

Investigating Self-Esteem, Life Satisfaction, and its effects on Academic Procrastination among Undergraduates

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Declaration

I declare that this submission is my own work. Where I have read, consulted, and used the
work of others I have acknowledged this in the text.
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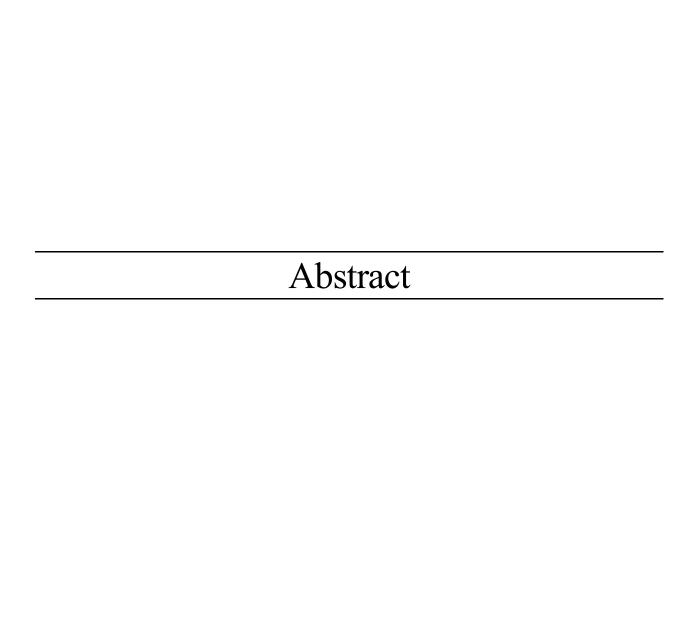
Finally, I would like to convey my appreciation to everyone who participated in this study.

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1. Abstract - 164

Academic procrastination is a condition involving students delaying their academic assignments and other activities essential for academic success (Steel & Kingsieck, 2016). According to reports, 52% of college students put off doing their assignments, and 50% of undergraduate students admitted procrastination. Do self-esteem and life satisfaction effects academic procrastination in undergraduate students? This was the research question of this study. The present study used a self-reported measure from (N = 139) undergraduate students from social media platforms like Reddit and students attending IADT (Institute of Art, Design, and Technology) to investigate self-esteem, life satisfaction, and its effects on undergraduate students' academic procrastination. These self-reports were acquired through questionnaires, 'The General Procrastination Scale,' 'The Rosenberg Self-Esteem Scale,' and 'The Satisfaction with Life Scale.' The study's results revealed that the predicting variable had a significant effect on students' procrastination, despite weak relationships being observed. The current research enables the design and implementation of potential solutions that will decrease students' propensity for academic procrastination in the future.

Literature Review

1.1 Introduction -1850

People are vulnerable to procrastination in many aspects of their lives. For some individuals, it affects most situations of their everyday lives, such as chronic procrastination. For others, it is only specific parts of their lives, an academic setting or workplace (Zacks & Hen, 2018). According to Steel & Kingsieck (2016), "procrastination is an individual willingness to postpone an intended task even though there will be consequences for their postponement" (p. 37). This behaviour is widespread among the public; 15 to 32% of people have experienced some level of procrastination (Ferrari et al., 2005, as cited in Ocansey et al., 2018). A well-known form of procrastination is academic procrastination. This phenomenon occurs when students postpone academic tasks and activities necessary for studying and learning (Steel & Kingsieck, 2016). Wang et al. (2021) reported that academic procrastination is linked to stress, anxiety, depression, and poor academic performance. A more profound knowledge of academic procrastination and other factors, such as self-esteem and life satisfaction, will be researched as effectors of academic procrastination.

1.2 Academic procrastination

Research has reported that 70% of university students procrastinate daily (Zack & Hen, 2018). It is reported that 52% of undergraduate students postpone academic tasks (Ozer et al., 2009, as cited in Wang et al., 2021). Approximately 50% of undergraduates admitted to continual procrastination (Rozental & Carlbring, 2014, as cited in Wang et al., 2021). Like other forms of procrastination, academic procrastination affects students' academic performance.

Temporal Motivation Theory (TMT) explains why people procrastinate. This theory attempted to explain decision-making or behavioral selection processes. TMT advises that an individual pursue activities that guarantee the most usefulness. In other words, when an individual is convinced that a task is useless, they tend to postpone it (Siaputra, 2010). This could be due to TMT maintaining Picroeconomics (a tendency to prefer more immediate payoffs than later payoffs) components such as value, sensitivity to delay, time delay, and expectancy. Value serves as a preference indicator for activities. Sensitivity to latency is a sign of a preference for immediate gratification. Expectancy showing expected achievement likelihood is the period it takes to get the result (Siaputra, 2010).

Due to these considerable disadvantages, researchers have investigated procrastination and presented numerous emotional, personality, and cognitive variables as potential predictors. Usually reported cognitive correlations are fear of failure, low self-esteem (Ferrari et al., 1992, as cited in Malkoc & Mutlu, 2018), and Academic motivation (Malkoc & Mutlu, 2018).

Among 101 undergraduate students Cerino (2014) discovered a negative relationship between self-efficacy, academic motivation and academic procrastination. The study also found that academic motivation significantly influenced academic procrastination. A study by Zarrian et al. (2020) examined 6,217 students in 5 faculties using random cluster multistage sampling at the university of Isfahan in Iran. Zarrian et al. (2020) discovered a negative association between academic procrastination and fear of failure. The results showed that fear of failure connects to self-esteem. When they fail, those with low self-esteem feel entirely defeated, thus, preferring to take no action for fear of failure.

Procrastination is heavily associated with poor mental health (Stead et al., 2010, as cited in Eisenbeck et al., 2019) and psychological inflexibility (Sutcliffe et al., 2019). In an academic environment, it connects to increased levels of anxiety, stress, regret, irritation, self-blame, and despair (Eisenbeck et al., 2019), along with being negatively linked with happiness, wealth, and health (Steel, 2007, as cited in Zack & Hen, 2018). Sutcliffe et al. (2019) examined 3rd-year psychology undergraduate students. The students with low levels of psychological flexibility had increased levels of procrastination. Students also reported having symptoms of physical illness due to procrastination (Tice & Baumeister, 1997, as cited in Glick et al., 2014), such as insomnia and depression (He, 2017). Many factors influence academic procrastination academically, psychologically, and physiologically. One of these significant factors is self-esteem.

1.3 Self-esteem

Self-esteem is often studied concerning academic procrastination. In contemporary life, the idea of self-esteem is widespread. People believe high self-esteem is essential for success in specific environments, such as the classroom and workplace (Orth & Robins, 2014). Orth & Robins (2014) stated self-esteem as a person's subjective self-reflection of their value. Those with high self-esteem regularly have effective coping strategies when faced with difficulties. In contrast, those with low self-esteem have fewer coping strategies and are more prone to face emotional distress (Brown, 2016, as cited in Chandra et al., 2019).

Research has explored the connection between low self-esteem and academic procrastination. It is frequently reported that academic procrastination is higher in students with poorer self-esteem (Senecal et al., 1995, as cited in Yang et al., 2021). Additionally, people with poor self-esteem or who think negatively of themselves are likely to have lower motivations for their academic tasks, which could result in procrastination (Knak & Odac, 2020, as cited in Yang et al., 2021). Kinik & Odadi (2020) conducted a study on Turkish university students, concluding that self-esteem was a mediator of academic procrastination. This may be because self-esteem is a procrastination mechanism for students' psychological well-being. Kinik & Odadi (2020) concur with a study by Chandra et al. (2019) from August to September 2017, 255 dental students in Bengaluru, India, participated in a cross-sectional study. The researchers used the Tuckman procrastination

scale to measure the student's academic procrastination tendency and the Rosenberg Self-Esteem scale was used to test the student's self-esteem. The researchers found that students with increased self-esteem were less likely to procrastinate than those with low self-esteem. The results showed that procrastination protects oneself from low self-esteem (Ferrari & Tibbett, 2017, as cited in Uzun et al., 2020).

One theory that explains this self-protection is 'the protection motivation theory (PMT). Yu et al. (2022) risk (fear) appraisal and coping appraisal result in protection motivation, which could enhance or decrease well-being to avoid a hazard. This theory suggests that people afraid of failing have faced heavy criticism from peers and think they need a high degree of aptitude to achieve success (Zhang et al., 2018). Those who repeatedly perform poorly in school adopt a poor opinion of themselves and procrastinate to avoid being evaluated (Stuart, 2013, as cited in Zhang et al., 2018). In related literature, life satisfaction is another variable concerning academic procrastination (Savithri, 2014, as cited in Kandemir, 2014).

1.4 Life Satisfaction

A fundamental psychological concept (or subjective) of well-being appears to be life satisfaction (Diener et al., 2002, as cited in Tsitsas et al., 2019). Life satisfaction is being pleased with one's life and feeling happy (Maddux, 2018, as cited in Sholihin et al., 2022). According to research, life satisfaction is one of the most significant indicators of a successful transition to life. It can benefit health, social relationships, and longevity (Diener, 2012, as cited in Rogowska et al., 2021). Academic achievement and self-image are all related to life satisfaction. College students value life satisfaction, which is strongly connected with emotional and affective factors and aspects of daily life (Sholihin et al., 2022).

It has been reported that academic procrastination and life satisfaction are negatively correlated, and an individual's satisfaction with their life is a significant effector of academic procrastination (Binder, 2000; Savithri, 2014, as cited in Kandemir, 2014). Among 314 university students registered in a different department, a university in Ankara, Turkey, Özer & Saçkes (2014) found using the Tuckman Procrastination scale and Satisfaction with Life scale that students who postpone tasks had decreased life satisfaction scores. These results show that student are frequently more likely to develop unpleasant emotions than those who do not. The results were consistent with the widely held belief that procrastinating causes pupils to feel unpleasant emotions (Nicholson & Scharff, 2007, as cited in Özer & Sackes, 2014).

Özer & Saçkes (2014) supported Maryam et al. (2016), who examined 200 students from different programs in a university in Pakistan, using the procrastination scale for the student population and the satisfaction with life scale. Maryam et al. (2016) reported that procrastination had a strong negative relationship with life satisfaction. This might be the case because, in college years, students are responsible for their well-

being, finances, and health. These years are stressful for college students (Cress & Lampman, 2007, as cited by Civitci, 2015).

However, Yang (2021) reported that self-regulation mediates life satisfaction and procrastination. They stated that individuals are dissatisfied because of procrastination caused by low self-regulation. Yang (2021) investigated 740 undergraduate students from Britain and China regarding life satisfaction, procrastination, and self-regulation. In both countries the relationship between life satisfaction, procrastination and self-regulation was significant. This concluded that poor self-regulation and greater procrastination resulted in poor life satisfaction.

Self-esteem is a crucial psychological concept since it improves an individual's satisfaction in life. Self-esteem plays a significant role in mental health and impacts aspirations, life objectives, and human interactions (Mann et al., 2004, as cited in Ling & Ee, 2023). Self-esteem determines achievement and happiness in life (Trzesniewski et al., 2006, as cited in Ling & Ee, 2023). According to previous research, self-esteem is a major determinant of life satisfaction (Brown et al., 2001, cited in Szcześniak et al., 2021). A study by Patel et al. (2018) examined the self-esteem and life satisfaction of 200 college students at Veer Bahadur Singh Purvanchal University Jaunpur, India. They found that self-esteem significantly impacts life satisfaction since a high degree of self-esteem corresponds to an elevated level of satisfaction with life. The study concludes that life satisfaction is boosted by self-esteem.

Another study by Ling & Ee (2023) tested self-esteem and life satisfaction among undergraduate psychology students in a university in Sabah, Malaysia, using the Rosenberg Self-Esteem and Satisfaction with Life scales. They discovered that it is reasonable to infer that students' overall perspectives of their life are strongly influenced by their level of self-esteem. Thus, self-esteem is essential for a broad assessment of an individual's existence. As a result, the findings are consistent with previous studies, which stated that self-esteem predicts life satisfaction (Diener & Diener, 1995, as cited in Ling & Ee, 2023). Thus, University students with poor self-esteem may be less satisfied with their lives (Ling & Ee, 2023).

1.5 The Present Study

Previous research has shown that academic procrastination is a significant problem in college students' everyday lives. Many studies have investigated multiple variables affecting academic procrastination, such as self-efficacy, motivation, and academic performance. Other studies have examined self-esteem and life satisfaction with other variables, such as perfectionism and fear of failure. However, only a few studies have combined self-esteem and life satisfaction as an effector of academic procrastination. The present research will examine if self-esteem and life satisfaction are effects of academic procrastination. It will test if having high or

low self-esteem and life satisfaction affects academic procrastination among undergraduate students. The Research question is the following:

RQ = Do self-esteem and life satisfaction effects academic procrastination in undergraduate students?

1.6 Hypothesis

- H1: There will be a significant relationship between self-esteem, life satisfaction and academic procrastination among undergraduate students.
- H2: There will be a significant relationship between self-esteem and academic procrastination among undergraduate students.
- H3: There will be a significant relationship between life satisfaction and academic procrastination among undergraduate students.

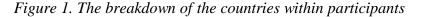
Method

2.1 Design_ - 893

The present study used a correlational design and an online quantitative survey using a questionnaire to collect data. The independent variable was to measure the student's level of self-esteem using a self-esteem scale (Rosenberg, 1965). The life satisfaction scale, the independent variable, was used to measure students' subjective well-being (Diener, 1985). The dependent variable measured the student's academic procrastination scale performance (Lay, 1986). The study was cross-sectional.

2.2 Participants

Convenience sampling was used to recruit college undergraduates from IADT (Institute of Art, Design, and Technology) and Snowball sampling was used to gather international college undergraduates via social media as shown in figure 1 (N=139) ranging from 18-65 years old (M age =22.6, SD==6.04). The students were given a link to the questionnaire using Qualtrics. Undergraduates from first to fourth year were the only ones allowed to participate in the study displayed in figure 2. Therefore, participants were recruited using the internet.



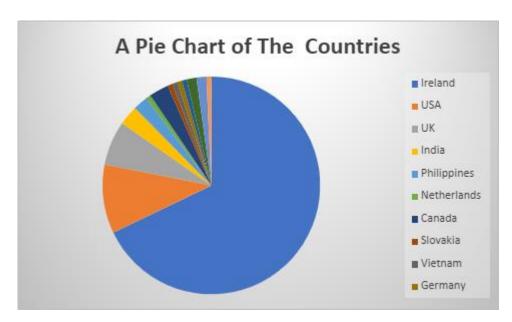
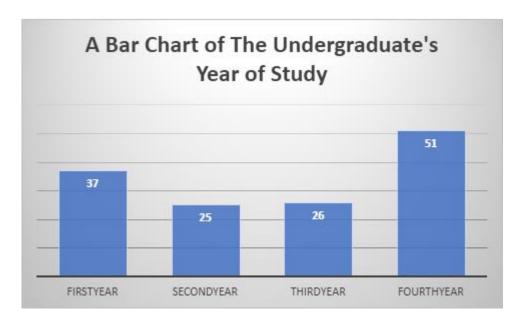


Figure 2. A Bar Chart of the participants year of study from first to fourth year.



2.3 Ethics

The ethical standards of the Psychology Society of Ireland and the Department of Technology Ethics Committee (DTPEC) in IADT (Institute of Art, Design, and Technology) were followed in the treatment of participants ("Code of Ethics | PSI," 2019). The Psychology Ethics Committee (DTPEC) also approved this research project. The DTPEC accepted an application to the ethics board after it was submitted (see Appendix P).

2.4 Materials

The survey was conducted online using Qualtrics and included the materials as follows. The information sheets explained the study, their contribution, and the participant's rights (see appendix A). A consent form for the participants to give their permission to part take in the survey (see Appendix B). Debrief form reaffirmed the study's goal and thanked the participants (see Appendix C), and the demographics form included gender and age information (see Appendix D).

The General Procrastination Scale (1986): the general procrastination scale (Lay, 1986) (see Appendix E) assessed undergraduate students' undergraduate level of procrastination (e.g., "I do not do assignments until just before they are to be handled"). The scale contains 20 items and ten reversed items. Sirois et al. (2019) reported that the scale is unidimensional, measures behaviour delays, and has outstanding test-retest stability over ten years. Participants score on a 5-Likert scale, with one being (Extremely Uncharacteristic) to 5 (Extremely Characteristic). The reliability of the scales used to collect results for this,

Cronbach's alpha was utilized; it was 0.82 (Lay, 1986). Yang et al. (2021) stated a Cronbach's alpha of .86 reliability. In this current study, Cronbach's alpha was .86 (see Appendix F for SPSS Output).

Rosenberg's Self-esteem scale (1965): (RSES; 1965) (see Appendix G) was used; it was a 10-item scale that assesses one's self-esteem, self-worth, and how one views themselves (e.g., "On the whole, I am satisfied with myself"). The items were scored on a 5-point Likert scale, with five beings (Strongly agree) and one being (Strongly disagree). A more excellent score corresponds to stronger self-esteem. The score reliability has been amply demonstrated in published studies. Cronbach's alpha of Rosenberg's self-esteem was .86 (Rosenberg, 1965). Zhang et al. (2018) revealed that Cronbach's alpha in their study was .863. This result shows that this scale has reliability and stability. In the present study, Cronbach's alpha was .89 (see Appendix H for SPSS Output).

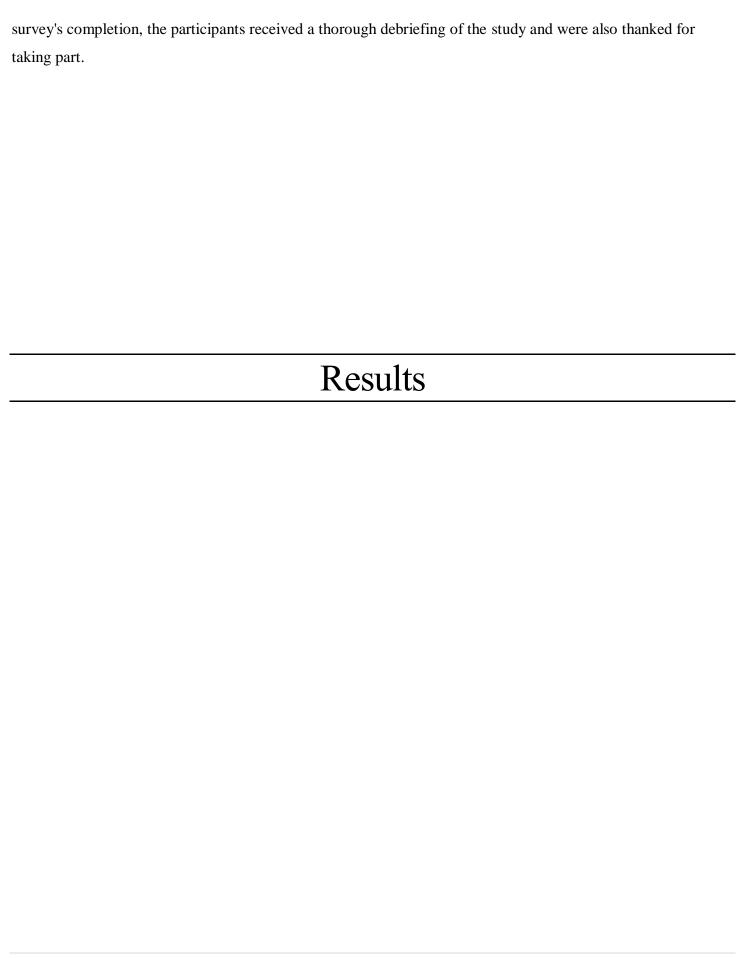
Satisfaction with Life Scale (SWLS; Diener et al., 1985): SWLS (see Appendix I) was developed by Diener et al. (1985). It is currently the most extensively used indicator of life satisfaction. The SWLS consists of a 5-item, self-report questionnaire that gauges overall subjective well-being and is used to answer questions, 1 being (Strongly disagree) and 7 being (Strongly agree). The Cronbach's alpha of the scale is .80 (Diener et al. 1985 as cited in Diener et al., 2013). Previous studies have confirmed the reliability of the scale. Civitici (2015) reported Cronbach's alpha of .79. In this present study, Cronbach's alpha of .84 (see Appendix J for SPSS Output).

2.5 Pilot Study

The research was preceded by a pilot study to ensure the online survey was operating correctly. This was done to verify that all questions were comprehended and that no errors were discovered during the process. Five fourth year Applied psychology students from Dun Laoghaire Institute of Art Design and Technology participated in the pilot study and discovered no significant issues with the online survey.

2.6 Procedure

The online survey was distributed via a link through social media such as Reddit, or participants were approached during class in IADT, where they were given a QR code for the survey. At the beginning of the survey, information regarding the study's purpose was provided, and they were given a consent form to complete to participate in the study. Then the participants were asked to give participants codes so the researcher could identify their data or remove it from the study. The participants were asked five demographic questions regarding their gender, pronouns, age, if they were college students and their year of study. The participants were instructed to complete the general procrastination scale (Lay, 1986). the satisfaction with life scale (Diener et al., 1985) Rosenberg self-esteem scale (Rosenberg, 1965), through the survey. Upon the



Overview -597

The current study conducted a multiple regression analysis to understand whether academic procrastination can be affected by an undergraduate student's self-esteem and life satisfaction, looking at first to fourth year (n=139) students on social media platforms such as Reddit and IADT (Institute of Art, Design, and Technology). IBM SPSS Statistic Version was used for the statistical analysis.

Descriptive Statistics

Table 1 (below) shows the number of participants (N) that answered each questionnaire. The standard deviation (SD) and the mean (M) scores are displayed. These scores are from the questionnaires that measure the dependent variable, academic procrastination, and two predicting variables.

Table 1. displays the number of participants, mean, and standard deviation of the scores.

Variable	N	M	SD
Academic procrastination	139	67.49	13.70
Life satisfaction	139	20	7.08
Self-esteem	139	25.60	5.92

Inferential Statistics

Assumptions

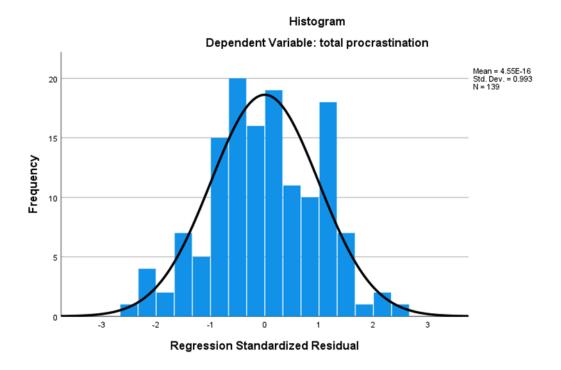
A standard multiple regression analysis was carried out to demonstrate how the predictive variables affect academic procrastination. Before the analysis, the data was evaluated to confirm that all the assumptions were met (Pallant, 2016). The singularity assumption was supported because there were no significant relationships between the predictor variables (see Appendix K for SPSS output).

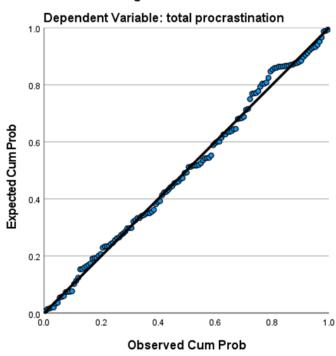
The analysis showed no outliers (Std. Residual Min= -2.4, Std. Residual Max= 2.5). There was no concern for multicollinearity (life satisfaction, Tolerance= .67, VIF= 1.5; self-esteem, Tolerance= .67, VIF= 1.5) (see Appendix L for SPSS output).

The residuals were linear and independent (Durbin-Watson statistic of 1,877). As seen in the histogram (Figure 1) and p-plot (Figure 2) below, the normality assumption was achieved. The Mahalonobis distances

range from .014 - 13.22 (see Appendix M for SPSS output). The data analysed was evidence that all the assumptions were met.

Figure 3.. A histogram presenting the target variable's normal distribution.





Normal P-P Plot of Regression Standardized Residual

Multiple Regression

The regression model was statically significant when using the entry method; F(2,136) = 9.150, p<.001, R2=.344, R2 Adjusted=.106). The model explains 10.6% of the variance in academic procrastination (See Appendix N for SPSS output). Information about the predictor variables included in the model is provided in Table 2 below. The analysis demonstrates that life satisfaction did not significantly predict undergraduate academic procrastination ($\beta = -.017$, t(138) = -.172, p=.864). However, self-esteem did significantly predict undergraduate academic procrastination ($\beta = -.334$, t(138) = -.3.39, p<.001).

Table 2. The predictors standardised regression coefficients, unstandardised regression coefficients, and significant values.

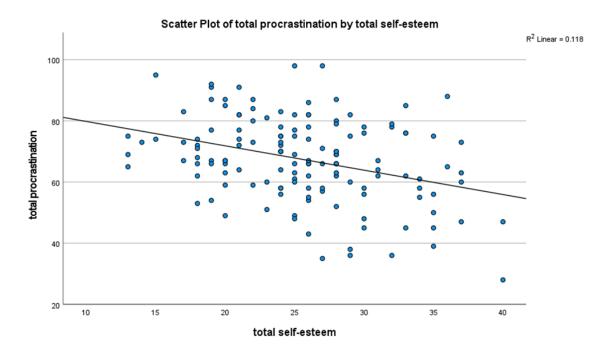
Variable	В	SE B	β	P
Life satisfaction	033	.190	017	.864
Self-esteem	774	.228	334	<.001

Summary of Results

According to the first hypothesis, self-esteem, life satisfaction, and academic procrastination would have a significant relationship. H1 was accepted as self-esteem, and life satisfaction impacted the regression model F (2, 273) = 136.55, p<.001, R2 = .500, R²Adjusted = .496).

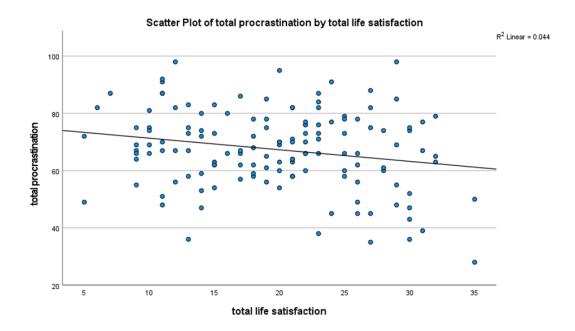
The second hypothesis states that there would be a significant relationship between self-esteem and undergraduate academic procrastination. There was a weak negative correlation of -.334 and a partial correlation of -.280, with a significant p-value of. <001. Therefore, H2 was accepted. Figure 3 below depicts a scatterplot of the relationship between self-esteem and academic procrastination scores.

Figure 5. Correlation between undergraduate's self-esteem scores and their academic procrastination scores.



The third hypothesis stated that there would be a significant relationship between life satisfaction scores and undergraduate academic procrastination scores. There was a weak negative correlation of -.209 and a partial correlation of -.015, with an insignificant p-value of .864. Therefore, H3 was not accepted. Figure 4 below depicts a scatterplot of the relationship between life satisfaction and academic procrastination.

Figure 6. Correlation between undergraduate's life satisfaction scores and their academic procrastination scores.



The results stated will be further discussed in the following section.

Discussion	

4.1 Overview of findings- 1479

The first hypothesis stated that there would be a significant relationship between self-esteem, life satisfaction, and academic procrastination among undergraduate students. The findings correspond with previous studies. Yang et al. (2021) investigated life satisfaction and academic procrastination. The researchers reported a significant relationship between life satisfaction and academic procrastination. The researchers concluded that self-esteem was a precursor to academic procrastination. Participants' self-esteem was falling, while academic procrastination was rapidly increasing. Yang (2021) reported that procrastination was connected to low life satisfaction. When testing university students from China and Britain, Yang (2021) found that increased procrastination predicted decreased life satisfaction in Chinese and British students. Yang et al. (2021) and Yang's (2021) research used correlation and self-report measurements similar to the present study.

The second hypothesis stated that there would be a significant relationship between self-esteem and academic procrastination among undergraduate students. The hypothesis is accepted, a decrease in self-esteem as academic procrastination increased. This finding supports previous studies. Kinik & Odadi (2020) found that self-esteem directly affected academic procrastination among 862 university students in Turkey. Students with an unfavorable perception of themselves may have diminished desire and optimism about completing academic obligations on time. This means students with an increased tendency will put off academic assignments. These findings are supported by a study conducted at a university in Bengaluru, India. Chandra et al. (2019) investigated the relationship between academic procrastination and self-esteem. Chandra et al. (2019) discovered that the greater the self-esteem, the less the students procrastinated; the less the self-esteem, the more likely they procrastinate. Research by Kinik & Odadi (2020) and Chandra et al. (2019) used 'The Rosenberg Self-Esteem Scale' to test student self-worth. This is also used in the present study.

The third hypothesis stated that there would be a significant relationship between life satisfaction and academic procrastination. This hypothesis is not supported. This is inconsistent with pervious research. Özer & Saçkes (2014) reported that increased levels of procrastination meant a decrease in life satisfaction and vice versa. The research by Özer & Saçkes (2014) was ANOVA tested and had a much larger sample size of 314, which could have resulted in a different conclusion. Maryam (2016) also supported this finding, identifying a significant connection between life satisfaction and academic procrastination in their study.

4.2 Strengths and Limitations

The present study has Strengths and Limitations. The researchers in this study use snowball sampling using online discussion forums like Reddit and convenience sampling gathering data from students in IADT (Institute of Art, Design, and Technology). Snowball sampling is less demanding to discover a large audience to assemble data. It was possible to discover the demographic related to the study on Reddit because of its

numerous subreddits related to college students, such as r/college and r/getstudying. Convenience sampling is beneficial and comparable to snowball sampling. Discovering a vast gathering of people was simpler since everybody was accumulated in one location, and contacting the researcher if the participants had any questions about the study was easier.

Conducting the study online also allows a diverse demographic to gather data from not just Ireland but different countries worldwide. The researcher gathered data from 10 countries (Ireland, USA, UK, India, Philippines, Netherlands, Canada, Slovakia, Vietnam, and Germany). All the participants are undergraduate students from first to fourth year. Yang (2021) stated that different cultural backgrounds and procrastination effects might differ in each country. This is an advantage as the results can be accurately applied to the rest of the population, allowing for good generalizability.

Chandra et al. (2019) stated that a larger sample size could yield a more accurate and trustworthy result. The present study has a large sample size of 139 participants. This sample size also has a broad age range (18-60 years). This gives a better idea of academic procrastination across different generations. It recognises the requirements of people at various ages and the many life stages across the lifespan.

A few limitations arose in the present study. The lack of a strong relationship between the predicting and dependent variables caused a limitation. Even though two of the hypotheses show a significant relationship, each assumption was met. The weak correlations discovered between each of the predicting variables and academic procrastination indicate that there is only a minor relationship between them. This implies that the study is not suitable for multiple regression.

The present study relied on self-report questionnaires concerning the students' self-esteem, life satisfaction, and academic procrastination. Maryam (2016) noted that self-report measures could lead to social desirability bias as the participant may not answer questions truthfully, susceptible ones. Further, several participants needed more interest in answering the first set of questions meaning the researcher had to eliminate the participant from the survey. In the current study, 200 students responded to the survey; however, only 139 completed the survey.

Another limitation was that the present study was cross-sectional, meaning the data was collected during a single period. This means the researchers could not analyse the participant's behaviour over a period. There needed to be an assurance that the snapshot's time was representative. The results might be erroneous or distorted if there was a conflict of interest with the funding source.

4.3 Theoretical implications

Despite its limitations, the present study contributed to the current literature on academic procrastination. Zack & Hen (2018) stated that academic procrastination contributes to low self-esteem and reduced well-being. Previous studies have researched the effects of self-esteem and academic procrastination and life satisfaction and academic procrastination among university students. The present study reports new findings by investigating two variables (self-esteem and life satisfaction) that still need to be associated in a study about academic procrastination among university students. The present study may aid in understanding the phenomenon investigated in this present study, that self-esteem and life satisfaction play a significant role in predicting a student's tendency to procrastinate.

Previous research investigating academic procrastination came from universities outside of western countries. Zarrin et al. (2020) reported fear of failure, self-regulation, and academic procrastination. The sample was collected from an Iranian university. Ling & Ee (2023) examined self-esteem and life satisfaction in a university in Malaysia. Zhang et al. (2018) investigated fear of failure, self-efficacy for self-regulation as a predictor of self-esteem, and academic procrastination, and Wang et al. (2021) academic procrastination in college students' data was collected only in Chinese universities. The present study contributes to the research by providing an Irish sample but has another sample from many countries around the world. This gives a much wider perspective of how many students from Ireland and other parts of the world's self-esteem and life satisfaction affect their academic procrastination.

4.4. Practical implications.

The practical implications regarding the inverse relationship between self-esteem, life satisfaction, and academic procrastination could help reduce this maladaptive behaviour in the future. Cognitive Behavioural therapy effectively confronts students' procrastination tendencies and helps decrease them. The findings have shown a positive outcome in combating procrastinatory behaviours and preventing the negative impact of procrastination (Balkis & Duru, 2007, as cited in Zack & Hen, 2018). Universities can also implement group counselling intervention programmes. Research has shown that students attending these programmes have helped decrease academic procrastination (Ozer et al., 2013, cited in Zack & Hen, 2018). University student services can organise a study skill centre to help students develop self-regulation and self-efficacy. Encouraging strategies such as double body to help lower procrastination can help students.

4.5 Future Research

For future studies, researchers should investigate longitudinal research that tracks a sample of students at college and looks at differences in procrastinating behaviours could be done and as opposed to investigating the effects of academic procrastination in a short period, giving an accurate depiction of any change in procrastination over time and being able to identify the reason for the change.

Future research should also investigate this area by testing academic procrastination in different countries by comparing their cultural background and how they contribute to academic procrastination. This will give a broader perspective on how academic procrastination affects students from certain countries and how these countries solve it.

Testing different interventions to reduce procrastination tendencies should be implemented in future studies. Cognitive behavioural therapy has been an advantage in reducing procrastination. An intervention using cognitive behavioural therapy could be provided throughout the semester to assess any changes in decreasing academic procrastination in students.

4.6 Conclusion

In conclusion, the present study contributes to educational psychology by addressing the gap in literature and supporting previous research. The results of the present study established that selfesteem and life satisfaction effects academic procrastination among undergraduate students, despite the weak relationship between the variables. The implications of the findings would be of interest to the university to implement strategies and programmes to help undergraduate students reduce their procrastination tendencies. The Present study dissemination is submitted in the all-Ireland psychology student congress 2023 and IADT grad show (see Appendix O).

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Appendices

6.1 Appendix A – Information Sheet

Title of project: Investigating self-esteem and life satisfaction and its effects on academic procrastination among undergraduates

You are being invited to take part in the research Investigating self-esteem and life satisfaction and its effects on academic procrastination among undergraduates. This project is being undertaken by Sarah Singa for our major research project as part of the BSc (Hons) in Applied Psychology, IADT.

Before you decide whether you wish to take part, it is important for you to understand why this research is being done and what it will involve. Please take time to read this information carefully and discuss it with someone you trust. If there is anything that is unclear or if you would like more information please ask, our contact details are at the end of this information sheet. Thank you for reading this.

What is the purpose of the project?

People tend to procrastinate at different times, such as delaying work-related projects or a task that must be done at home. Procrastination also occurs in an educational setting, known as "Academic procrastination," which involves delaying an assignment or studying for an exam. Much research reported that academic procrastination could affect aspects of a student's life. This research investigates self-esteem and life satisfaction and their effects on academic procrastination among undergraduates.

Who is being invited to take part?

This research is for undergraduate college students, as this particular demographic is vulnerable to academic procrastination. Which is the way they are a group of interest in this study.

What is involved?

If you choose to participate, you will be asked demographic questions about your age, gender, pronoun, if you are an undergraduate college student and year of study. Followed by three questionnaires. The first questionnaire asks about your tendencies to procrastinate, the second questionnaire asks about your self-esteem, and the third asks about your life satisfaction. This study will take approximately 10 minutes to complete.

Do I have to take part?

You are free to decide whether you wish to take part or not. If you decide to participate, you will be asked to sign a consent form that lets us know you have read this information sheet and understand what is involved in the research. You can withdraw from this study at any time and without giving reasons. Choosing to either take part or not part in the study will have no impact on your marks, assessments, or future studies.

What are the disadvantages and risks (if any) of taking part?

The questionnaire will ask about your self-esteem and life satisfaction there is a possibility that there will be questions that may cause discomfort. You may decide not to answer these questions if you do not wish to.

What are the possible benefits of taking part?

We cannot promise the study will help you, but the information we get from the study will help to increase your understanding of academic procrastination.

How will my information be used?

The data from the questionnaire will combine all other participant's data and be statistically analysed. No individual's data will be identifiable in the final report. The results of this analysed will be reported in the thesis for the BSc (Hons) in Applied Psychology at the Dun Laoghaire Institute of Art, Design & Technology. This can be requested through the library at IADT, or by emailing the researcher at Moo190611@iadt.ie or the supervisor at irene.connoly@iadt.ie. This study may also be published in an academic journal article and may be written about for blog posts or media articles, which can be requested from the researcher.

How will my data be protected?

Your confidentiality will be safeguarded during and after the study and how the researcher will adhere to GDPR regulations. Your data will be anonymised. Each participant will construct a unique code that will be able to identify their own data if they wish to have it removed from the study after submitting their answers.

Under the EU General Data Protection Regulation (GDPR) the legal basis for collecting data for scholarly research is that of public interest. The regulations regarding the protection of your data will be followed. Only data which is needed for analysis will be collected. By giving your consent to take part in the study you are consenting to the use of your data as detailed in this information sheet.

The data will be retained by the researcher for at least one year, and may be retained for up to 7 years if the results of the study are published in certain capacities (e.g. in a journal article). There is also a possibility that the fully anonymised dataset may be submitted to a journal and made available to other researchers and academics worldwide for verification purposes, but if this occurs it will be ensured that you are not identifiable from the data.

As the supervisor on this project, I, Irene Connolly, am responsible for ensuring that all datasets will be stored in accordance with GDPR regulations and those which are not submitted to a journal will be fully deleted on or before January 2030.

Only the researcher and supervisor will have access to the data received from the questionnaire. The data will be stored securely on a password-protected computer. If the data is breached the data protection officer in IADT will be informed immediately. The data will be coded by each participant, the researcher will be able to link data to any individual without the

code only known by the participant themselves. The data will be stored for a year after collection, they will then be deleted if the study is not published. If that is the case the data will be stored for a further seven years and then it will be deleted.

You will find contact information for IADT's Data Protection Officer, Mr Bernard Mullarkey, and more information on your rights concerning your data at https://iadt.je/about/your-rights-entitlements/gdpr/

Who has reviewed the study?

This study has been approved by the IADT Psychology Ethics Committee.

What if you have any questions or there is a problem?

If you have a concern about any aspect of this study, you may wish to speak to the researcher(s) who will do their best to answer your questions. You should contact Sarah Singa at No0190611@iadt.ie or their supervisor Irene Connolly at irene.connolly@iadt.ie.

Thank you

The researcher would like to thank everyone who chooses to take part in this research, every answer is appreciated.

Date

16/1/2023

6.2 Appendix B – Consent Form

Title of Project: Investigating self-esteem and life satisfaction and its effects on academic procrastination among undergraduates

Name of Researcher: Sarah Singa

Please Click the box if you agree with these statements.

1	I confirm that I have read and the opportunity to ask question		eet for the above study and have had	
2	I understand that my particip	ation is voluntary and that I am	free to withdraw at any time.	
3	I understand that data collect research is published.	ed about me during this study v	vill not be identifiable when the	
4	I am over 18			
5	I agree to take part in this stu	dy.		
Nam	ne of participant	Date	Signature	
Rese	earcher	Date	Signature	

It is unusual that students will ask participants to take part in future research, or to use the data gathered for the current study in future research. However, should you decide with your supervisor that you will do this, please include in the consent for the following:

- I agree to be contacted about possible participation in future research projects.
- I agree for this data to be used in future research projects.

6.3 Appendix C – Debrief

Title of Project: Investigating self-esteem and life satisfaction and its effects on academic procrastination among

undergraduates

Name of Researcher/s: Sarah Singa

Thank you very much for taking part in this research study.

This study investigates academic procrastination and its effects on self-esteem and life satisfaction among undergraduate

students. The questionnaires you just completed will help understand undergraduate students' reasons behind their tendency

to procrastinate. For example, is it the student's confidence in themselves and their academic abilities, is the student's current

condition in their lives that causes them to delay their academic tasks, or is it a combination of both? These answers will be

collected by undergraduate students to examine their self-esteem and life satisfaction to see if it affects their procrastination

tendencies.

Withdrawal information

If you have any questions about this study, or if you would like to withdraw your data from the study, please contact the

researcher or supervisor at N00190611@iadt.ie or irene.connolly@iadt.ie. In your email let them know your unique ID code,

this was the second letter from your first and last name, combined with the last 3 digits of your telephone number. If you

submit a request for data removal the data collected from you will be securely deleted. You will be able to remove your data

from the study until 10/02/2023 when the data will be combined and analysed. Data removal will not be possible after that

date. Please keep a copy of this information in case you wish to remove your data after leaving this screen.

Data protection

Your data will be treated according to GDPR regulations. You will find contact information for IADT's Data Protection

Officer, Mr Bernard Mullarkey, and more information on your rights concerning your data at https://iadt.ie/about/your-rights-

entitlements/gdpr/

Support resources

If you have been affected by the content of this study in any way,

Please contact the organization down below for assistance.

Jigsaw Dublin City- Youth Mental Health charity: dublincity@jigsaw.ie

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Pieta House-24hr freephone crisis helpline (1800 247 247), Text HELP to 51444

Samaritans - phone: 116123.

Thank you again for taking the time to participate in this research.

If you have any questions about this study, please contact the researcher or supervisor at N00190611@iadt.ie or irene.connolly@iadt.ie.

6.4 Appendix D – Demographic Questions

O Lidentify as	
O I prefer not to say	
Q4	*
3. What are your Pronouns (She/Her, Him/He, They/Them etc):	
My pronouns are	
O I prefer not to say	
Age	

5. Are you an undergraduate College Stude	nt?:
○ Yes, I am	
○ No, I am not	
Page Brea	ak
Q7	*
6. What is your Year of Study?:	
○ 1st Year	
O 2nd Year	
○ 3rd Year	

6.5 Appendix E – the general procrastination scale (Lay, 1986)

Procrastination Scale (Lay, 1986) - For student populations.

Instructions: People may use the following statements to describe themselves. For each statement, decide. whether the statement is uncharacteristic or characteristic of you using the following 5 point scale. Note that the 3 on the scale is Neutral – the statement is neither characteristic nor uncharacteristic of you. In the box to the right of each statement, fill in the number on the 5 point scale that best describes you.

Extremely Moderately Neutral Moderately Extremely

Uncharacteristic Uncharacteristic Characteristic Characteristic

12345

- 1. I often find myself performing tasks that I had intended to do days before.
- 2.* I do not do assignments until just before they are to be handed in.
- 3.* When I am finished with a library book, I return it right away regardless of the date it is due.
- 4. When it is time to get up in the morning, I most often get right out of bed.
- 5. A letter may sit for days after I write it before mailing it.
- 6. I generally return phone calls promptly.
- 7. Even with jobs that require little else except sitting down and doing them, I find they seldom get done for days.
- 8. I usually make decisions as soon as possible.
- 9. I generally delay before starting on work I have to do.
- 10.* I usually have to rush to complete a task on time.
- 11. When preparing to go out, I am seldom caught having to do something at the last minute.

- 12. In preparing for some deadlines, I often waste time by doing other things.
- 13.* I prefer to leave early for an appointment.
- 14.* I usually start an assignment shortly after it is assigned.
- 15. I often have a task finished sooner than necessary.
- 16. I always seem to end up shopping for birthday or Christmas gifts at the last minute.
- 17. I usually buy even an essential item at the last minute.
- 18. I usually accomplish all the things I plan to do in a day.
- 19. I am continually saying I'll do it tomorrow.
- 20. I usually take care of all the tasks I have to do before I settle down and relax for the evening.

Note: Reversed-keyed items: 3,4,6,8,11,13,14,15,18,20

6.6 Appendix F- SPSS Output the General Procrastination Scale Cronbach Alpha Reliability Analysis

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.877	.880	20

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ps1	63.68	174.435	.409	.328	.873
ps2	63.93	162.937	.638	.604	.865
ps3	64.34	177.878	.228	.270	.880
ps4	63.66	173.486	.375	.297	.875
ps5	64.12	169.572	.442	.386	.873
ps6	64.55	175.148	.281	.258	.879
ps7	63.95	163.990	.690	.573	.864
ps8	64.34	172.791	.412	.334	.874
ps9	63.50	166.904	.705	.664	.865
ps10	63.88	162.523	.709	.674	.863
ps11	63.96	177.331	.250	.209	.879
ps12	63.41	167.476	.663	.603	.866
ps13	65.48	181.454	.183	.180	.880
ps14	63.97	166.275	.579	.527	.868
ps15	63.90	163.917	.711	.625	.863
ps16	64.13	179.229	.183	.352	.882
ps17	64.24	168.635	.499	.515	.871
ps18	63.88	168.862	.600	.492	.868
ps19	63.43	169.609	.604	.422	.868
ps20	64.02	167.268	.582	.471	.868

6.7 Appendix G - Rosenberg Self-Esteem Scale (RSES; 1965)

agree, disagree, or strongly disagree with it.
1 = Strongly agree
2 = Agree
3 = Disagree
4 = Strongly disagree
1. On the whole, I am satisfied with myself.
2. At times I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel 1do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I'm a person of worth.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to think that I am a failure.
10. I take a positive attitude toward myself.

Please record the appropriate answer for each item, depending on whether you strongly agree,

6.8 Appendix H - SPSS Output Rosenberg Self-Esteem Scale Cronbach Alpha Reliability Analysis

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.890	.894	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
sest1	23.06	28.736	.632	.434	.879
sest2	23.41	27.736	.702	.528	.874
sest3	22.48	30.338	.651	.484	.880
sest4	22.84	29.511	.572	.407	.883
sest5	23.01	28.580	.622	.472	.880
sest6	23.50	28.136	.684	.497	.876
sest7	22.64	28.783	.705	.546	.875
sest8	23.62	30.470	.369	.206	.899
sest9	22.86	27.066	.713	.536	.873
sest10	22.95	27.802	.708	.570	.874

6.9 Appendix I – Satisfaction with Life Scale (SWLS; 1985)

Below are five statements that you may agree or disagree with. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the lime preceding that item. Please be open and honest in your responding.

□ 7 – Strongly agree
\Box 6 – Agree
□ 5 – Slightly agree
☐ 4 – Neither agree nor disagree
□ 3 – Slightly disagree
□ 2 – Disagree
□ 1 – Strongly disagree
In most ways my life is close to my ideal.
The conditions of my life are excellent.
I am satisfied with my life.
So far I have gotten the important things I want in life.
If I could live my life over, I would change almost nothing.
\square 35 – 31 Extremely satisfied
\square 26 – 30 Satisfied
\square 21 – 25 Slightly satisfied
□ 20 Neutral
□ 15 – 19 Slightly dissatisfied
□ 10 – 14 Dissatisfied
□ 5 – 9 Extremely dissatisfied

6.10 Appendix J - SPSS Output Satisfaction with Life Scale (SWLS; 1985) Cronbach Alpha Reliability Analysis

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.838	.843	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
lifsat1	15.92	31.856	.754	.625	.774
lifsat2	15.32	34.682	.633	.419	.808
lifsat3	15.55	33.163	.712	.582	.787
lifsat4	15.58	32.448	.657	.439	.801
lifsat5	16.63	34.772	.479	.233	.854

6.11 Appendix K – SPSS Output of Predictor Variable Correlations

Correlations

		total procrastinatio n	total life satisfaction	total self- esteem
Pearson Correlation	total procrastination	1.000	209	344
	total life satisfaction	209	1.000	.575
	total self-esteem	344	.575	1.000
Sig. (1-tailed)	total procrastination		.007	<.001
	total life satisfaction	.007		.000
	total self-esteem	.000	.000	
N	total procrastination	139	139	139
	total life satisfaction	139	139	139
	total self-esteem	139	139	139

6.12 Appendix L – SPSS Output of Tolerance Values for No Multicollinearity

Coefficientsa

		Unstandardize	d Coefficients	Standardized Coefficients			c	correlations		Collinearity	Statistics
Model		В	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	87.849	4.912		17.884	<.001					
	total life satisfaction	033	.190	017	172	.864	209	015	014	.670	1.493
	total self-esteem	774	.228	334	-3.399	<.001	344	280	274	.670	1.493

a. Dependent Variable: total procrastination

${\bf 6.13\; Appendix\; M-SPSS\; Output\; of\; Mahalanobis\; Distances\; for\; Normality}$

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	55.74	77.49	67.39	4.718	139
Std. Predicted Value	-2.469	2.141	.000	1.000	139
Standard Error of Predicted Value	1.106	4.158	1.835	.506	139
Adjusted Predicted Value	57.39	77.85	67.41	4.702	139
Residual	-31.065	32.000	.000	12.862	139
Std. Residual	-2.398	2.470	.000	.993	139
Stud. Residual	-2.417	2.498	001	1.005	139
Deleted Residual	-31.575	32.734	018	13.173	139
Stud. Deleted Residual	-2.462	2.548	001	1.011	139
Mahal. Distance	.014	13.222	1.986	1.756	139
Cook's Distance	.000	.097	.008	.014	139
Centered Leverage Value	.000	.096	.014	.013	139

a. Dependent Variable: total procrastination

6.14 Appendix M – Model Summary and Multiple Regression Analysis

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	.344ª	.119	.106	12.956	1.877

- a. Predictors: (Constant), total self-esteem, total life satisfaction
- b. Dependent Variable: total procrastination

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3072.010	2	1536.005	9.150	<.001 ^b
	Residual	22829.011	136	167.860		
	Total	25901.022	138			

- a. Dependent Variable: total procrastination
- b. Predictors: (Constant), total self-esteem, total life satisfaction



All-Ireland Student Psychology Congress 2023 - Poster and Oral Presentation Submission Form

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My Dissemination Plan

Method of Dissemination: IADT Grad Show/The All Ireland student psychology Congress 2023

Name:

Sarah Singa

Supervisor's Name:

Dr Irene Connelly

Project Title:

Investigating Self-Esteem, Life Satisfaction, and its effects on Academic Procrastination among Undergraduates

Project's Aim:

The aim of the project was to investigate self-esteem, Life satisfaction and its effects on academic procrastination. People procrastinate at various times, such as delaying work-related tasks or assignments that must be completed at home. Academic procrastination, which involves delaying an assignment or studying for a test, occurs in an educational setting as well. Many studies have found that academic procrastination can have an impact on various aspects of a student's life.

Project's Method:

Undergraduate students from first to fourth year took part in this study, as they are a demographic vulnerable to academic procrastination. The students were given an online survey to completed the survey included three questionnaires. 'The General Procrastination Scale' (Lay, 1986), 'Rosenberg Self-Esteem Scale' (Rosenberg, 1965) and 'Satisfaction with Life Scale' (Diener et al. 1993). Each scale was reviewed form its reliability and validity. Before the survey was disturbed a pilot study conducted to check for any errors. 139 undergraduate students completed the survey.

Project's results:

The present study's results conclude that self-esteem and life satisfaction did have an effect on academic procrastination among undergraduates. This result supported previous studies such as Yang (2021), Yang et al. (2021) and Chandra et al. (2019).

However, the results did not support the hypothesis that life satisfaction had an effect on undergraduate students' academic procrastination. Pervious studies have found that life satisfaction did have an effect on academic procrastination.

Project's Implications

The present study aims to contribute to the field of education psychology by conducted a study that has not yet been investigated and supplies a more diverse insight to academic procrastination from different parts of the world. In other to combat academic procrastination in college/educational setting, serves such as cognitive behavioural therapy and skills such as self-regulation and self-efficacy should be implemented.

6.16 Appendix P – Ethics Application Form

Student Name:	Sarah Singa
Student Email Address: N00190611@iadt.ie_	
Supervisor Name:Ir	ene Connolly
Working Project Title: academic procrastination	Investigating self-esteem and life satisfaction and its effects on among undergraduates.
_	stigated: _ Independent Variables: self-esteem and life satisfaction. emic procrastination

Section 2: External Agencies

Does your project involve recruitment from any external agency (e.g. a	Yes*	No
school, sports club, medical centre, voluntary organisation, or any other organisation outside of the IADT)?		
,		•

* You must include a letter from a senior manager of each organisation stating that you have approval to collect data within that organisation. Include copies of each of these letters in the Appendices to your application. If the organisation has its own ethical review board (which is very common in some settings, such as hospitals), then you are also required to get ethical approval from that board prior to starting data collection, and to submit notice of this approval to your supervisor so that it can be forwarded on to the ethics committee. Some online forums also require permission to post requests for participants — make sure to check the relevant forum/organisation's code of conduct or terms and conditions. You do not need to include approval letters if you are conducting recruitment using mainstream social media routes (e.g., Twitter, Instagram, Facebook, Snapchat, TikTok) to your own followers, and/or snowball sampling/word of mouth recruitment.

Section 3: Project Methodology – Please tick which type of project you are seeking approval from the PEC for. If your project involves mixed methods, then tick <u>all</u> which apply.

Route Type	Methodology	Tick
		here
Green Route	Theoretical paper / systematic literature review / Rapid Structured	
(no direct	Literature Review (RSLR)	
contact with	Novel analysis of an existing dataset gathered by another researcher	
participants	or group which you are certain has abided by appropriate ethical	
required, and	procedures for the relevant discipline	

no data is	Observation of participants in a public place in which they could	
collected/recor	reasonably be expected to be observed by strangers or in an online	
ded which could	space which does not require users to log in to access.	
identify	Content analysis of material which is publicly available and does not	
participants)	require users to log in to access content.	
participants)	Other method without direct contact with participants **	
	Other method without direct contact with participants	
Amber Route	Requirements gathering for and/or user testing of a prototype which	
(direct contact	is highly unlikely to cause any harm or distress to participants and	
with	which does not aim to collect data from a potentially vulnerable	
participants, but		
no additional	group An experiment which is highly unlikely to cause any harm or distress	
ethical	to participants and which does not aim to collect data from a	
considerations		
	potentially vulnerable group	
beyond the	A survey/questionnaire design which is highly unlikely to cause any	. /
minimum	harm or distress to participants and which does not aim to collect	
requirements)	data from a potentially vulnerable group	
	An observational study which is highly unlikely to cause any harm or	
	distress to participants and which does not aim to collect data from	
	a potentially vulnerable group	
	Content analysis research which is highly unlikely to cause any harm	
	or distress to participants and which does not aim to collect data	
	from a potentially vulnerable group	
	Interviews and/or focus groups which are highly unlikely to cause	
	any harm or distress to participants and which do not aim to collect	
	data from a potentially vulnerable group	
	Other method which is highly unlikely to cause any harm or distress	
	to participants and which does not aim to collect data from a	
	potentially vulnerable group **	
Red Route	Requirements gathering for and/or user testing of a prototype which	
(direct contact	may cause harm or distress to participants and/or which involves	
with	collecting data from any potentially vulnerable group	
participants,	An experiment which may cause harm or distress to participants	
including one or	and/or which involves collecting data from any potentially	
more project	vulnerable group	
aspects which	A survey/questionnaire design which may cause harm or distress to	
require special	participants and/or which involves collecting data from any	
ethical	potentially vulnerable group	
consideration)	An observational study which may cause harm or distress to	
	participants and/or which involves collecting data from any	
	potentially vulnerable group	
	Content analysis research which may cause harm or distress to	
	participants and/or which involves collecting data from any	
	potentially vulnerable group	
	Interviews and/or focus groups which may cause harm or distress to	
	participants and/or which involves collecting data from any	
	potentially vulnerable group	
	Any project which includes use of any illegal materials or substances	
	as part of the materials for the study, regardless of methodology	
	employed.	
	employed.	

Any project which includes use of any dangerous materials or substances as part of the materials for the study, regardless of methodology employed.	
Any project employing ethnographic or autoethnographic methodologies.	
Other method which may cause harm or distress to participants and/or which involves collecting data from any potentially vulnerable group **	

^{**} If you are using a methodology not listed above then provide a short description (fewer than 100 words) here:

Section 4: Checklist of Attached Appendices and Other Completed Sections

Applicable Project Ethics Route Colour Guide		Section / Item	I have attached this item/completed this section	I have checked with my supervisor and we have agreed that this item/section is not relevant to my project
	1	Section 1	√	
	2	Section 2		
	3	Section 3		
	4	Section 4	~	
	5	Letters of permission from any		
		external agencies to be used for data	\/	
		collection	V	
	6	Statement of approval from ethical	\/	
		review boards in external agencies	V	
	7	Section 5 (Green Route Projects only)		
	8	Section 6 (Amber and Red Route Projects only)	/	
	9	Section 7 (Amber Route Projects only)	7	
	10	Section 8 (Red Route Projects only)		
	11	Section 9 (Red Route Projects only)		
	12	Evidence of why you need to		
		complete a Red Route Project (see		
		note in Section 8)		
	13	Project Information Sheet (Red Route		
		Projects only)		
	14	Project Consent Form (Red Route		
		Projects only)		
	15	Project Demographic Questionnaire		
		(Red Route Projects only)		

Collection Materials (Red Route Projects only) 17 Project Debrief (Red Route Projects only)	16	All Other Questionnaires and Data	
17 Project Debrief (Red Route Projects		Collection Materials (Red Route	
		Projects only)	
only)	17	Project Debrief (Red Route Projects	
		only)	

Section 5: Declaration of a Green Route project

I hereby declare that [all of / this aspect of (delete as appropriate)] my project involves no direct interaction between me and any research participants, and that having checked with my supervisor, that I do not need to seek informed consent from those whose data I use in my research. In addition, I will ensure that all data which I do gather is held in a manner which is compliant with GDPR, and will be deleted once it is no longer required (and definitely within 6 years of collection). At all times my study will be conducted in adherence to the ethical policies of the Psychological Society of Ireland and the British Psychological Society.

Student Signature:	Date:	

Section 6: Confirmation of Adherence to Basic Ethical Principles for Amber and Red Route Projects

Complete the Table below with guidance from your supervisor. If you need to tick any of the 'red' boxes, then your project <u>must</u> be submitted under the 'Red Route'.

		Yes	No	N/A
6.1	I will describe the main research procedures to participants in advance so that they know what to expect. I will use the sample Information Sheet provided by PEC to do this.	√		
6.2	I will tell participants that their participation is voluntary.	~		
6.3	I will obtain written consent from participants using a 'tick' consent form which follows the current template provided by PEC prior to starting data collection.	✓		
6.4	I will verify that participants still wish to include their data in online studies by including a final indicator of consent at the end of the questions.	√		
6.5	If my research involves content analysis or observation in any private or partially private setting then I will ensure to obtain informed consent prior to collecting data.	V		
6.6	I will explain to participants that they can withdraw from the study at any time and for any reason.	/		
6.7	I will ensure that participants know that they can refrain from answering any question that they don't want to, even if this is part of a psychometric scale.	✓		
6.8	If using an online data collection method I will ensure that the only questions which require answers in order to proceed are the questions relating to providing informed consent, and I will ensure that participants are provided with an option which indicates that they do not give their consent.	V		
6.9	I will inform participants that their data will be treated with full confidentiality, and that, if published, it will not be identifiable as theirs.	1		

6.10	I will debrief participants at the end of their participation (i.e. give them a brief explanation of the study, whether or not deception was involved) following the current template provided by PEC	\checkmark		
6.11	I will obtain passive consent from parents/guardians for studies involving people aged between 16 and 18 years, as well as active consent from the participant and their school/organisation	√		
6.12	I will obtain active consent from parents/guardians for studies involving people aged under 16 years. Where feasible I will also obtain active consent from the participant themselves. I will ensure that the parent/guardian or their nominee (e.g. a teacher) will be present throughout the data collection period.	√		
6.13	I will ensure that my project supervisor has full access to the data that I collect and will only use data collection software which permits this.	\checkmark		
6.14	I will ensure that my project supervisor retains full rights to the data collected, including the ability to delete all data at any time, and that third-parties (e.g., software companies) will not 'own' the data collected.			
6.15	I will ensure that participants in studies involving Virtual Reality (VR) are not susceptible to extreme motion sickness or other physical conditions which may result in harm to the participants. I will ensure that a chaperone is present during VR sessions, and that the participant has the option of also having a nominee of their choosing present as well.	1		
6.16	I will ensure that any equipment used in this study is cleaned and disinfected after each participant, and that appropriate hygienic barriers (e.g. masks) are used by all participants	\checkmark		
6.17	Is there any realistic risk of any participant experiencing either physical or psychological distress or discomfort?		V	•
6.18	I plan to use animals as part of my research study			
6.19	I plan to tell participants their results on a task or scale which I am using in my research.		\ \	/
6.20	I am researching a sensitive topic which may cause some participants distress (such as, but not limited to, religion, sexuality, alcohol, crime, drugs, mental health, physical health, parenting, family relationships)		>	
6.21	One or more aspects of my study is designed to change the mental state of participants in a negative way (such as inducing aggression, frustration, sadness, etc.)		>	,
6.22	My study involves deception or deliberately misleading participants in some way.		<	
6.23	My target population includes people who have learning or communication difficulties		٧	
6.24	My target population includes patients (either inpatient or outpatient)		V	_
6.25	My target population includes people in custody		Ň	
6.26	My target population includes people who may feel under personal or professional pressure to take part in my research (for example, close friends; family; employees or staff of managers or school principals who may support the research).		\	l
6.27	My project includes the use of any illegal materials or substances as part of the materials for the study, regardless of methodology employed.		\checkmark	,

6.28	My project includes the use of any dangerous materials or substances		
	as part of the materials for the study, regardless of methodology	\ /	
	employed.	\sim	
6.29	My project employs ethnographic or autoethnographic methodologies.	7	

Section 7: Declaration of an Amber Route project

I hereby declare that [all of / this aspect of (delete as appropriate)] my project involves no risk of physical, emotional, social or cognitive harm to participants; that I will obtain full informed consent from all participants and provide a full debrief afterwards (using the templates provided); that I will provide full anonymity and/or confidentiality to participants; and that my participants are not a potentially vulnerable population. In addition, I will ensure that all data which I gather is held in a manner which is compliant with GDPR, and will be deleted once it is no longer required (and definitely within 6 years of collection). At all times my study will be conducted in adherence to the ethical policies of the Psychological Society of Ireland and the British Psychological Society.

Student Signature:	_Sarah Singa	Date:
19/11/2022		