



RESEARCH ARTICLE

EXPLORING THE RECIPROCAL IMPACT OF ACADEMIC PROCRASTINATION AND STUDENT WELL-BEING: A COMPREHENSIVE REVIEW

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ARTICLE INFO

Article History:

Received 19th November, 2023

Received in revised form

18th December, 2023

Accepted 15th January, 2024

Published online 27th February, 2024

Key words:

Academic procrastination, Academic Procrastination and Subjective wellbeing, Mental Health and Academic Procrastination, Bidirectional impact of Academic Procrastination

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ABSTRACT

Introduction: This systematic literature review explores the relationship between academic procrastination and student well-being, highlighting the complex dynamics affecting depression, stress, self-esteem, self-regulation, and life satisfaction. **Method:** A PRISMA-based systematic literature review of academic articles published between 1995 and 2023 from platforms including Google Scholar, ISI, Scopus, Science Direct, PubMed, Research Gate, and many more investigates the reciprocal impact of impact of academic procrastination and student well-being. The selection of scholarly publications was based on predetermined inclusion and exclusion criteria. Relevance to the study's objectives and the availability of a solid theoretical framework were inclusion criteria. I conducted a thorough search of academic databases, identifying twenty-seven relevant studies that met our inclusion criteria. **Discussion:** The extensive body of research presented in the collected studies sheds light on the intricate relationship between academic procrastination and various psychological factors, emphasizing its global relevance across diverse cultural and educational contexts. According to studies, the wellbeing of students is reciprocally connected with academic procrastination. **Conclusion:** All studies collectively contribute to a nuanced understanding of the multifaceted aspects and the reciprocal impact of academic procrastination, considering its relationships with self-efficacy, test anxiety, academic stress, emotion regulation, perfectionism, subjective well-being, and overall mental health across different cultural and educational contexts.

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Citation: Vikas Singh Jat, M.A., 2024. "Exploring the Reciprocal Impact of Academic Procrastination and Student Well-being: A Comprehensive Review". International Journal of Current Research, 16, (02), 27104-27111.

INTRODUCTION

Academic procrastination, or the habit of delaying or postponing assignments, can have an impact on a person's emotional and academic wellbeing in addition to their ability to function academically. The word "procrastination" was originally used in 1967 by Brown & H. Oltman. Its basic word, procrastinate means "to put off until the next day." According to Milgram (1991), procrastination is only done to do tasks as best as possible. Still, the delay results in an unproductive delay rather than improving the work. Academic procrastination is a unique form of procrastination that has been the subject of much less scientific study. It is a problematic tendency that affects nearly 50% of college students and 15-20% of individuals in the broader community (Onwuegbuzie & Jiao, 2000), (Harriott & Ferrari, 1996). It has a negative impact on both academic achievement and mental moods, leading to humiliation, anxiety, sleeplessness, and sadness (He, 2017). Procrastination is seen negatively and pessimistically by some professionals, who believe it to be an irreversible condition that can only be minimized to normal levels. However, some specialists are more optimistic since they view procrastination as a deviance that is easily corrected by behavioral, cognitive, and motivational improvements

(Prawitasari, 2012). Thus, the propensity to put off beginning, carrying out, and finishing an activity is known as procrastination. Procrastination and psychological factors interact dynamically in this complex relationship. On the one hand, procrastinating in the classroom can result in higher stress and anxiety levels. When deadlines approach, procrastinators could experience more strain, which could be harmful to their mental health. Procrastination and rushing through tasks can create a vicious cycle of stress that prolongs and exacerbates symptoms of anxiety and depression. The fear of failing and the realisation that one's scholastic expectations have not been met might exacerbate psychological distress. However, psychological issues could also be the cause of students' procrastination in the classroom. Perfectionism, low self-esteem, and fear of failing are examples of underlying concerns that can make it harder for someone to deal and lead them to procrastinate. Avoiding work can help people feel better momentarily when they are upset, but it also feeds a procrastination habit that is detrimental to their academic and psychological health. Depression, stress, self-esteem, self-regulation, and life satisfaction are all related in ways that can be better understood by applying psychological theories like the Self-Determination Theory (SDT) (Dunn & Zimmer,

2020). SDT holds that a person's intrinsic motivation, well-being, and ability to exercise self-control are fundamentally influenced by their psychological needs for relatedness, autonomy, and competence. Depression can lead to procrastination as a coping mechanism since it can diminish a person's sense of self and perceived control over their lives and academic work. Depression can also erode competence, causing anxiety about failing and feelings of worthlessness. Social retreat and isolation may impede a sense of relatedness and connection with peers, teachers, or the academic environment. Depression and academic procrastination can interact in a vicious cycle where depression is brought on by procrastination and procrastination is the cause of depression. Low self-esteem can also be a contributing factor to academic procrastination. Low self-esteem is influenced by social settings, cognitive functions, and self-beliefs.

METHODOLOGY

This systematic review looked at earlier studies on the relationship between academic procrastination and students' well-being. research articles available on a variety of databases, including ResearchGate, Science Direct, ISI, Scopus, Google Scholar, and PubMed. Researchers examined English-language papers by assessing the complete texts that were made available.

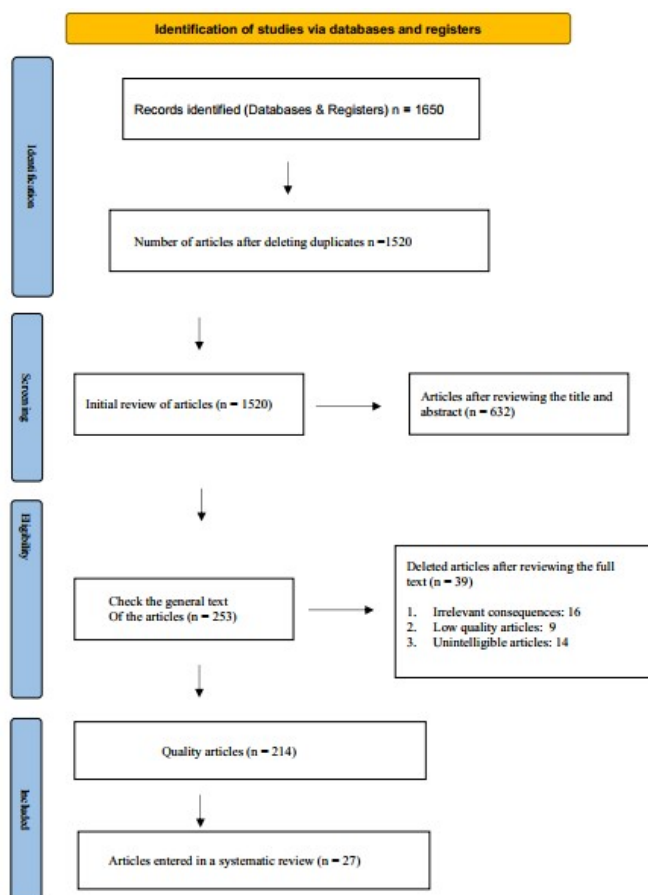


Figure 1. PRISMA flow chart outlining research results

The following keywords, or keyword combinations, were specifically used: academic procrastination, students' wellbeing, the reciprocal relationship between academic procrastination and students' wellbeing, academic procrastination, and psychological health, etc.

Academic journals were carefully selected based on preset inclusion and exclusion standards. Relevance to the objectives of the study and the presence of a strong theoretical framework were requirements for inclusion. Manuscripts without an abstract or full text were not taken into consideration following their extraction from the relevant databases. An extensive examination of the content of 27 periodicals from the 19 countries is presented as the study's conclusion. The PRISMA checklist was used to evaluate the articles. It included elements such as whether the article's structure aligned with the research type, purpose, and community; sample selection; data collection methods; data analysis through objective-related statistical tests; presence of defined entry and exit criteria; adherence to research ethics; and presentation of findings in accordance with research objectives and discussion. The resulting schematic is shown in (Figure 1).

RESULTS

A total of 1520 articles were screened at the title and abstract levels after duplicates were eliminated (Figure 1). Just twenty-seven of these articles underwent full text screening. The results of cross-sectional studies using both random and mixed sampling are included in the current review of the literature. Examining the Mutual Effects of Academic Delamination and the Welfare of Students. Following review, we discovered the following outcomes (Table 1): Studies by Melania Tiara *et al.* (Cahyaratri *et al.*, 2022), Abbasi HeiydarluHajali, Abdeli Soltan Ahmadi Javad (Abbasi Heiydarlu Hajali, 2015), Nazari Shahin (Nazari Sahin, n.d.), and Yang Yikuan (Yikuan, 2021) have explored the relationship between academic procrastination and psychological well-being among students in various cultural contexts. Melania Tiara *et al.* found a positive correlation between academic procrastination and stress, anxiety, and depression among students in Indonesia. Abbasi HeiydarluHajali and Abdeli Soltan Ahmadi Javad found a positive association between academic procrastination and psychological well-being among students in Iran. Nazari Shahin found a significant correlation between academic procrastination, religious duties, and depression among students in Kashan University, Iran. Yang Yikuan's study in China investigated the effects of the COVID-19 epidemic on procrastination and psychological state among undergraduate students. Wendy Quinn's (Quinn, 2019) study in Dublin explored the interplay between academic procrastination and various psychological factors among undergraduate students. Julio Cjuno *et al.* (Cjuno *et al.*, 2023) found a positive and significant relationship between total academic procrastination and its subscales with suicidal ideation during the pandemic. Jelena Saplavska and Aleksandra Jerkunkova's (Saplavska & Jerkunkova, 2018) cross-sectional study in Latvia found a compelling link between academic procrastination and situational and personal anxiety. Ezzihar Mohammad Al-Shagaheen's (Al-shagaheen, 2017) study in Jordan found a significant positive relationship between academic procrastination and test anxiety. Antonio Ragusa's (Ragusa *et al.*, 2023) study in Italy found that academic self-regulation serves as a negative predictor of procrastination, but procrastination positively predicts academic stress and anxiety. Jahangir Mohammadi Bytamar, Omid Saed, and Sahel Khakpoor's (Mohammadi Bytamar *et al.*, 2020) study in Iran found a link between emotion regulation difficulties and academic procrastination.

Table 1. Review Outcomes

Author	Purpose	Study design/Race/Time Period/sampling	Sample Size/data set	Region	Results
Melania Tiara, Cahyaratri, Fanti,Saktini at.al ^[1]	The relationship of academic procrastination with stress, anxiety, and depression during the covid-19 pandemic in students of the medical study program, faculty of medicine, UNDIP	Analytic observational study with a Cross sectional /Mixed/ Nov 2021/Consecutive Sampling	184/ UNDIP medical students	Indonesia	Students who often procrastinate tend to experience anxiety and depression more often than students who do not procrastinate and who procrastinate more have more anxiety and depression. The level of academic procrastination was positively correlated with stress levels ($r=0.468$, $p<0.001$), anxiety levels ($r=0.468$, $p<0.001$), and depression levels ($r=0.401$, $p<0.001$)
Abbasi HeiydarluHajali and Abdeli Soltan Ahmadi Javad ^[2]	Investigation the relationship between academic procrastination with psychological health and academic achievement among the students of farhangian university in Orumiyeh	Correlational Descriptive/Mixed/ 2015/Random Sampling	297 (131 Female + 166 Male)	Iran	Academic procrastination positively impacts students' psychological health.
Nazari Shahin 2021 ^[3]	The relationship between academic procrastination and depression among the students of Kashan university	Cross-Sectional, descriptive/mixed/ 2021/Stratified random sampling	400	Iran	The variables of performing religious duties, students' depression have a significant relationship with academic procrastination ($P < 0.001$). There is a significant positive correlation between academic procrastination and student depression ($P < 0.001$, $r = 0.325$).
Yang Yikuan 2021 ^[4]	The Relationship between Academic Procrastination and Stress in Times of Uncertainty	Cross sectional Correlational Analysis/Mixed/ Undergraduate students/2021/ Volunteer Survey	169 (49.7% of men; 50.3% of women).	China	Rise in procrastination among students, with varying the Study found that college students' delayed behavior and psychological state of challenging stress and frustrating stress are affected by the COVID-19 epidemic to varying degrees.
Wendy Quinn 2019	Academic procrastination: the role of stress, self-esteem, self-efficacy, age and gender on undergraduate students	Quantitative mixed design consisting of a correlational and cross-sectional survey /2019/ Random Sampling	141 The sample consisted of 46% males (n=59) and 54% females (n=70),	Dublin	The results reported here indicate perceived stress and self-efficacy are associated with procrastination
Julio Cjuno, Joel Palomino-Ccasa, Ronald Gianmarco Silva-Fernandez, Milagros Soncco-Aquino, ObelitaLumba-Bautista, Ronald M. Hernández 2023	Academic Procrastination, Depressive Symptoms and Suicidal Ideation in University Students: A look during the Pandemic	Non-experimental and cross-sectional study of correlational scope/Non-probabilistic convenience sampling/2023	578 participants between 16 and 30 years old (69% female)	Iran	A positive significant relationship was found between total academic procrastination and its subscales and suicidal ideation ($P < 0.01$). This correlation remained significant after controlling for depression ($P < 0.05$) Academic procrastination influences suicidal ideation. as Also, procrastination was positively and highly significantly correlated with suicidal ideation.

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Jelena Saplavska, Aleksandra Jerkunkova 2018	Academic Procrastination and anxiety among Students	Cross sectional/ mixed/ 2018/Random Sampling	60	Lavia (Europe)	The study found a positive correlation between academic procrastination and situational and personal anxiety, with increased anxiety leading to an increase in academic procrastination. This finding highlights the importance of addressing anxiety levels.
Ezdihar Mohammad Al-Shagaheen 2017	Academic Procrastination and its Relationship with Self-Efficiency and Test-Anxiety among Mu'tah University Students in Jordan	Quantitative/ 2017/Mixed/random stratified cluster sampling.	704		Significant and positive statistical relationship at alpha > 0.05 between academic procrastination and test-anxiety among participants, and that there were virtual differences between the means for Students responses on the academic procrastination, the self-efficiency and the test-anxiety scales based on both gender and specialty variables.
Robert M. Klassen <i>et al.</i> 2008	Academic procrastination of undergraduates: Low self-efficacy to self-regulate predicts higher levels of procrastination	Cross sectional/ mixed/ random sampling/2008	261	Canada	Self-efficacy for self-regulation is a significant predictor of procrastination
Antonio Ragusa <i>et. Al.</i> 2023	Effects of academic self-regulation on procrastination, academic stress and anxiety, resilience, and academic performance in a sample of Spanish secondary school students	Cross sectional/mixed/random sampling/2023	991 high school students (563 boys and 428 girls)aged between 16 and 19 years	Italy	Academic self-regulation negatively impacts procrastination, which in turn increases academic stress and anxiety. However, resilience has a protective effect by positively influencing these factors.
Sruthi Bommarreddy Sriya Ravula, Rashmi Jain 2020	Effect of Academic Stress on Academic Procrastination and Self-Regulation among Professional Students	Cross sectional/correlational/ mixed/random sampling/2020	430	India	Significant correlation between academic stress, procrastination, and self-regulation among design, medical, and engineering students.
Jahangir Mohammadi Bytamar, Omid Saed and Sahel Khakpoor 2020	Emotion Regulation Difficulties and Academic Procrastination	Cross sectional/correlational/ mixed/ random sampling	250	Iran	The study found that procrastination is linked to difficulties in emotion regulation.
Xiaodong Bu, Lin Wu, Hongchun Wang 2021	Impact of college students' academic procrastination on subjective well-being	Survey/mixed/2021	597	China	Results show that Academic Procrastination had a significant negative impact on Subjective wellbeing.
Chen-Yi Amy Ko and Yuhsuan Chang 2018	Investigating the Relationships Among Resilience, Social Anxiety, and Procrastination in a Sample of College Students	Cross sectional/Descriptive/mixed/ convenience sampling/2018	321	Taiwan	social anxiety is linked to procrastination, possibly due to fear of aversive conditions.
Zafar Ahmad, Naureen Munir 2022	PerfectionismAcademic Procrastination, and psycholo-gicalwell-being among university Students	Cross sectional survey/mixed/ convenient sampling/2022	300	Pakistan	Academic procrastination significantly correlates with reduced psychological wellbeing.

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Fuschia M. Sirois 2014	Procrastination and Stress: exploring the role of self-compassion	Descriptive/mixed/ sampling/2014	Random	768	Canada	Procrastination is linked to lower self-compassion levels, affecting stress indirectly.
Elsaeed A. Dardara, and Khalid A. Al-Makhalid 2022	Procrastination, Negative Emotional Symptoms, and Mental Well-Being among college students in Saudi Arabia	Survey/mixed/random sampling		886 (334 Female + 542 Male)	Saudi Arabia	High procrastination leads to depression, stress, anxiety, and wellbeing, with negative correlations.
FarzeelGoher, DilAngaiz, Muqadissa Batool 2022	Exploring the relationship between academic procrastination, academic stress and academic performance of students studying in bs (hons.) final semester at a public university in Gilgit-city	Cross sectional Survey/Mixed/2022		481	Gilgit	Significant link between student stress and procrastination.
Smoletz, F.G 2019	Academic procrastination and its effects on perceived stress and mental well-being	Cross sectional correlational design/Mixed/ Survey/2019		96	Netherland	The study confirms the link between academic procrastination, perceived stress, and mental well-being.
Chloe Ryan 2019	Investigating the interaction effects of academic procrastination and psychological flexibility on happiness	Cross sectional/Sampling by RPS /Mixed/2019		124	UK	Procrastination is linked to low psychological flexibility, causing negative feelings.
T. S. M. Khalifa 2022	Performance Perfectionism and its Relation to Academic Procrastination and Depression among Early Childhood Student Teachers	Cross sectional/Correaltional/ Random/Mixed		400	Egypt	A study reveals a negative link between performance perfectionism and academic procrastination among students.
ESRA AKKAYA 2007	Academic procrastination among faculty of education students: the role of gender, age, academic achievement, perfectionism, and depression	Survey and correlational/Cross sectional/Mixed/Random sampling		384 (259 Male + 123 Female)	Turkey	Academic achievement and depression are strong predictors of procrastination.
NikolettEisenbeck, David F. Carreno, Ruben Ucles-Juarez 2019	Frompsychol-ogical distress to academic procrastination: Exploring the role of psychological inflex-ibility	Survey/Mixed/Correlational		442	Spain	High academic procrastination among undergraduate students, a prevalent issue linked to psychological distress, including depression, anxiety, and stress.
Fred Johansson, Alexander Rozental, Klara Edlund, Pierre Côté, Tobias Sundberg, Clara Onell, Ann Rudman, Eva Skillgate 2022	Associations Between Procrastination and Subsequent Health Outcomes Among University Students in Sweden	Web based survey/Correlational/mixed		3525	Sweden	Academic procrastination is linked to mental health issues, pain, unhealthy lifestyle behaviours, and worse psychosocial factors.
Mohammad Q Abdullah, 2017	Procrastination and its Relationship with Mental Health among Children and Adolescents	Correlational/mixed/Random Sampling/2017		268 (133 male + 135 female)	Syria	The study found gender differences in procrastination, with boys tending to procrastinate more than girls.
Saima Parwez, Sana Khurshid, Ishrat Yousaf, 2023	Impact of Procrastination on Self-esteem of College and University Students of Khyber Pakhtunkhwa	Cross sectional/Mixed/Convenience sampling/2023		269 (133 male + 136 Female)	Pakhtunkhwa	Higher procrastination levels were linked to worse mental health, upper extremity pain, unhealthy lifestyle behaviors, and psychosocial health factors
Zadel Teresa P. Boncales 2019	Procrastination in Relationship to Mental Health	Descriptive-correlational/Mixed/Random Sampling		280	Philippines	Procrastination is primarily caused by pressure, distraction, and complex tasks, with recreational activities like watching TV and social media delaying tasks. Age significantly impacts procrastination, with both negative and positive effects.

Research on academic procrastination has been conducted across various countries, revealing a significant correlation between it and reduced psychological well-being. In Pakistan, Zafar Ahmad, and Naureen Munir's (Ahmad & Munir, 2022) study found a significant correlation between academic procrastination and reduced psychological well-being. In Canada, Francischia M. Sirois's (Sirois, 2014) study found that procrastination is associated with lower self-compassion levels, indirectly impacting stress. In Saudi Arabia, Elsaheed A. Dardara and Khalid A. Al-Makhalid's (Dardara & Al-Makhalid, 2022) study found that high levels of procrastination are linked to depression, stress, anxiety, and overall well-being. In the UK, Chloe Ryan's (Ryan, 2019) study found that procrastination is associated with low psychological flexibility, contributing to negative feelings. In Egypt, T. S. M. Khalifa's (Khalifa, 2023) research found a negative link between performance perfectionism and academic procrastination among early childhood student teachers. In Turkey, Esra Akkaya's (Akkaya, 2007) survey identified academic achievement and depression as strong predictors of procrastination. In Spain, Nikolalett Eisenbeck, David F. Carreno, and Ruben Ucles-Juarez's (Eisenbeck *et al.*, 2019) study found high academic procrastination among undergraduate students, linking it to psychological distress. In Sweden, Fred Johansson, and colleagues' (Johansson *et al.*, 2023) survey found links between academic procrastination and mental health issues among university students. In Syria, Muhammad Q Abdullah's (Abdullah, 2017) correlational study found gender differences in procrastination. In the Philippines, Zadel Teresa P. Boncales' (Boncales, 2019) study identified pressure, distraction, and complex tasks as primary causes of procrastination, with age significantly impacting it. In a 2021 survey conducted in China by Xiaodong Bu, Lin Wu, and Hongchun Wang the impact of college students' academic procrastination on subjective well-being is investigated.

The survey, which received a high response rate, reveals a significant negative impact of academic procrastination on subjective well-being among the participants. (Bu *et al.*, 2021). In a comprehensive exploration by Chen-Yi Amy Ko and Yuhsuan Chang in 2018 (Ko & Chang, 2019), the study investigates the relationships among resilience, social anxiety, and procrastination in a sample of college students in Taiwan. Utilizing a cross-sectional, descriptive, and mixed research design with convenient sampling, the findings reveal a connection between social anxiety and procrastination, suggesting that this link may be attributed to a fear of aversive conditions. Farzeel Goher, DilAngaiz, and Muqadissa Batool's (Goher *et al.*, 2022) exploration in Gilgit examines the relationship between academic procrastination, academic stress, and academic performance among students studying in the final semester of a BS (Hons.) program at a public university. Conducted through a cross-sectional survey with mixed methodology, the study, which includes 481 participants, establishes a significant link between student stress and procrastination. Smoletz's (Smolezt, 2019) cross-sectional study in the Netherlands investigates academic procrastination and its effects on perceived stress and mental well-being. With a correlational design and mixed methodology involving 96 participants, the study affirms the connection between academic procrastination, perceived stress, and mental well-being. These studies collectively contribute to a nuanced understanding of the intricate links between procrastination, psychological factors, and overall well-being across different cultural and educational contexts.

Saima Parwez, Sana Khurshid, and Ishrat Yousaf's (Parwez *et al.*, 2023) cross-sectional study in Khyber Pakhtunkhwa investigates the impact of procrastination on the self-esteem of college and university students. With mixed methodology and convenience sampling involving 269 participants, the study highlights the association between higher procrastination levels and worse mental health. Another cross-sectional study conducted by Robert M. Klassen (Klassen *et al.*, 2008) and colleagues at a large public university in Western Canada, the focus is on 261 undergraduate students. The study, which utilized random sampling, discovered a crucial insight into academic procrastination. It establishes that low self-efficacy to self-regulate significantly predicts higher levels of procrastination among students. A cross-sectional study by Sruthi Bommareddy Sriya Ravula, Rashmi Jain (Sruthi Bommareddy, Sriya Ravula, 2020) with 430 undergraduate students from 3 different fields of study-Design/ Fine Arts Students, Engineering Students, Medical Students, revealed that a significant correlation between academic stress, procrastination, and self-regulation.

DISCUSSION

A comprehensive overview of selected studies exploring the relationship between academic procrastination and various psychological factors among students in diverse cultural contexts. The findings collectively suggest a complex interplay between procrastination and mental health outcomes, including stress, anxiety, depression, well-being, and even suicidal ideation. Given the breadth of the information, it is evident that academic procrastination is consistently associated with negative psychological outcomes across different cultural and educational settings. The studies highlight the importance of factors such as self-efficacy, test anxiety, perceived stress, emotion regulation, and subjective well-being in understanding the dynamics of academic procrastination. While the data does not explicitly recommend a specific course of action, it does emphasize the need for interventions and support systems to address academic procrastination and its potential impact on mental health. Strategies could include promoting self-efficacy, stress management, and emotion regulation skills among students. Additionally, the findings underscore the relevance of considering cultural and contextual factors when designing interventions to address academic procrastination.

CONCLUSION

The study reveals a complex link between academic procrastination and mental health outcomes, highlighting the negative psychological effects across various cultural contexts. Factors like self-efficacy, test anxiety, perceived stress, emotion regulation, and subjective well-being are identified. The data advocates for proactive measures to address procrastination, such as fostering self-efficacy, stress management, and emotion regulation skills. The study emphasizes the importance of cultural and contextual factors in tailoring interventions. It calls for educational institutions and mental health professionals to prioritize interventions targeting academic procrastination.

Funding: The author received no financial support for the research, authorship, and/or publication of this article.

ACKNOWLEDGEMENTS

I am thankful for the time and effort invested by Prof. Dr. Deepak Jahagirdar in providing me with valuable insights, thoughtful suggestions, and a scholarly perspective. Their commitment to excellence has been a constant source of inspiration, pushing me to strive for the highest standards in my research endeavors.

Conflict of Interest: The authors declare that there are no conflicts of interest regarding the publication of this paper.

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