined as “the capacity to plan, guide, and monitor one’s behaviour flexibly in the face of changing circumstances” (Brown, 1998, p. 162). Previous research has attempted to properly establish the relationship between academic procrastination. Steel (2007) found procrastination to be a self-regulatory failure. This finding is consistently supported by further research on the subject. Park and Sperling (2011) examined self-regulation levels in academic procrastinators from a self-regulated learning perspective. Participants were examined using several surveys measuring their academic motivation, self-regulation and academic procrastination, as well as participating in semi structured interviews. High procrastinators were those who described themselves as procrastinators, low procrastinators were those who did not. High procrastinators frequently mentioned that they were lazy and could not follow their plans and intentions, demonstrating self-regulatory failure, whereas low procrastinators tended to leave ample time to complete their work, often beginning early. High procrastinators demonstrated a lack of self-regulation in not just their behaviour, but also in a

cognitive and motivational sense. They were less likely to perform cognitive tasks such as planning or monitoring their work. They also placed less intrinsic value on the tasks which they performed, and so were less motivated to carry them out. While the study is supported by other research, one large limitation is its use of self-reported data. Participants may not have provided accurate data on their habits, a limitation supported by findings within the study which showed a link between procrastination and defensive behaviours.

The ability to control and manage the time and effort needed to complete their school work may benefit learning (Park and Sperling, 2011). Kandemir (2014) found similar results in their study regarding the causes of academic procrastination which examined self-regulation, academic self-efficacy and life satisfaction. Self-regulation was the second highest predictor of procrastination, behind only academic success.

Strunk and Steel (2011) highlighted the need for further research in how the potential causes of procrastination relate to one another. The study examined how self-regulation, self-efficacy, and self-handicapping predicted procrastination. Self-regulation and self-handicapping were both found to be statistically significant in predicting procrastination, while the prediction power of self-efficacy was completely subsumed by that of self-regulation.

Academic Procrastination and Anxiety

According to the American Psychological Association “Anxiety is an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure”. Numerous studies have shown the link between procrastination and anxiety (Lay, 1995; Onwuegbuzie 2004). A recent study by Yurtseven and Akpur (2018) attempted to further examine not only its direct relationship with academic procrastination, but also with other variables that have been shown to have a significant relationship with procrastination. The other variables studied were perfectionism and academic achievement. Not only was the

relationship between anxiety and procrastination found to be significant ($r = 0.55$) ($p < 0.01$), but anxiety was also significantly related to both perfectionism ($r = 0.69$), and academic achievement ($r = - 0.72$). Also identified were several factors which contributed to a rise in anxiety. Both intrapersonal factors, such as lack of courage and self-efficacy, as well as interpersonal factors, such as peer pressure, were found to increase anxiety. One of the main factors that caused procrastination brought up by students often in their qualitative interviews was also anxiety. This suggests somewhat of a feedback loop, in which students feel anxious about their school work, causing them to procrastinate, which only further increases their anxiety levels. While the study is supported by previous research, it measured anxiety only regarding foreign language classes, and so may lack validity for broader academic anxiety and procrastination.

Saplavska and Jerkunkova (2018) examined how different types of anxiety may affect procrastination. Performed on 60 second year engineering students, the two types of anxiety, personal and situational, were measured using the State-Trait Anxiety Inventory (Form Y). Personal anxiety is described as a “tendency to perceive situations as threatening and react with anxiety”. Situational anxiety as a condition is “characterized by subjectively experienced emotions – stress, anxiety, nervousness, etc” (Saplavska and Jerkunkova 2018). This state arises from a tense or stressful situation and can be of varying intensities. As is typical for anxiety disorders, the emotional response is often significantly greater than the preceding situation would dictate. A significant positive correlation was found for both personal anxiety ($r_{s(60)} = 0.45$, $p < 0.001$) and situational anxiety ($r_{s(60)} = .42$, $p < 0.001$) and procrastination. Due to the small difference between the correlation level of personal and situational anxiety with procrastination there is not strong evidence for the necessity of splitting anxiety up in this way. However, the sample size was somewhat small, meaning that a larger study may show greater differences between the two.

Procrastination has also been found to affect the time at which people experience the most anxiety. Lay, Edwards, Parker and Endler (1989) examined appraisal, anxiety, coping, and procrastination during an examination period. While not the focus of the study, high procrastinators were found to experience significantly less anxiety than their peers when deadlines were far away, but significantly higher when the deadline was close by. Low procrastinators started higher in anxiety and gradually declined, while the opposite was true for high procrastinators, and with a much steeper curve. Tice and Baumeister (1997) would later add to this, confirming the timing at which high and low procrastinators experienced peak anxiety, but also finding that high procrastinators experienced a higher level of anxiety and stress overall.

Academic Procrastination and Internet Use

The internet has become an increasingly ubiquitous aspect in people's lives, with a 2019 study carried out by the Central Statistics Office revealing that 79% of people that used the internet in the past three months in fact used it every day. For this reason, internet use has become an increasingly common topic for research, particularly regarding the use of social media sites such as Facebook. Sahin (2014) compared user's adoption and use of Facebook in relation to academic procrastination. As predicted, Facebook user students scored higher on academic procrastination. In particular, they scored higher in areas such as studying for exams, daily work and completing projects by the deadline, while they scored noticeably lower on area such as being late for appointments and returning library books. Higher levels of Facebook use were also correlated with higher levels of academic procrastination. Facebook use case was divided into three groupings: social relations, academic use and daily works. Overall, there was a low, positive and significant correlation between the Facebook use case and academic procrastination of students ($r=0.204$, $p<.01$). Social relations ($r=0.205$, $p<.01$) and daily works

($r=0.126$, $p<.01$) affected academic procrastination negatively the most, while academic use had no significant effect on academic procrastination ($r=0.075$, $p>.01$).

Further research has found that social media usage is not the only internet usage that relates to procrastination. Reinecke et al (2018) examined the relationship between trait procrastination (a summary variable linked to a greater likelihood to procrastinate in general life), internet use and psychological functioning among German adolescents. The scales used to measure internet use were Assessment of Internet and Computer Game Addiction Scale (Müller et al., 2014) and the Internet Multitasking scale from Reinecke et al. (2017). Both internet multitasking ($\beta = 0.23$, $p < 0.001$) and insufficiently controlled internet use ($\beta = 0.40$, $p < 0.001$) were found to be significantly correlated to trait procrastination. However, as the study focused on trait procrastination it may not be wholly applicable to academic contexts. Furthermore, the study was performed on adolescents rather than an older age group. Thatcher and Goolam (2005) indicated that internet use differs significantly depending on age. The levels of procrastination found were consistent with that of the general population (Steel 2007).

Online gaming has also been a subset of research into internet use and procrastination. Hinsch and Sheldon (2013) examined the effects of social internet consumption on 143 psychology students in a longitudinal study. This was measured by the number of hours spent either on Facebook or playing a social online game (Halo, World of Warcraft, Call of Duty). Participants completed 3 surveys in total; the original, another 2 days later, and final one a week later. In those who reduced the amount of time on either Facebook or online games reported a significant decrease in procrastination.

Self-Regulation and Internet Use

Besides procrastination, internet usage has also been linked to self-regulation. Sebena, Orosova, Benka (2013) attempted to study the link between them in their study involving self-

regulation and depressive symptoms as predictors of internet use in college students. Self-regulation was found to significantly negatively predict generalized problematic internet use. This result is supported by similar research in the area, such as Zai, Javed, De Soriano (2012), somewhat conflicting results. In this study internet use was split into specific problematic internet use (SPIU) and generalised problematic internet use (GPIU). Both were found to be caused by psychosocial vulnerabilities (i.e. low self-esteem/well-being). However, in the case of SPIU, specific applications work with these vulnerabilities to cause deficient self-regulation, which in turn leads to more time spent online and the negative outcomes associated with that. GPIU differs in that it acts as the cause of negative outcomes, rather than time spent on the internet. Therefore, in the case of SPIU, self-regulation can be seen to not only be correlated with, but cause problematic internet use. Both the amount of time spent on the internet and the way in which it is used can lead to significantly different outcomes.

Internet Use and Anxiety

With the continued prevalence of the internet comes the problems associated with it. Two such problems are internet addiction and the anxiety caused by it. Sandya, Venkatarao and Sourav (2018) examined internet addiction with depression, anxiety and stress among university students. A self-administered anonymous questionnaire was used to collect socio-demographic data from 430 willing students in India. Internet addiction, measured using the Young Internet Addiction Test (YIAT) was found to potentially present in 13% of students. Prevalence of anxiety above the normal DASS score was 59.1%. DASS stress scores were significantly correlated with internet addiction ($n=56$, mean = 19.46 ± 7.94 , (p -value < 0.0001)). These findings were consistent with previous research done by Tena, Gordana and Tea (2018), albeit in a sample of adolescents. Adolescents that scored higher levels of compulsive internet use also reported higher levels of symptomatology related to depression

($r = .415$; $p < .01$) and anxiety ($r = .369$; $p < .01$). In a multiple regression compulsive internet use was shown to predict both depression ($F(4,1314) = 95.005$, $p < .001$) and anxiety levels ($F(4,1315) = 78.556$, $p < .001$). Both these studies demonstrated a strong links between various forms and severities of internet use in college age and adolescent populations. The extent of this problem demonstrates further research is needed in the area to combat this phenomenon.

Gender and Academic Procrastination

Research regarding gender differences in academic procrastination have been inconsistent (Ferrari, 2001). Some studies have found there to be no significant difference between males and females (Whatley, 2009), while others have found men to be more likely to procrastinate (Hampton, 2005; Sarid and Peled, 2010). A study by Brownlow & Reasinger (2000) examined the effects of intrinsic and extrinsic towards academic work on academic procrastination in 96 college students. They found that overall men were more likely to procrastinate than women. Furthermore, the reasons behind their procrastination also differed, with men being more extrinsically motivated, while women were more intrinsically motivated, particularly by perfectionism. This is supported by later research such as that done by Ozer, Demir and Ferarri (2009). 784 students were examined on their reasons for academic procrastination, with males again being significantly more likely to. Significantly more female students cited fear of failure and laziness as their reasons for procrastinating then men, who reported risk taking and rebellion against control as significantly more. These studies highlight that not only do males and females procrastinate at different levels, but for different reasons as well. These findings can help guide future research and potential teaching strategies to reduce procrastination specialised for the genders. The current study aims to further this research by again examining the differences in academic procrastination between males and females, as well as the other variables (self-regulation, anxiety, internet use).

Gender and self-regulation, anxiety and internet use

Previous studies have found there to be a link between gender and self-regulation, with women scoring higher, although they mainly focus on children or adolescents (Raižienė, Garckija, Gabrielavičiūtė & Jaruševičiūtė, 2019). For example, Matthews, Ponitz & Morrison, (2009) examined gender differences in early achievement and self-regulation (using the Head-Toes-Knees-Shoulders task) skills in pre-school (N= 268). While both boys and girls improved between overtime, a repeated measures analysis showed that girls ($F(1, 128) = 38.26, p < .01$) were more capable than boys ($F(1, 120) = 28.23, p < .01$) in self-regulation overall.

A study by Else-Quest, Hyde, Goldsmith & Van Hulle, (2006) examined the gender differences in temperament of boys and girls age 3 to 13 via meta-analysis of 260 studies. Girls were found to score significantly higher in effortful control (Cohen's $d = -1.01, p < .05$), with 8 of the 10 dimensions used to measure it being significant. In particular, attention shifting and inhibitory controls favoured girls. While these studies are based on young children and adolescents and so may not be fully applicable to the general population, they are in line with previous research such as Bjorklund and Kipp (1996) which found adult women scored higher in both social and behavioural self-regulation tasks than adult men.

Regarding gender and anxiety, most previous research has found that women are more likely to suffer from and experience anxiety (Wittchen, 1994). This has been corroborated by more recent studies, such as that done by Asher & Aderka, (2018). This study examined gender differences in the prevalence of social anxiety disorder in 652 participants. Women were found to be statistically more likely to have social anxiety disorder. 8% (n= 413) women, versus 5.8% (n=239) of men suffered from social anxiety. Furthermore, women displayed greater psychiatric comorbidity. Women [$M = 1.28, SD = 1.11$] were more likely to also suffer from generalised anxiety disorder than men ($M = .87, SD = 1.02$) ($t(650) = -4.62, p < .001, d = .38$).

This is supported by Mclean et al, (2011) which found that general anxiety disorders are both more prevalent and more severe in women than men.

However, Kalsoom, (2019) found that men were more likely to suffer anxiety than women ($t(98)=4.23, p=0.001$). It should also be taken into account that this study was only on sufferers from kidney disease, and so may not be applicable to the general population.

Gender self-regulation

Previous research on gender and internet use have focused mainly on the ability to access the internet (Heppy Vidyantina & Ariansyah, 2018). The research that has examined the extent to which both males and females use the internet results have been mixed. Cherian et al., (2018) examined excessive internet use and anxiety among psychology students. Of the total 2776 participants, 1096 (39.5%) were male and 1680 were female (60.5%). It was found that male students were significantly more likely to be addicted to the internet. (odds ratio (OR) = 2.801, $P \leq 0.001$). Dholakia, (2006) also found that worldwide men spend a greater amount of time on the internet than women. In the US for example, men spent an average of 13.1 hours on the internet per week, while women spent only 10.1 hours per week on the internet. Out of the 9 countries surveyed, only Singapore reported women (15.9 hours) using the internet more than men (14.9) hours. However, Akman & Mishra, (2010) found no difference in daily use of the internet, ($\alpha\text{-value}=-1.1819, p\text{-value}=0.137$) or reasons for using the internet ($\alpha\text{-value}=-0.5007, p\text{-value}=0.324$) between males and females.

Current Study

With the continued rise of procrastination among the general populations the importance for further research in the area is clear. While numerous studies have attempted to map out the various causes and consequences of procrastination there still remains much

conflicting evidence and unknown variables. This study will add to this growing body of research by looking at a broad range of variables, their associations with procrastination, and with each other. The current study will examine the predictive relationship between self-regulation, anxiety, internet use, and gender on academic procrastination. It will consider the relationship between self-regulation and internet use. The relationship between internet use and anxiety will also be examined. Gender differences will be examined in self-regulation, anxiety and internet use. Finally, this study will use a qualitative question “Why, in your own words, do you procrastinate?”. This open-ended research question will aid in expanding the seriously lacking qualitative research on the subject. The studies sample is also made up of mainly Irish university students, providing greater cultural context to existing research which has predominantly featured in the US and Asia.

Hypotheses:

H1: Self-regulation, self-esteem, anxiety and internet use will significantly predict procrastination in undergraduate students.

H2: Self-regulation will have a significant negative relationship with internet use.

H3: Internet use will have a significant relationship with anxiety.

H4: There will be a significant difference in academic procrastination between males and females.

H5: There will be a significant difference in self-regulation, anxiety and internet use between males and females.

Research Question: “*Why, in your own words, do you procrastinate? (10 words or less)*”

Methodology

Participants

Participants were accessed through convenience sampling. 97 undergraduate students from Dublin Business School (DBS), Technological University Dublin (TUD) and University College Dublin (UCD) were recruited to fill out an online questionnaire. Participants came from various undergraduate degrees. An email requesting time to carry out the online survey in DBS was sent to lecturers in advance with details of the study and completion time included. Participants were recruited from TUD and UCD via social connections. An online survey was chosen instead of a 'pen and paper' approach to increase efficiency and allow for it to be carried out on a wider group of participants quickly. The sample consisted of 29% males (n= 28), 69% females (67%) and 2 participants who did not answer. Participants were ranked in age groups with 88% aged from 18-23 (n= 85), 10% aged from 24-29 (n= 10), and one 1% aged from both 36-41 (n= 1) and 42+ (n= 1). Cohen's power table (Cohen, 1988) was used with medium effect size, margin of error at 0.05, confidence interval at 95% and statistical power at 0.8 to calculate the minimum number of participants needed for the multiple regression at 84. No incentives were offered so participation was voluntary and participants were free to stop the survey at any time. No names were asked for to ensure anonymity.

Design

This was a questionnaire based quantitative mixed design study. It was descriptive in nature and used a correlational design to measure the relationship between the predictor variables self-regulation, anxiety and internet use on the dependent variable academic procrastination. There was also a comparative aspect of the study in which the differences between males and females in academic procrastination are measured. In addition, an open-

ended qualitative question was asked at the end of the questionnaire, which was to be limited to 10 words or less.

Materials

The materials used were 4 self-report questionnaires; the short form Academic Procrastination Scale (Yockey 2016), short form Self-Regulation Scale (Vosloo et al. 2013), a modified version of the Depression, Anxiety, Stress Scale (Depression Anxiety Stress Scales - DASS, 2018) using only the anxiety items, and the Compulsive Internet Use Scale (Meerkerk et al, 2009). There was also a demographic section which asked for the participants gender and age group, and an open-ended qualitative question at the end which asked “Why, in your own words, do you procrastinate?” (in 10 words or less).

Apparatus

IBM Statistical Package for the Social Sciences (SPSS) Statistics 26, NVivo 12 and Kwik Survey.

Informed Consent

Mentioned the purpose of the study, that it was voluntary participation and for those who wished to participate to check the box below in order to consent.

Demographics

Participants were asked to give their age group and gender.

Scales

The short form Academic Procrastination Scale (APS) is a 5-item version of the Academic Procrastination Scale created by McCloskey (2011). It is used to assess the level of

academic procrastination when there is limited time. Participants were asked to respond to statements such as “I frequently find myself putting important deadlines off” using a Likert Scale from “1- Disagree” to “5- Agree”. The responses for each of the 5 items were then summed to give a total score ranging from 5 to 25, with a higher score indicating higher levels of academic procrastination. The initial APS was demonstrated by McCloskey and Scielzo (2015) with an internal consistency reliability of .94 according to a Cronbach’s alpha. The short form APS used in this current study was found to have an internal consistency reliability of .87 (Yockey, 2016).

The short form Self-regulation Scale is a 31-item version of the Self-Regulation Scale created by Brown, Miller and Lawendowski (1999). It is used to assess the participant’s self-regulation by having them respond to statements such as “I am able to accomplish goals I set for myself” using a 5- point Likert Scale where “1- Strongly Disagree” and “5- Strongly Agree”. Higher scores indicate higher levels of self-regulation. The criterion measured in the scale are mindfulness, self-efficacy, monitoring change, goal focus, and internal locus of control. Vosloo et al (2013) found that it had an internal consistency reliability of .92.

The Depression, Anxiety, Stress Scale is a 21-item that measures the depression, anxiety and stress level of participants by having them respond to statements such as “I was worried about situations in which I might panic and make a fool of myself” using a 4-point Likert Scale where “0- Did not apply to me at all” and “3- Applied to me very much, or most of the time”. Higher scores indicate higher levels of depression, anxiety or stress. Tran, Tran and Fisher (2013) reported it as having an overall internal consistency reliability of .88. In the current study, only the anxiety items were used, which had an internal consistency of .77.

The Compulsive Internet Use Scale (CIUS) is a 14-item scale used to measure the severity of compulsive internet use. Participants were asked to respond to statements such as “How often do you neglect your daily obligations (work, school or family life) because you

prefer to go on the internet?” using a 5-point Likert Scale where “0- Never” and “4- Very Often”. Higher scores indicate higher levels of compulsive internet use. 5 dimensions are measured in the CIU; loss of control, preoccupation, withdrawal symptoms, coping or mood modification, and conflict. Meerkerk et al (2009) found it to have an internal consistency reliability of .89 according to Cronbach’s alpha.

Qualitative Question

The final question was an open-ended qualitative question “*Why, in your own words, do you procrastinate?*” (in 10 words or less) A blank space was left below to allow participants to write their answer.

Debrief

Following the final question, a short message was given thanking participants for taking part in the survey as well as the contact details for support groups (Aware Helpline and Samaritans Ireland), as well as the researcher and supervisor’s emails in case they had any queries about the study.

Procedure

Firstly, the questionnaire was designed and submitted online using Kwik Survey. Lecturers in DBS were contacted by email requesting for time to carry out the questionnaire in their class, as well as informing them about the nature of and the time required to complete the questionnaire. A link to the questionnaire was also sent to friends of the researcher in TUD and UCD. When given permission from lecturers to use their class time visits were made to various undergraduate student classes in DBS. A link to the questionnaire was written on the classes white board for any who wished to participate. The participants first checked a box on the

informed consent page consenting to doing the questionnaire and allowing their data from it to be used for the study. They then filled out the rest of the questionnaire; demographics and the 4 previously discussed scales. The researcher remained in the class for the duration of the questionnaire to answer any questions. The questionnaire took between 7-12 minutes to complete. The completed questionnaires were sent and saved to the researchers Kwiksurvey account page, from which the data was transferred to SPSS and NVivo.

Ethics

Ethics approval was required prior to carrying out the questionnaire. An application for ethics approval was part of the research proposal submitted to DBS. The study was conducted in line with 4 principles of the PSI codes of conduct; Respect for the rights and dignity of the person, Competence, Responsibility, and Integrity. The research aims, rationale and participants were included as part of the research proposal. No incentives to participate or deception was used at any point during the study. No names were asked for to ensure anonymity. As per the DBS Psychology Research Manual guidelines the data will be kept in a secure file on a password protected computer until a year after the examination process. After this time file shredder was used to delete the results of the study stored on the researcher's computer to ensure no potentially identifying information remained.

Results

Quantitative:

Data was analysed using IBM SPSS Statistics 26. Analyses were two-tailed and a significance level of $p < .05$ was used to determine statistical significance. Tests of normality were run on all variables. Academic Procrastination and anxiety were found to be not normally distributed. There was a total of 97 participants. The sample was comprised of 29% males ($n=28$), and 69% females ($n=67$). 2 participants did not answer. Participants were ranked in age groups with 88% aged from 18-23 ($n=85$), 10% aged from 24-29 ($n=10$), and one 1% aged from both 36-41 ($n=1$) and 42+ ($n=1$). Table 1 presents the descriptive statistics of the variables. Data was further analysed using a multiple regression, linear regression, and Pearson's correlation coefficient.

Table 1 Descriptive Statistics of Psychological Measures

Variable	Mean	SD	Min	Max	Skewness	Kurtosis
A. Procrastination	17.43	6.44	5	25	-.54	-1.05
Self-Regulation	105.85	20.07	56	150	-.08	-.42
Anxiety	14.1	4.97	6	25	.41	-.78
Internet Use	37.89	10.41	16	58	-.15	-.53

H1: *Predictors of Academic Procrastination*

It was hypothesised that self-regulation, anxiety and internet use would significantly predict academic procrastination in undergraduate students. A multiple regression was carried out to test this hypothesis. Multicollinearity was examined using VIF values. The multicollinearity was found to be of acceptable levels as the VIF values were all under 1.5. The multiple regression indicated that the 3 predictors predicted 43% of the variance ($R^2=.43$), $F(3,$

79)= 21.44, $p < .0005$. Self-regulation was found to negatively significantly predict academic procrastination ($\beta = -.13$, $p < .0005$) and internet use was found to positively significantly predict academic procrastination ($\beta = .21$, $p = .001$). However, anxiety did not act as a significant predictor for academic procrastination ($\beta = .08$, $p = .51$). Therefore, the overall null hypothesis is rejected.

H2: Self- Regulation and Internet Use

It was hypothesised that self-regulation would have a significant negative relationship with internet use. A simple linear regression indicated that self-regulation predicted 27% of the variance ($R = .53$), $F(1, 81) = 30.89$, $p < .0005$. Self-regulation was found to have a significant negative relationship with internet use ($\beta = -.27$, $p < .0005$). Therefore, the null hypothesis is rejected. Figure 1 shows a scatterplot of this relationship.

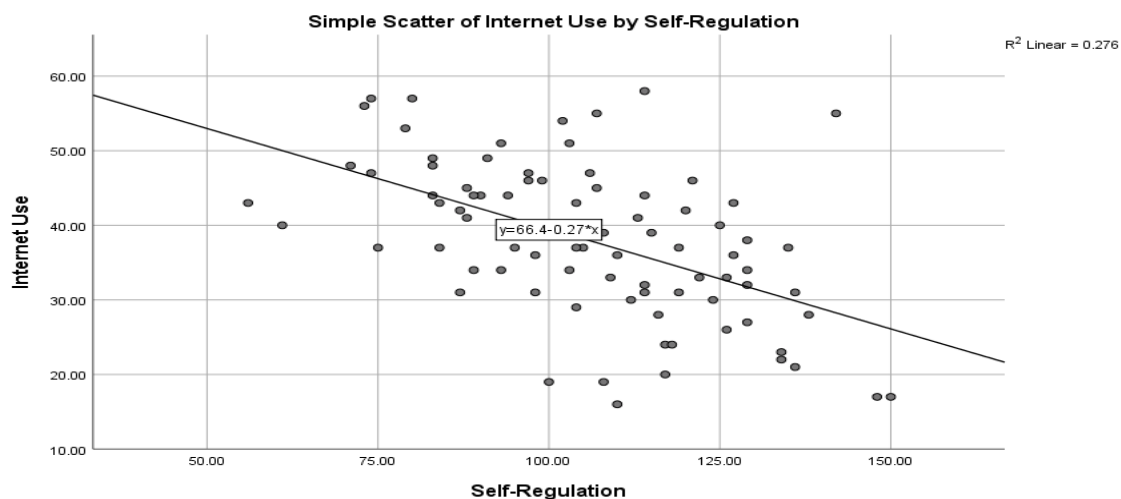


Figure 1 Scatter Plot of Internet Use and Self-Regulation

H3: Internet use and Anxiety

It was hypothesised that internet use would have a significant relationship with anxiety. A Spearman's correlation coefficient indicated that internet use has a significant weak positive correlation to anxiety ($r_s(83) = 0.26$, $p < .05$). Therefore, the null hypothesis was rejected. Figure 2 shows a scatterplot of this relationship.

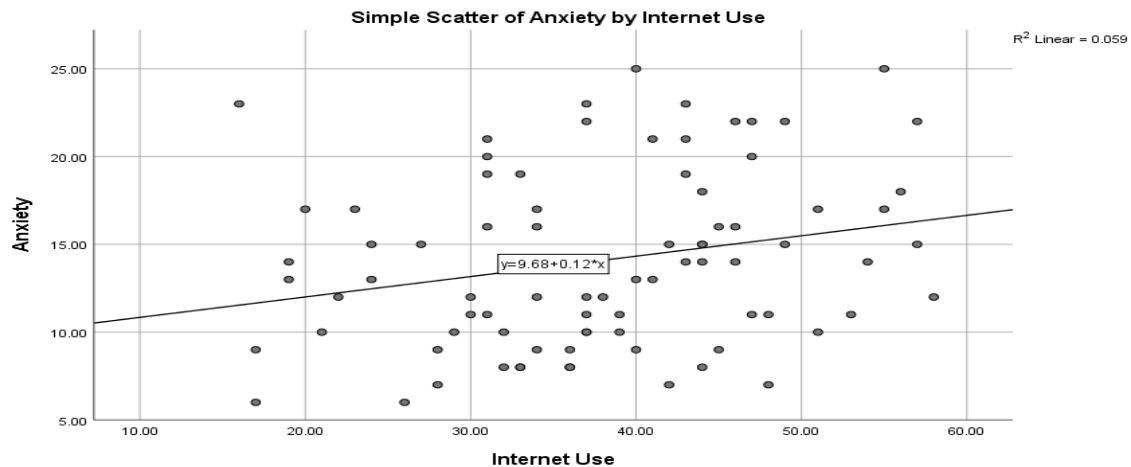


Figure 2 Scatter Plot of Anxiety and Internet Use

H4: Gender differences in Academic Procrastination

The majority of participants were female. A Mann Whitney U test revealed that males (mean rank = 60) and females (mean rank = 40.91) differed significantly in academic procrastination levels ($z = -3.13$, $p < .05$). Figure 3 illustrates this difference.

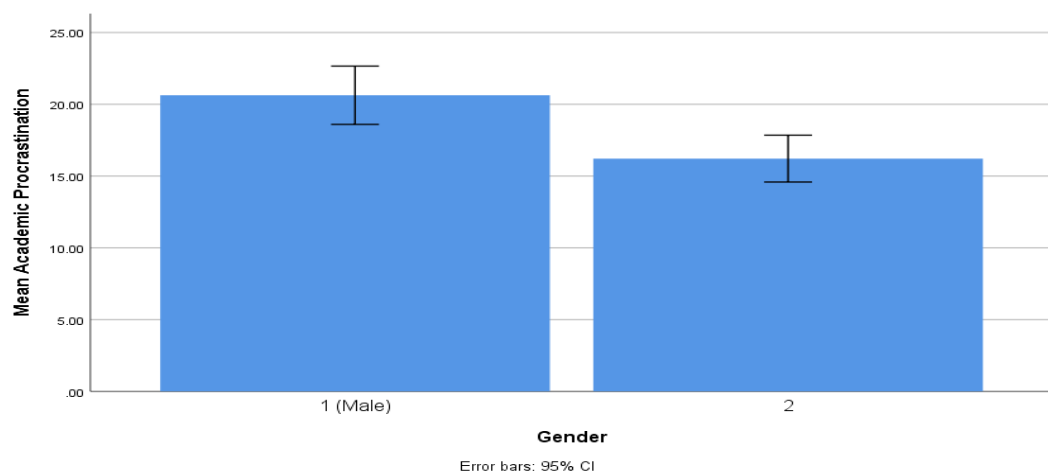


Figure 3 Gender Differences in Academic Procrastination

H5: Gender differences in self-regulation, anxiety and internet use

A one-way multivariate analysis of variance was carried out to examine if males and females differed on the other variables; self-regulation, anxiety and internet use. There was no statistically significant difference in self-regulation, internet use or anxiety between males and females ($F(3,77) = 1.49$ $p < .05$). Following a Bonferroni adjustment to .017 there were no significant difference between males and females in any of the independent variables; self-regulation ($F(1,79) = 2.5$, $p = .118$), internet use ($F(1,79) = 1.602$, $p = .209$), and anxiety ($F(1,79) = .399$, $p = .530$). Table 2 shows the descriptive statistics from this test.

Table 2 Descriptive Statistics of MANOVA

	Gender	Mean	Std. Deviation	N
Self-Regulation	Male	100.30	23.00	23
	Female	108.24	19.27	58
	Total	14.09	5.05	81
Anxiety	Male	13.52	5.39	23
	Female	14.31	4.94	58
Internet Use	Male	40.57	9.70	23
	Female	37.40	10.33	58
	Total	38.30	10.20	81

Qualitative

Research Question: *Why, in your own words, do you procrastinate?*

Thematic analysis was conducted as outlined by Braun and Clarke (2006) was used in this study. The objective was to identify what the participants saw as the main reason for their procrastination. Using NVivo 12 Plus software initial codes were generated. These codes were then categorized into relevant themes and sub- themes. Themes and codes were created using an inductive approach.

Theme 1: Self-Regulation

In line with quantitative research done on the topic, self-regulation appeared as a theme present across many of the participant's responses. This theme is split into two sub themes, concentration and motivation, referring to the self-regulatory failures that were cited as being the cause of participant's procrastination. The concentration sub-theme referred to participant's inability to concentrate on their tasks and avoid distractions.

Participant 6 "Lack of concentration and too many distractions"

Participant 40 "I find myself purposefully distracting myself with something more fun"

The motivation sub-theme is itself split into two sub-sub-themes; increasing and lacking motivation. These refer to the motivational reasons, good and bad for participant's procrastination.

Increased motivation was a theme in only 5 responses. These responses highlighted the motivation that participants gained from procrastinating until closer to the deadline of their tasks. This is in line with research on 'active procrastinators' (Chu and Choi 2005).

Participant 19 "I like having pressure put on for certain assignments and stuff like that as a motivation. It can be anxiety and stress provoking but knowing how to deal with it allows me to continue to work deadline to deadline kinda"

Lacking motivation was a much more common theme, appearing in 40 responses. Rather than distractions, the main reasons for this lack of motivation were that the tasks were seen as boring or that the participants were simply 'lazy'.

Participant 49 "As assignments are often tedious and boring"

Participant 18 "Because I'm too lazy"

To summarise, much of the themes generated through thematic analysis appear in line with quantitative research regarding the reasons for procrastination. In particular, self-regulation, specifically self-regulatory failure as seen in the lacking motivation sub-sub-theme, was by far the most common, appearing in over half of the responses. This is consistent with Steel (2007) which described procrastination as being a form of self-regulatory failure. A model of the themes and sub-themes can be seen in Figure 6 below.

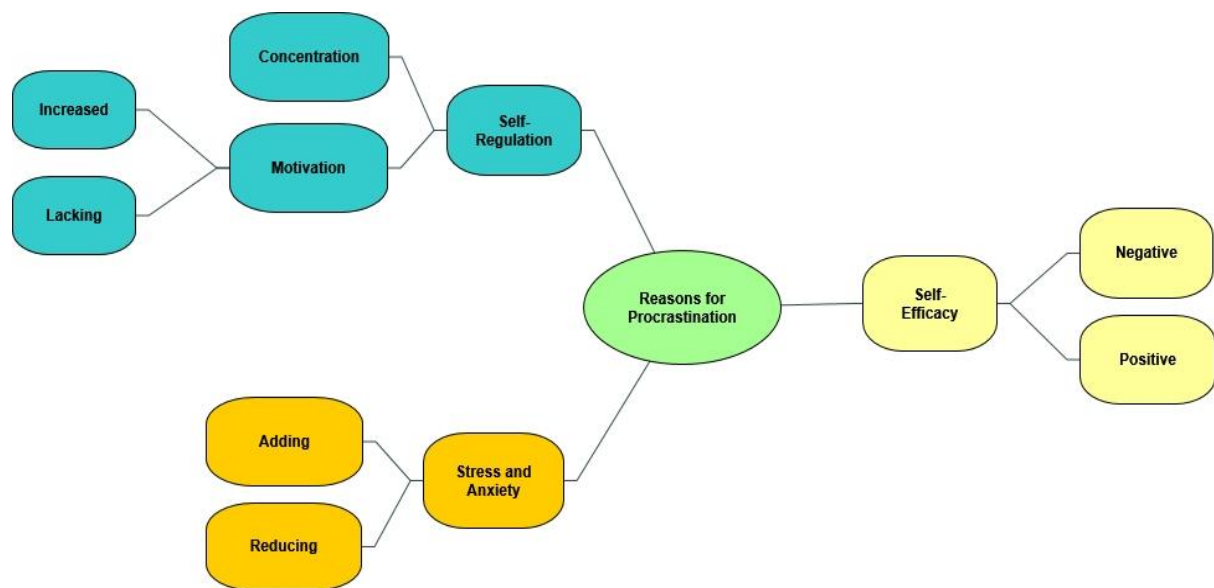


Figure 6 Model of the themes and sub-themes

Discussion

The purpose of this study was to examine the roles played by self-regulation, anxiety, internet use and gender played in academic procrastination among undergraduate students. Specifically, it was hypothesised that self-regulation, anxiety and internet use would be significant predictors of academic procrastination. Self-regulation was found to negatively predict academic procrastination, while internet use positively predicted it. Anxiety did not act as a significant predictor. It was hypothesised that self-regulation would have a significant negative relationship with internet use. This hypothesis was supported by the study's findings. It was hypothesised that internet use would have a significant relationship with anxiety. This was supported by the findings of the study in that internet use had a weak positive correlation with anxiety. It was also hypothesised that there would be differences between males and females in academic procrastination. This hypothesis was supported by the study's findings as there was a difference between the genders. It was hypothesised that there would be significant gender differences in self-regulation, anxiety and internet use. This was not supported by the study's findings as there was no difference between males and females on any of the variables.

Quantitative

H1: *Predictors of Procrastination*

In line with previous research (Park and Sperling, 2011; Kandemir, 2014) self-regulation was found to be a significant negative relationship with academic procrastination. This is unsurprising, as Steel (2007) described procrastination as 'self-regulatory failure'. An inability to regulate one's emotions and impulses will lead to spending time on frivolous but perhaps more enjoyable activities rather than college work. Students lacking in self-regulation skills may also struggle to handle negative feelings such as stress which increase its negative

effects and may lead to further procrastination (Hamaideh, 2011). Putting in place measures to increase self-regulation, such as cognitive structuring (ie planning), have been shown to have a positive effect (Van Eerde, 2000).

Contrary to previous research on the topic (Yurtseven and Akpur, 2018; Tice and Baumeister, 1997) anxiety was not found to have a significant relationship with academic procrastination. This may be due to the participants scoring highly in anxiety, with a mean of 14.1 where 10+ is severe. A 2019 report by the Union of Students (USI) found that 40% of third level students experienced severe anxiety, while 30% were severely depressed. This may explain why such high levels of anxiety were reported.

The findings on internet use and academic procrastination were supported by previous research (Sahin, 2014; Reinecke et al, 2018), in that internet use had a significant positive relationship with academic procrastination. Due to the ubiquity of the internet, particularly social media, internet use is a common activity and serves as a large distraction from academic work. Furthermore, a 2013 report by Eurostat found that younger populations use the internet significantly more than those above 55. As, the majority of participants were below 30 years of age, the likelihood of using the internet to procrastinate will rise significantly.

H2: *Self-Regulation and Internet Use*

In agreement with existing literature (Sebena, Orosova, Benka, 2013; Zai, Javed, De Soriano ,2012) self-regulation was found to have a significant negative relationship with internet use. This was expected as procrastination is a self-regulatory failure, and as previously stated, the internet is a common pastime, particularly among the younger population. It is likely that low self-regulation leads to increased internet use as individuals lack the ability to regulate the time they spend on the internet. Despite this, Zai, Javed and De Soriano (2012) found that

specific internet applications could cause deficient self-regulation in tandem with psychosocial vulnerabilities, while general internet use may be caused by it. Therefore, the manner for which the internet is used may lead to significantly different outcomes.

H3: *Internet Use and Anxiety*

The results of this study found that there was a significant weak positive correlation between internet use and anxiety. This is in agreement with previous research (Sandya, Venkatarao and Sourav, 2018; Tena, Gordana and Tea, 2018). The reason for the correlation's weakness may be due to mitigating factors that were not measured. For example, Droiu et al. (2018) examined if social media could act as a form of social support. It was found that it could be a source of both social support and a source of stress. This social support could reduce a person's anxiety, or stress could increase it, contributing to the weak correlation found in the current study.

H4: *Gender and Academic Procrastination*

The study found that there was a significant difference in academic procrastination levels between males and females, corroborating some previous research (Brownlow and Reasinger, 2000; Ozer, Demir and Ferarri, 2009) but not others (Whatley, 2009). It is possible that due to the number of female participants outnumbering male participants over 2:1 that the data may be biased.

H5: *Gender differences in self-regulation, anxiety and internet use*

Potential differences between males and females in self-regulation, anxiety and internet use were also examined. Surprisingly, no significant differences were found for any of the variables. This is despite previous research indicating otherwise. Bjorklund and Kipp (1996) found that females exhibited greater self-regulation, particularly regarding emotional control but also for delay of gratification. Research such as Else-Quest, Hyde, Goldsmith & Van Hulle, (2006) also contradict with this result, but this may be in part due to the different ages of participants.

The lack of gender differences between men and women was not supported by prior research. McLean et al (2011) found that females were more likely to suffer from anxiety, and at a greater intensity, than men. Kalsoom, (2019) found results similar to those in the current study, but specifically regarding sufferers of kidney disease. As the overall anxiety mean of the participants was quite high, it is possible that there was a confounding variable that increased it.

The result on gender differences in internet use was partially supported by existing literature. Akman & Mishra, (2010) similarly did not find there to be any difference between males and females. However, some research such as Baloglu et al (2018) found that men scored significantly higher on problematic internet use than females. Again, it is possible that the difference in the number of male and female participants resulted in this data.

Qualitative

The qualitative aspect of this study aimed to explore the reasons participants themselves gave for their procrastination through the research question ‘Why, in your own words, do you procrastinate?’ While there are many potential reasons for procrastinating, this question was used to allow participants to identify what they believed to be the main issue or cause for it.

Theme 1: Self-Regulation

This theme was the largest of the three main themes. The responses showed that self-regulation, particularly failure to self-regulate, is a common problem for procrastinators, agreeing with previous quantitative research (Steele, 2007). Most participants struggled to work up the motivation to complete their task *“As assignments are often tedious and boring.”* Some simply described themselves as being too lazy or not being bothered to do it *“Because I’m too lazy”*. This highlights not only participants issues in motivating themselves and regulating their desires, but perhaps in how college work is presented and taught. Many participants described college work as being boring or uninteresting, highlighting a need to keep students engaged and interested in their work to reduce procrastination. 5 participants gave responses characteristic of active procrastinators, in that they identified procrastination as a means to increase motivation later on *“I like having pressure put on for certain assignments and stuff like that as a motivation”*.

Theme 2: Self-Efficacy

The smallest theme in number of participant responses, but one that can be seen as closely tied to self-regulation (Strunk and Steele, 2011), some participants indicated a lack of self-efficacy to complete their task *“I make excuses as to why im not doing the thing i should be (generally college work) because i feel like i wont be able to do it well”*. These responses were somewhat characterised by low self-esteem, in that some would berate themselves while admitting to their lack of ability *“Because I’m a fool lacking in self-control”*. This highlights the emotional toll that procrastination and the stress caused by it can have on individuals. 4 participants, again appearing as active procrastinators, were confident in their ability to

complete their task and seemed to avoid any ill feelings due to their procrastination “*I know I’ll be able to do it all in a short period of time*”.

Theme 3: Stress and Anxiety

This theme demonstrates not only some of the reasons for participant’s procrastination, but also the consequences “*Because I’m avoiding the stressful tasks I should finish. Which makes me even more stressed*”. The majority, however, described their reason for procrastination as being a form of escape from the stress and anxiety they feel due to college and life in general “*To escape the pressure or stress of work*”. This can again be linked to self-regulation in that a failure to manage disruptive emotions leads to the development of maladaptive behaviour, in this case procrastination.

Limitations

The current study also had some limitations that should be noted. Firstly, there was a large gender disparity, with 67 females, but only 28 males, and 2 individuals that did not answer despite the option of ‘other’. This negatively affects the generalisability of the results and calls the data regarding the differences between males and females in academic procrastination and the other variables into question. Further effecting the generalisability is the age disparity. 85 participants were in the 18-23 category, 10 in 24-29, while 36-41 and 42+ had only 1 participant each. As previous research has shown that procrastination decreases with age (Steel, 2007) these results may not be consistent with older populations. The time of year at which the data was collected may have also affected the levels of academic procrastination and anxiety in particular. Moon and Illingworth (2005) demonstrated that procrastination levels differ at different times of the year. Therefore, a longitudinal study would be appropriate for future

research to compare academic procrastination levels during the beginning and end of the academic year. Lastly, while there were 97 participants in the study overall only 74 answered the open-ended qualitative question. This may have been due to the relatively large amount of question in the study. This limited to create encompassing themes for the data. Furthermore, as there was only one qualitative question thematic analysis was limited.

Future research

Future research would benefit from a longitudinal study to examine and compare the difference in academic procrastination across the academic year. It would also be beneficial to examine the levels of procrastination in children and adolescents as much of the existing literature focuses on adults, particularly college students. Changes in procrastination and the variables associated with it over developmental periods may help to highlight how procrastination habits are formed and how they can be reduced. More extensive qualitative research involving in depth interviews could give greater insight into the individuals experiences of procrastination as well as its underlying cognitive factors.

Conclusion

Academic procrastination is a growing problem (Steel, 2007), and one that has been shown to have significant effects on individual's mental health (Yurtseven and Akpur, 2018). Overall, the current study partially supports existing literature regarding the potential predictors of academic procrastination, finding that self-regulation and internet use are strong predictors of academic procrastination. Both self-regulation and internet use were found to be correlated with anxiety, although with the weakness of the relationship between internet use and anxiety it would benefit from further research. So too would qualitative research benefit from increased

study as it is somewhat lacking. With the increasing amount of people worldwide entering third level education it is important that the underlying causes of academic procrastination are understood. Continued support and more effective strategies to reduce the potential causes and ill effects of this procrastination are crucial in improving student's chances of completing their studies to the best of their abilities.

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Appendices

Appendix A

Informed Consent Form

My name is Ronan O’Sullivan and I am a Final Year Psychology student at DBS. As part of my final year I am conducting a research study on Academic Procrastination and the role of self-regulation, self-esteem, anxiety and internet use among undergraduate students. This research shall be submitted as part of my studies.

You are invited to take part in this voluntary survey. Participants will be required to complete and return the questionnaire attached. Should any questions cause you discomfort or distress there is contact information for support services on the final page. The questionnaire is completely anonymous so please do not sign your name. You have the right to withdraw from the survey at any time.

All data from the questionnaires shall be transferred to a secure password protected computer. The questionnaires themselves shall be stored in a secure location.

By filling out and submitting this questionnaire you are consenting to participate in this study.

Should you require any further information regarding the study or wish to be informed about its dissemination and reporting you may contact my supervisor Dr. Patricia Orr at XXXX or myself, Ronan O’Sullivan at XXXXX.

Thank you for your cooperation in completing this survey.

Appendix B

Demographics

Please tick the box that applies to you.

What age are you?

18-24 25-32 33-41 42+

What gender are you?

Male Female Other

Appendix C

Academic Procrastination Scale (Short Form)

How much do you, yourself agree to the following statements?

Disagree Slightly Disagree Neutral Slightly Agree Agree
 1 2 3 4 5

1.	I put off projects until the last minute.	
2.	I know I should work on schoolwork, but I just don't do it.	
3.	I get distracted by other, more fun, things when I am supposed to work on schoolwork.	
4.	When given an assignment, I usually put it away and forget about it until it is almost due.	
5.	I frequently find myself putting important deadlines off.	

Scoring Key

Scores of the Academic Procrastination Scale (Short Form) are scored on a 1 to 5 scale where 1 = Disagree and 5 = Agree. Higher combined scores indicate a higher level of academic procrastination. Yockey (2016) demonstrated its validity compared to the regular (non-short form) Academic Procrastination Scale consisting of containing 25 items.

Appendix D

Short Form Self-Regulation Questionnaire (SSRQ)

Please answer the following questions by circling the response that best describes how you are. Remember, there are no right or wrong answers.

	Strongly Disagree	Disagree	Uncertain or Unsure	Agree	Strongly Agree
1. I usually keep track of my progress towards my goals.	1	2	3	4	5
2. I have trouble making up my mind about things. *	1	2	3	4	5
3. I get easily distracted from my plans. *	1	2	3	4	5
4. I don't notice the effects of my actions until it is too late. *	1	2	3	4	5
5. I am able to accomplish goals I set for myself.	1	2	3	4	5
6. I put off making decisions. *	1	2	3	4	5
7. It's hard for me to notice when I've "had enough" (alcohol, food, sweets). *	1	2	3	4	5
8. If I wanted to change, I am confident that I could do it.	1	2	3	4	5
9. When it comes to deciding about a change, I feel overwhelmed by the choices. *	1	2	3	4	5
10. I have trouble following through with things once I've made up my mind to do something. *	1	2	3	4	5
11. I don't seem to learn from my mistakes. *	1	2	3	4	5
12. I can stick to a plan that's working well.	1	2	3	4	5
13. I usually only have to make a mistake one time in order to learn from it.	1	2	3	4	5
14. I have personal standards, and try to live up to them.	1	2	3	4	5
15. As soon as I see a problem or challenge, I start looking for all possible solutions.	1	2	3	4	5
16. I have a hard time setting goals for myself. *	1	2	3	4	5
17. I have a lot of willpower.	1	2	3	4	5

18. When I'm trying to change something, I pay a lot of attention to how I'm doing.	1	2	3	4	5
19. I have trouble making plans to help me reach my goals. *	1	2	3	4	5
20. I am able to resist temptation.	1	2	3	4	5
21. I set goals for myself and keep track of my progress.	1	2	3	4	5
22. Most of the time I don't pay attention to what I'm doing. *	1	2	3	4	5
23. I tend to keep doing the same thing, even when it doesn't work. *	1	2	3	4	5
24. I can usually find several different possibilities when I want to change something.	1	2	3	4	5
25. Once I have a goal, I can usually plan how to reach it.	1	2	3	4	5
26. If I make a resolution to change something, I pay a lot of attention to how I'm doing.	1	2	3	4	5
27. Often I don't notice what I'm doing until someone calls it to my attention. *	1	2	3	4	5
28. I usually think before I act.	1	2	3	4	5
29. I learn from my mistakes.	1	2	3	4	5
30. I know how I want to be.	1	2	3	4	5
31. I give up quickly. *	1	2	3	4	5

Scoring Key

Self-Regulation Scale is scored on a scale from 1 to 5, where 1 = Strongly Disagree and 5 = Strongly Agree. Higher scores equate to higher levels of self-regulation. *Indicates reverse scoring.

Appendix E

Modified DASS 21 (Anxiety Scale)

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement. The rating scale is as follows:

0 Did not apply to me at all - NEVER

1 Applied to me to some degree, or some of the time - SOMETIMES

2 Applied to me to a considerable degree, or a good part of time - OFTEN

3 Applied to me very much, or most of the time - ALMOST ALWAYS

	N	S	O	AA
1. I was aware of dryness of my mouth	0	1	2	3
2. I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
3. I experienced trembling (eg, in the hands)	0	1	2	3
4. I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
5. I felt I was close to panic	0	1	2	3
6. I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
7. I felt scared without any good reason	0	1	2	3

Scoring Key

Greater number indicates a higher level of anxiety.

	Anxiety
Normal	0-3
Mild	4-5
Moderate	6-7
Severe	8-9
Extremely Severe	10+

Appendix F

Compulsive Internet Use Scale (CIUS)

The following questions should be answered about your use of the internet for private purposes.

Answers can be given on a 5-point scale: (0) Never, (1) Seldom, (2) Sometimes, (3) Often, (4) Very often.

1. How often do you find it difficult to stop using the internet when you are online?
2. How often do you continue to use the internet despite your intention to stop?
3. How often do others (e.g. partner, children, parents, friends) say you should use the internet less?
4. How often do you prefer to use the internet instead of spending time with others (e.g. partner, children, parents, friends)?
5. How often are you short of sleep because of the internet?
6. How often do you think about the internet, even when not online?
7. How often do you look forward to your next internet session?
8. How often do you think you should use the internet less often?
9. How often have you unsuccessfully tried to spend less time on the internet?
10. How often do you rush through your (home) work in order to go on the internet?
11. How often do you neglect your daily obligations (work, school or family life) because you prefer to go
on the internet?
12. How often do you go on the internet when you are feeling down?
13. How often do you use the internet to escape from your sorrows or get relief from negative feelings?
14. How often do you feel restless, frustrated, or irritated when you cannot use the internet?

Scoring Key

The Compulsive Internet Use Scale is scored on a scale from 0 to 4, where 0 = Never and 4 = Very Often. Higher combined scores indicate a higher level of Compulsive Internet Use.

Appendix G

Qualitative Question

Why, in your own words, do you procrastinate? (10 words or less)

Appendix H

Debrief Page

Thank your participation. If you feel that the questions in the survey have raised any feelings of discomfort or distress, please consider contacting any of the support services listed below, or speak to someone close to you.

- The Aware Helpline : 1890 303 302 or e-mail info@aware.ie Available Monday – Sunday, 10am to 10pm.
- Samaritans Ireland: free call 116123 or e-mail jo@samaritans.org Available 24 hours a day, 365 days a year.
- DBS Student Services email: studentservices@dbs.ie

Should you require any further information or wish to be informed about the dissemination or reporting of the study, please contact my supervisor Dr. Patricia Orr at XXXXXX or myself, Ronan O’Sullivan at XXXXXX.