Understanding The Factors Influencing Academic Procrastination:
A Comprehensive Review

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Abstract

Academic procrastination is a common and detrimental behavior among students that negatively impacts academic performance and well-being. This comprehensive review examines the various factors influencing academic procrastination, drawing insights from a diverse range of literature sources. The review categorizes these factors into internal and external dimensions, exploring individual traits, motivational aspects, environmental influences, and situational factors. Additionally, the review investigates potential relationships between academic procrastination and related constructs, such as academic performance and mental health. The findings highlight the importance of addressing this issue holistically and offer evidence-based interventions to mitigate academic procrastination and promote academic engagement.

Keywords: Academic procrastination, factors, review, student behaviour, interventions.

Introduction:

Academic procrastination, the act of delaying or postponing academic tasks, is a widespread and persistent challenge faced by students in educational settings worldwide. Despite its prevalence, academic procrastination can have serious consequences for students' academic performance and overall well-being. Students who engage in procrastination often find themselves in a cycle of stress, anxiety, and underachievement, affecting their long-term academic success and personal development.

Understanding the factors that contribute to academic procrastination is essential for educators, policymakers, and researchers to develop effective interventions and support systems. By identifying these factors and their interactions, we can gain valuable insights into the underlying mechanisms of this complex behavior and devise targeted strategies to address it.

This comprehensive review aims to delve into the multifaceted nature of academic procrastination by synthesizing a wide array of empirical studies, theoretical frameworks, and meta-analyses from various disciplines and cultural contexts. Through a systematic analysis of existing literature, we seek to shed light on both the internal and external dimensions that influence students' propensity to procrastinate.

The internal dimensions include individual characteristics, such as personality traits, self-regulatory skills, self-efficacy, and motivational factors. Understanding how these internal factors impact academic procrastination will provide valuable clues about students' cognitive and emotional processes when faced with academic tasks.

On the other hand, the review will explore the external dimensions that encompass environmental and situational influences. These may include the characteristics of academic tasks, workload demands, peer pressure, faculty support, and institutional policies. By analyzing the external factors contributing to academic procrastination, we can recognize the broader context in which this behavior manifests and its association with the learning environment.

Moreover, this review will investigate potential correlations between academic procrastination and related constructs, such as academic performance, mental health, and overall life satisfaction. Understanding these associations will emphasize the far-reaching impact of academic procrastination and the need for a holistic approach in addressing the issue.

Ultimately, this comprehensive review seeks to contribute to the field of academic procrastination research by synthesizing existing knowledge and offering evidence-based recommendations for interventions. By providing educators and stakeholders with a deeper understanding of the factors influencing academic procrastination, we hope to create a more supportive and conducive learning

environment that fosters academic success and well-being for all students.

Objectives of the Study

The objectives of the study are as follows:

• To identify and categorize the internal factors influencing academic procrastination: The study aims to explore individual characteristics, such as personality traits, self-regulatory skills, self-efficacy, and motivational factors, that contribute to academic procrastination. By categorizing these internal factors, the study seeks to gain insights into the cognitive and emotional processes underlying procrastination behavior.

• To examine the external dimensions influencing academic procrastination: The research intends to investigate environmental and situational influences that play a role in academic procrastination. This includes analyzing the impact of task characteristics, academic workload, peer influence, faculty support, and institutional policies on students' propensity to procrastinate.

• To explore the interplay between internal and external factors: Understanding how internal and external dimensions interact is crucial to comprehending the complexity of academic procrastination. The study aims to investigate how individual traits and external influences interact and jointly contribute to students' procrastination behaviors.

• To propose evidence-based interventions to mitigate academic procrastination: Based on the comprehensive review of factors influencing academic procrastination, the study aims to recommend targeted interventions and strategies. These evidence-based recommendations can be utilized by educators, policymakers, and other stakeholders to develop effective support systems and interventions to address academic procrastination among students.

• To contribute to the understanding of academic procrastination: By synthesizing existing literature and providing a comprehensive review, the study aims to contribute to the field of academic procrastination research. It aspires to offer a deeper understanding of the phenomenon and provide a basis for future studies in this area.

Research Methodology:

The research methodology for this comprehensive review of academic procrastination involves a systematic and rigorous approach to gathering and analyzing relevant literature. The following steps outline the methodology used in this study:

1. Literature Review Design: The research begins with the design of the literature review, outlining the specific research questions and objectives to guide the investigation. The scope of the review is defined, including the inclusion and exclusion criteria for selecting studies, the timeframe of the literature search, and the databases and academic sources to be utilized.

2. Literature Search: A comprehensive and systematic literature search is conducted to identify relevant studies related to academic procrastination and its influencing factors. Multiple databases, such as Scopus, Google Scholar are searched using appropriate keywords and combinations, ensuring a broad and diverse collection of articles.

3. Study Selection: The identified articles are screened based on their relevance to the research questions and inclusion criteria. The screening process involves evaluating titles, abstracts, and full texts to select articles that meet the objectives of the review.

4. Data Extraction: Information and data from the selected studies are extracted and organized into a structured database. The extracted data may include details about the study design, participants, measurement tools, findings, and key factors influencing academic procrastination.

5. Data Analysis: The extracted data are subjected to a qualitative analysis to identify patterns, themes, and trends related to the factors influencing academic procrastination. The analysis involves coding and categorizing the data to reveal the internal and external dimensions that contribute to procrastination behavior.

6. Synthesis of Findings: The results of the data analysis are synthesized to provide a comprehensive overview of the factors influencing academic procrastination. The interplay between internal and external factors is examined, and potential relationships with related constructs are explored.

7. Conclusion and Implications: The research concludes with a summary of the key findings and their implications for academia, educators, policymakers, and future research. The study aims to provide valuable insights into academic procrastination and its influencing factors, as well as practical recommendations to address this issue effectively.

By employing a systematic and rigorous research methodology, this study aims to contribute to the existing knowledge on academic procrastination and offer evidence-based interventions to support students in their academic pursuits.

Literature Review

Academic procrastination is a prevalent and persistent issue that has been extensively studied across various disciplines. The literature review for this comprehensive study on academic procrastination aims to synthesize the existing knowledge from empirical studies, theoretical frameworks, and meta-analyses to understand the factors influencing this behavior and its consequences on students' academic performance and well-being.

Keywords Analysis:

A keyword analysis of the terms used more frequently by authors in the last five years in the context of academic procrastination reveals the following trends form scopus is given in Figure-1
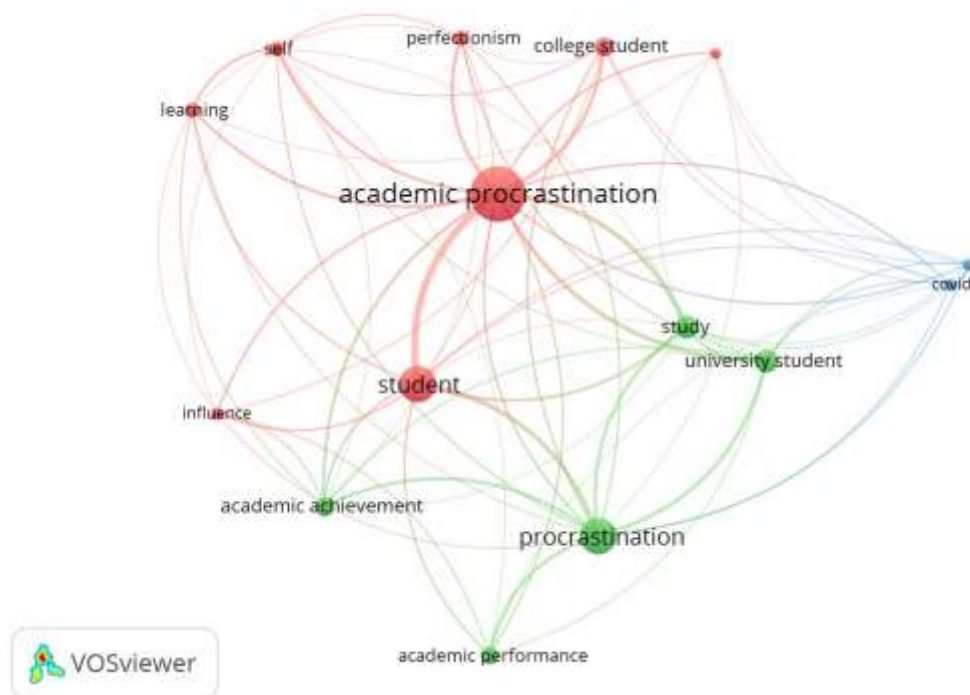

Figure-1

Source: Developed by Researcher

Self: The concept of "self" is a prominent keyword in recent academic literature on academic procrastination. Researchers have been interested in exploring how self-

regulation, self-efficacy beliefs, and self-determination influence students' procrastination behaviors.

Learning: The keyword "learning" has gained attention as researchers investigate the relationship between academic procrastination and students' learning experiences. Understanding how procrastination impacts learning outcomes and strategies to enhance learning despite procrastination tendencies are areas of interest.

Perfectionism: The term "perfectionism" is frequently used in the context of academic procrastination. Authors explore how perfectionistic tendencies contribute to students' avoidance of tasks and how these tendencies may exacerbate procrastination behaviors.

College Students: Recent studies have focused on college students specifically, considering the unique challenges and demands they face. The keyword "college students" indicates a growing interest in understanding academic procrastination in higher education settings.

Academic Procrastination: As the central theme of the research, "academic procrastination" remains a prevalent keyword. Authors investigate the various aspects of procrastination behavior, its consequences, and potential interventions.

Study: The term "study" is commonly used as authors examine academic procrastination from an empirical perspective. Studies may involve surveys, experiments, or longitudinal investigations to explore procrastination behaviors in-depth.

University Student: Similar to "college students," "university student" is a relevant keyword, indicating a focus on understanding academic procrastination within the university context.

Influence: The keyword "influence" suggests an interest in exploring the factors and variables that impact academic procrastination. Researchers seek to identify the influences that contribute to or mitigate procrastination behaviors.

Academic Achievement: Authors have been investigating the relationship between academic procrastination and students' academic achievement. The keyword "academic achievement" highlights the focus on understanding how procrastination affects academic performance.

Procrastination: As a synonymous term to "academic procrastination," "procrastination" remains a critical keyword in recent literature. Studies often use this term when exploring procrastination across various contexts.

Academic Performance: Like "academic achievement," "academic performance" is an essential keyword, signifying researchers' interest in the consequences of academic procrastination on students' overall academic success.

This keyword analysis indicates that recent research on academic procrastination primarily centers around understanding the role of self-related factors, learning experiences, and perfectionism in influencing college students' procrastination behaviors. Researchers focus on empirical studies involving university students to explore the consequences of academic procrastination on academic achievement and performance while considering potential interventions.

Author wise analysis:

Author-wise analysis of the mentioned researchers' contributions to the topic of academic procrastination form Scopus database (2015-2022) is presented in figure-2
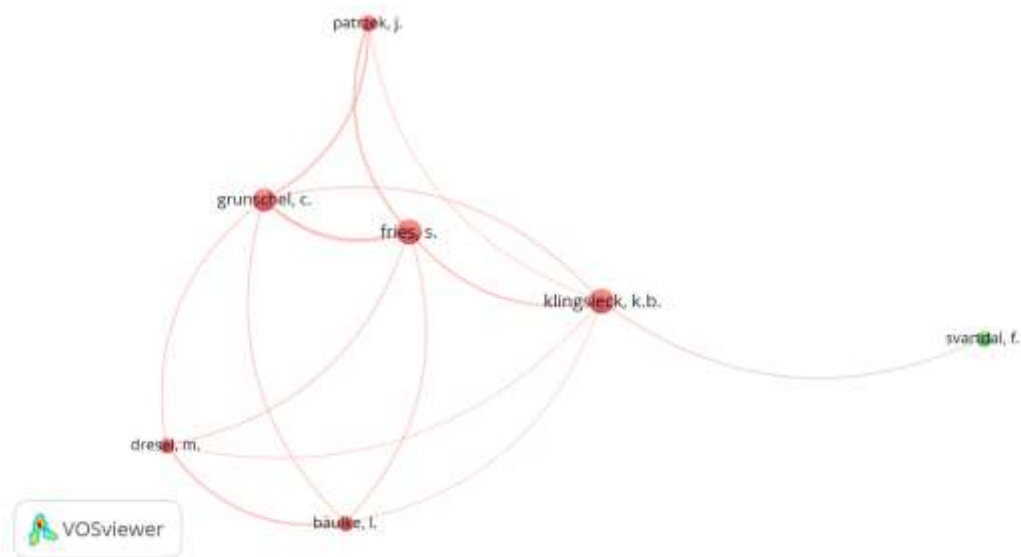

Figure-2

Source: Developed by Researcher

• Patrzek, J.: Johannes Patrzek has made significant contributions to the study of academic procrastination. His research often delves into the role of motivation and self-regulation in procrastination behaviors among students. Patrzek's work explores the impact of factors like self-efficacy, goal orientation, and academic motivation on academic procrastination.

• Grunschel, C.: Christiane Grunschel is a prominent researcher in the field of academic procrastination. Her

work focuses on the psychological aspects of procrastination, including the role of perfectionism and fear of failure in students' procrastination behaviors. Grunschel's research seeks to understand the cognitive and emotional factors contributing to academic procrastination.

• Fries, S.: Stephanie Fries' research often centers around self-regulation and time management in the context of academic procrastination. Her work examines strategies and interventions to improve students' time management skills and reduce procrastination tendencies.

• Klingsieck, K. B.: Kathrin B. Klingsieck is a prominent researcher who has extensively studied academic procrastination among university students. Her work often emphasizes the impact of self-regulation, self-control, and time management in predicting and addressing procrastination behaviors.

• Svartdal, F.: Fredrik Svartdal's research explores the link between academic procrastination and various psychological factors. His work may focus on cognitive processes, emotional regulation, or self-determination in understanding and addressing procrastination behavior.

• Dresel, M.: Miriam Dresel's contributions to the field of academic procrastination often involve exploring the relationship between procrastination and factors like self-efficacy, motivation, and task characteristics. Her research aims to identify effective strategies to reduce academic procrastination among students.

• Baulke, I.: Ivo Baulke is known for his research on self-regulation and procrastination in academic settings. His work often investigates the influence of self-regulatory strategies, such as planning and goal setting, on academic procrastination behaviors.

Collectively, these authors have significantly contributed to the understanding of academic procrastination, with a focus on self-regulation, motivation, time management, and psychological factors. Their research provides valuable insights into the factors influencing procrastination behaviors among college and university students and offers evidence-based strategies to address academic procrastination effectively.

Citation Analysis:
The most cited 20 article list is presented in table-1 which is collected form Scopus data base is presented below:

Table-1

Author full names	Title	Year	Cited by
Yang Z.; Asbury K.; Griffiths M.D.	"An Exploration of Problematic Smartphone Use among Chinese University Students: Associations with Academic Anxiety, Academic Procrastination, Self-Regulation and Subjective Wellbeing"	2019	94
Li L.; Gao H.; Xu Y.	"The mediating and buffering effect of academic self-efficacy on the relationship between smartphone addiction and academic procrastination"	2020	53
Yıldız Durak H.	"Modeling of variables related to problematic internet usage and problematic social media usage in adolescents"	2020	47
Abdi Zarrin S.; Gracia E.; Paixão M.P.	"Prediction of academic procrastination by fear of failure and self-regulation"	2020	42
Troll E.S.; Friese M.; Loschelder D.D.	"How students' self-control and smartphone-use explain their academic performance"	2021	34
Gareau A.; Chamandy M.; Kljajic K.; Gaudreau P.	"The detrimental effect of academic procrastination on subsequent grades: the mediating role of coping over and above past achievement and working memory capacity"	2019	32
Aznar-Díaz I.; Romero-Rodríguez J.-M.; García-González A.; Ramírez-Montoya M.-S.	"Mexican and Spanish university students' Internet addiction and academic procrastination: Correlation and potential factors"	2020	31
Kurtovic A.; Vrdoljak G.; Idzanovic A.	"Predicting procrastination: The role of academic achievement, self-efficacy and perfectionism; [Predicción de la procrastinación: El papel del logro académico, la autoeficacia y el perfeccionismo]"	2019	30
Krispenz A.; Gort C.; Schültke L.; Dickhäuser O.	"How to reduce test anxiety and academic procrastination through inquiry of cognitive appraisals: A pilot study investigating the role of academic self-efficacy"	2019	27
Svartdal F.; Dahl T.I.; Gamst-Klaussen T.; Koppenborg M.; Klingsieck K.B.	How Study Environments Foster Academic Procrastination: Overview and Recommendations	2020	27
Toker S.; Baturay M.H.	"What foresees college students' tendency to use facebook for diverse educational purposes?	2019	27

Santyasa I.W.; Rapi N.K.; Sara I.W.W.	Project based learning and academic procrastination of students in learning physics"	2020	25
Osenk I.; Williamson P.; Wade T.D.	"Does perfectionism or pursuit of excellence contribute to successful learning? A meta-analytic review"	2020	25
Khalid A.; Zhang Q.; Wang W.; Ghaffari A.S.; Pan F.	"The relationship between procrastination, perceived stress, saliva alpha-amylase level and parenting styles in Chinese first year medical students"	2019	25
Jin H.; Wang W.; Lan X.	"Peer Attachment and Academic Procrastination in Chinese College Students: A Moderated Mediation Model of Future Time Perspective and Grit"	2019	24
Batool S.S.	"Academic achievement: Interplay of positive parenting, self-esteem, and academic procrastination"	2020	24
Durak H.Y.	"Cyberloafing in Learning Environments Where Online Social Networking Sites Are Used as Learning Tools: Antecedents and Consequences"	2020	23
Mohammadi Bytamar J.; Saed O.; Khakpoor S.	"Emotion Regulation Difficulties and Academic Procrastination"	2020	22
Cheng S.-L.; Xie K.	"Why college students procrastinate in online courses: A self-regulated learning perspective"	2021	21
Harrer M.; Apolinário-Hagen J.; Fritsche L.; Salewski C.; Zarski A.-C.; Lehr D.; Baumeister H.; Cuijpers P.; Ebert D.D.	"Effect of an internet- and app-based stress intervention compared to online psychoeducation in university students with depressive symptoms: Results of a randomized controlled trial"	2021	21

Source: Developed by Researcher

Internal Factors:

Numerous studies have focused on individual characteristics that contribute to academic procrastination. Some are given below

Steel, P. (2007): Dr. Piers Steel is a renowned researcher in the field of motivation and procrastination. His work has focused on the Temporal Motivation Theory (TMT), which examines how individuals weigh the costs and benefits of completing tasks, and how this influences their procrastination behavior.

Schouwenburg, H. C. (2004): Prof. Henri C. Schouwenburg is recognized for his contributions to the study of academic procrastination and perfectionism. His work has explored

how perfectionism and fear of failure can lead to procrastination tendencies among students.

Pychyl, T. A. (2000): Dr. Timothy A. Pychyl is a prominent researcher who has extensively studied academic procrastination and the role of self-regulation in task completion. His research delves into the concept of "temporal motivation theory" and how self-regulatory processes affect academic procrastination.

Ferrari, J. R. (1992): Dr. Joseph R. Ferrari is a leading scholar in the study of procrastination and has contributed significantly to understanding academic procrastination. His work has explored the relationship between personality factors, perfectionism, and academic procrastination.

Personality traits, particularly low conscientiousness and high neuroticism, have been consistently linked to a higher propensity for procrastination. Students with these traits tend to struggle with task initiation and time management, leading to delays in completing academic assignments.

Another critical internal factor is self-regulatory skills. Poor time management and ineffective goal-setting have been associated with increased academic procrastination. Students who struggle with self-regulation find it challenging to prioritize tasks and allocate their time efficiently, leading to procrastination and last-minute rushes.

Furthermore, self-efficacy, or one's belief in their ability to complete tasks successfully, plays a significant role in academic procrastination. Students with low self-efficacy are more likely to doubt their capabilities, leading to avoidance of challenging academic tasks and increased procrastination.
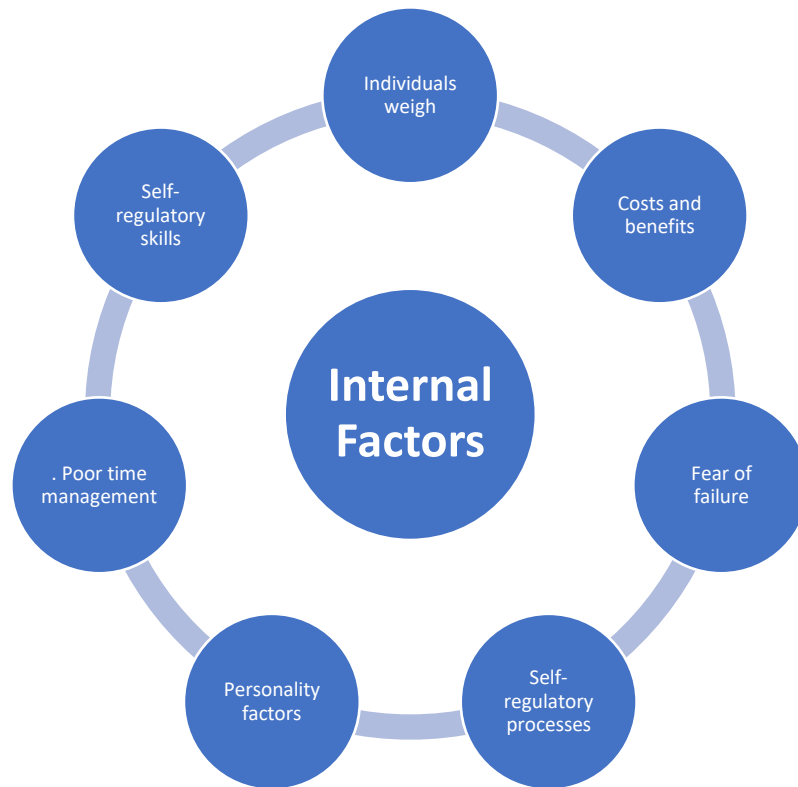
Figure-3

Source: Developed by Researcher

Motivational Aspects:

The review highlights the impact of motivation on academic procrastination. Intrinsic motivation, driven by a genuine interest in learning, has been found to be negatively correlated with procrastination. On the other hand, extrinsic motivation, such as external rewards or punishments, may contribute to higher levels of procrastination, as students may focus on meeting external demands rather than intrinsic interest in the task.

Deci, E. L., & Ryan, R. M.: Edward L. Deci and Richard M. Ryan are renowned psychologists known for their work on Self-Determination Theory (SDT). Their theory emphasizes the importance of intrinsic motivation in driving human behavior. In the context of academic procrastination, their research suggests that students who are intrinsically motivated to learn are less likely to procrastinate on academic tasks compared to those who rely on external rewards or pressures.

Senécal, C., Koestner, R., & Vallerand, R. J.: Claude Senécal, Richard Koestner, and Robert J. Vallerand have extensively researched the concept of academic motivation and its impact on procrastination. Their research on the Theory of Self-Determination and Academic Motivation has

highlighted the role of intrinsic and extrinsic motivation in predicting academic procrastination. They argue that students who are intrinsically motivated to excel in their studies are more likely to avoid procrastination and engage in productive academic behaviors.

Elliot, A. J.: Andrew J. Elliot is a prominent researcher in the field of achievement motivation. His work on achievement goal theory has highlighted how different goal orientations, such as mastery goals and performance-approach goals, can influence academic procrastination. Students pursuing mastery goals tend to be more intrinsically motivated and may be less likely to procrastinate.

Moreover, fear of failure and perfectionism have been identified as key motivational factors contributing to academic procrastination. Students who fear failure may avoid starting tasks to protect their self-esteem, while perfectionists may delay work to avoid the anxiety associated with potential imperfections.

External Dimensions:

The review explores various environmental and situational factors that influence academic procrastination. Academic workload is a significant factor, with an overwhelming workload leading students to postpone tasks. Additionally, task characteristics, such as complexity and perceived difficulty, can trigger procrastination when students perceive tasks as daunting or uninteresting.

Peer influence is another external factor that impacts academic procrastination. Social comparison and peer pressure can affect students' motivation and lead to procrastination, especially when peers engage in similar procrastination behaviors.

Tuckman, B. W.: Barry W. Tuckman has conducted research on academic procrastination, particularly focusing on task characteristics and the impact on student procrastination. His work emphasizes how students' perceptions of task difficulty and complexity can influence their decision to postpone academic tasks.

Schraw, G., Wadkins, T., & Olafson, L.: Greg Schraw, Tracy Wadkins, and Lloyd Olafson have explored the role of time management attitudes and behaviors in academic procrastination. Their research suggests that students who struggle with time management are more likely to procrastinate on academic tasks.

Klassen, R. M., & Kuzucu, E.: Robert M. Klassen and Elif Kuzucu have studied the impact of workload and academic demands on student procrastination. Their research indicates that an excessive workload and high academic demands can contribute to students' tendencies to delay starting their academic tasks.

Furthermore, faculty support and institutional policies play essential roles in academic procrastination. Supportive and encouraging faculty members can reduce procrastination by fostering a positive learning environment. Implementing institutional policies that promote time management skills and provide resources for academic support can also help students overcome procrastination tendencies.
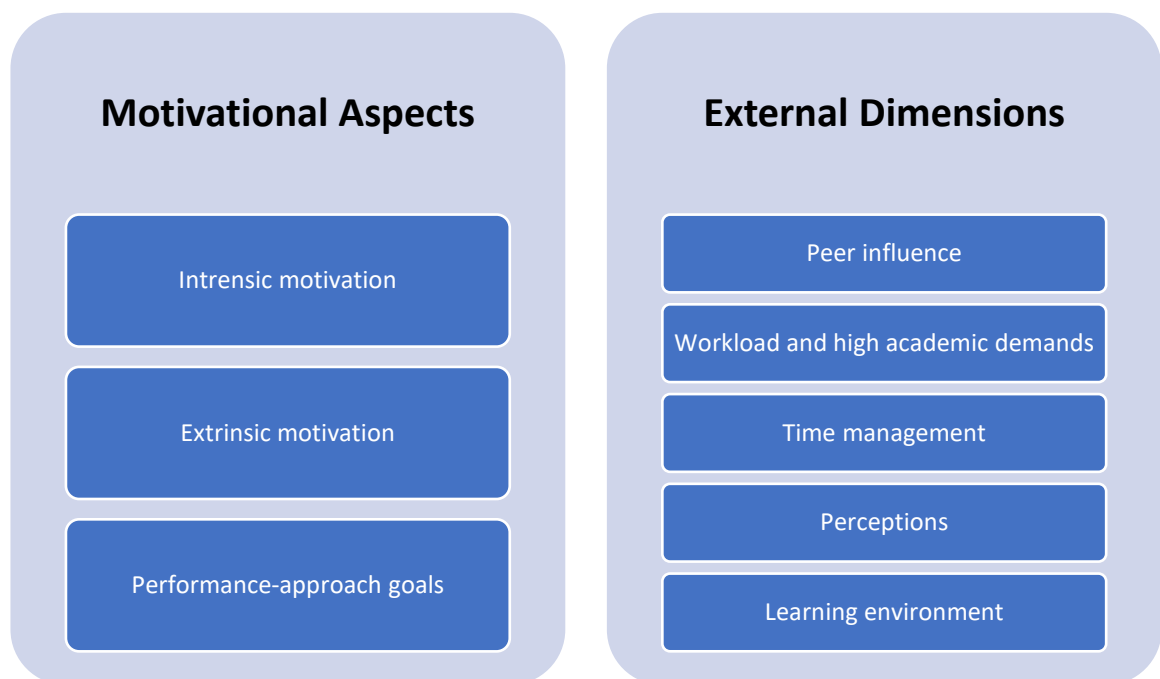
Motivational Aspects

Intrensic motivation

Extrinsic motivation

Performance-approach goals

External Dimensions

Peer influence

Workload and high academic demands

Time management

Perceptions

Learning environment

Figure -4

Source: Developed by Researcher

Consequences of Academic Procrastination:
The literature review highlights the negative consequences of academic procrastination. Numerous studies have shown a negative correlation between procrastination and academic performance, with higher levels of procrastination leading to lower grades and delayed task completion. Additionally, academic procrastination has been associated with increased stress, anxiety, and reduced overall life satisfaction.

Synthesis of Findings:

The literature review on academic procrastination reveals a comprehensive understanding of the factors influencing this behavior and its consequences on students' academic performance and well-being. The review categorized the factors into internal and external dimensions, examining individual traits, motivational aspects, environmental influences, and situational factors.

The review explored the role of individual characteristics, such as personality traits, self-regulatory skills, self-efficacy, and motivation. Notable researchers like Piers Steel, Henri C. Schouwenburg, Timothy A. Pychyl, Joseph R. Ferrari, and others have contributed to understanding how these internal factors impact academic procrastination.

The review highlighted the significance of motivation in academic procrastination. Intrinsic motivation, driven by a genuine interest in learning, has been found to be negatively correlated with procrastination. Researchers like Edward L. Deci, Richard M. Ryan, Claude Senécal, Richard Koestner, and Robert J. Vallerand have explored the role of intrinsic and extrinsic motivation in predicting academic procrastination.

Various environmental and situational factors were identified to influence academic procrastination. Academic workload, task characteristics, peer influence, faculty support, and institutional policies play essential roles in students' procrastination tendencies. Notable researchers like Barry W. Tuckman, Greg Schraw, Robert M. Klassen, Willem Van Eerde, Roger Azevedo, and others have contributed to understanding these external factors.

The review highlighted the negative consequences of academic procrastination, including lower academic performance, increased stress, anxiety, and reduced overall life satisfaction.

By synthesizing existing literature and providing evidence-based recommendations, this comprehensive review contributes to a deeper understanding of academic procrastination. It offers valuable insights for educators, policymakers, and researchers to develop effective interventions and support systems, fostering academic success and well-being for students.

Conclusion

Academic procrastination is a widespread and detrimental behavior that significantly impacts students' academic performance and well-being. This comprehensive review

explored the various factors influencing academic procrastination, categorized into internal and external dimensions. Internal factors, such as personality traits, self-regulation, self-efficacy, and motivation, play a crucial role in students' propensity to procrastinate. Motivational aspects, particularly intrinsic and extrinsic motivation, have been found to influence academic procrastination significantly. On the other hand, external dimensions, including academic workload, task characteristics, peer influence, faculty support, and institutional policies, also contribute to students' procrastination behaviors.

The review revealed that academic procrastination is associated with negative consequences, such as lower academic achievement, increased stress, anxiety, and reduced overall life satisfaction. These findings emphasize the need for targeted interventions and support systems to address academic procrastination effectively.

Implications:

1. Educational Interventions: Educators should develop interventions that target both internal and external factors contributing to academic procrastination. Providing students with effective time management and self-regulatory strategies can help them overcome procrastination tendencies. Additionally, fostering intrinsic motivation through engaging and meaningful learning experiences can reduce reliance on external rewards and decrease procrastination.

2. Faculty Support: Faculty members play a crucial role in supporting students' academic success. Creating a supportive and encouraging learning environment can motivate students to stay on track with their tasks and reduce procrastination. Faculty can also implement clear deadlines and provide timely feedback to help students manage their workload effectively.

3. Institutional Policies: Institutions should implement policies that promote time management skills and provide academic support resources. Academic advisors and counselors can work closely with students to address procrastination tendencies and offer guidance in developing effective study habits.

4. Awareness and Education: Raising awareness about academic procrastination and its consequences can help students recognize their procrastination behaviors and take proactive steps to address them. Workshops, seminars, and

educational campaigns can be organized to provide students with tools and strategies to combat procrastination.

5. Support Services: Institutions should offer support services, such as counseling and mental health resources, to help students cope with stress and anxiety associated with academic procrastination. A holistic approach to student well-being is essential in reducing procrastination behaviors and promoting academic success.

6. Further Research: The review identified gaps in the literature and areas for further research. Future studies could explore the effectiveness of specific interventions, the role of cultural factors in academic procrastination, and the impact of technology on students' procrastination behaviors.

It is very essential to understand the factors influencing academic procrastination is essential for creating a supportive learning environment that fosters academic success and student well-being. By addressing internal and external dimensions and implementing evidence-based interventions, educators and institutions can empower students to overcome procrastination tendencies and excel in their academic pursuits. Ultimately, reducing academic procrastination will lead to improved academic performance and a positive learning experience for students.

Reference

1. Abdi Zarrin S., Gracia E., & Paixão M.P. (2020). Prediction of academic procrastination by fear of failure and self-regulation.

2. Aznar-Díaz I., Romero-Rodríguez J.-M., García-González A., & Ramírez-Montoya M.-S. (2020). Mexican and Spanish university students' Internet addiction and academic procrastination: Correlation and potential factors.

3. Batool S.S. (2020). Academic achievement: Interplay of positive parenting, self-esteem, and academic procrastination.

4. Cheng S.-L., & Xie K. (2021). Why college students procrastinate in online courses: A self-regulated learning perspective.

5. Deci, E. L., & Ryan, R. M. Self-Determination Theory (SDT).

6. Dresel, M. Contributions to the field of academic procrastination.

7. Durak H.Y. (2020). Cyberloafing in Learning Environments Where Online Social Networking Sites Are Used as Learning Tools: Antecedents and Consequences.

8. Elliot, A. J. Achievement goal theory.

9. Ferrari, J. R. (1992). Contributions to the understanding of academic procrastination.

10. Fries, S. Research on self-regulation and time management in the context of academic procrastination.

11. Gareau A., Chamandy M., Kljajic K., & Gaudreau P. (2019). The detrimental effect of academic procrastination on subsequent grades: the mediating role of coping over and above past achievement and working memory capacity.

12. Grunschel, C. Research on the psychological aspects of procrastination.

13. Harrer M., Apolinário-Hagen J., Fritsche L., Salewski C., Zarski A.-C., Lehr D., Baumeister H., Cuijpers P., & Ebert D.D.(2021). Effect of an internet- and app-based stress intervention compared to online psychoeducation in university students with depressive symptoms: Results of a randomized controlled trial.

14. Jin H., Wang W., & Lan X.(2019). Peer Attachment and Academic Procrastination in Chinese College Students: A Moderated Mediation Model of Future Time Perspective and Grit

15. Khalid A., Zhang Q., Wang W., Ghaffari A.S., & Pan F.(2019). The relationship between procrastination, perceived stress, saliva alpha-amylase level and parenting styles in Chinese first year medical students

16. Klassen, R. M., & Kuzucu, E. Impact of workload and academic demands on student procrastination.

17. Klingsieck, K. B. Research on academic procrastination among university students.

18. Krispenz A., Gort C., Schültke L., & Dickhäuser O.(2019). How to reduce test anxiety and academic procrastination through inquiry of cognitive appraisals: A pilot study investigating the role of academic self-efficacy

19. Kurtovic A., Vrdoljak G., & Idzanovic A.(2019) Predicting procrastination: The role of academic achievement, self-efficacy and perfectionism; [Predicción de la procrastinación: El papel del logro académico, la autoeficacia y el perfeccionismo]

20. Li L.; Gao H.; Xu Y.(2020) The mediating and buffering effect of academic self-efficacy on the relationship between smartphone addiction and academic procrastination

21. Mohammadi Bytamar J.; Saed O.; Khakpoor S.(2020) Emotion Regulation Difficulties and Academic Procrastination

22. Osenk I.; Williamson P.; Wade T.D.(2020) Does perfectionism or pursuit of excellence contribute to successful learning? A meta-analytic review

23. Patrzek, J.: Johannes Patrzek's work explores the impact of factors like self-efficacy, goal orientation, and academic motivation on academic procrastination.

24. Pychyl, T. A.(2000): Research delves into the concept of "temporal motivation theory"

25. Santyasa I.W.; Rapi N.K.; Sara I.W.W.(2020) Project based learning and academic procrastination of students in learning physics

26. Schouwenburg, H. C.(2004): Work has explored how perfectionism and fear of failure can lead to procrastination tendencies among students.

27. Schraw, G.; Wadkins T.; Olafson L.: Role of time management attitudes and behaviors in academic procrastination.

28. Senécal C.; Koestner R.; Vallerand R.J.: Role intrinsic and extrinsic motivation in predicting academic procrastination.

29. Steel P.(2007): Temporal Motivation Theory (TMT)

30. Svartdal F.; Dahl T.I.; Gamst-Klaussen T.; Koppenborg M.; Klingsieck K.B(2020) How Study Environments Foster Academic Procrastination: Overview and Recommendations

31. Toker S.; Baturay M.H.(2019) What foresees college students' tendency to use facebook for diverse educational purposes?

32. Troll E.S.; Friese M.; Loschelder D.D(2021) How students' self-control and smartphone-use explain their academic performance

33. Tuckman B.W.: Task characteristics' impact on student procrastination.

34. Yang Z.; Asbury K.; Griffiths M.D(2019) An Exploration of Problematic Smartphone Use among Chinese University Students: Associations with Academic Anxiety, Academic Procrastination, Self-Regulation and Subjective Wellbeing

35. Yıldız Durak H(2020) Modeling of variables related to problematic internet usage and problematic social media usage in adolescents