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How Academic Procrastination Develops: A Qualitative Study

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ABSTRACT

Objective: Procrastination is a pervasive phenomenon denoting delay in academic activities and is associated with multiple factors. Because it affects various aspects of students' individual and social lives, this study aimed to explain the process of its formation as a step toward reducing or eliminating it.

Methods: This study used the grounded theory method. A prevalence study on procrastination was first conducted among students at Persian Gulf University, Bushehr, Iran, during the 2023–2024 academic year; students scoring two standard deviations above the mean were identified as procrastinators. Data were then collected from 22 procrastinating students through semi-structured interviews using purposive sampling.

Results: The causes of procrastination comprised two categories (self-related and external factors), spanning personality traits, motivation, lifestyle, social media, family, and the educational system. Procrastination factors were organized into contextual, perpetuating, and manifesting categories, including parenting style, self-confidence, burnout, the COVID-19 era, and interpersonal and occupational background. Coping strategies fell into avoidance, confrontational, submission, and emotion-focused categories, such as task avoidance, planning, and negative emotions. Consequences were grouped into individual and interpersonal categories, including academic and psychological harm, reduced self-confidence, and damaged relationships.

Conclusions: Stable personality, family, and motivational patterns formed the core category of the findings, offering important practical implications for understanding the personality, family, and motivational profile of procrastinating students.

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Introduction

University life is characterized by the challenge of seemingly endless assignments and tight deadlines for students. However, it is not this sheer volume of tasks that has become the challenge, but rather the pervasive tendency of learners to postpone the workflow in relation to their goals (Sun & Kim, 2023). Following this logic, the core issue is not the difficulty of the assignment but rather the students' ability to remain self-regulated, stay on track, and complete the task. Specifically, procrastination is defined as the intentional delay of assignments (Yuan et al., 2024). In essence, procrastination means that an individual decides to perform a task that could yield future results but postpones it to a later time without a valid reason (Turner & Hodis, 2023). Students must cope with stressful scheduling and manage their academic anxiety. In this context, procrastination can be viewed as a self-protective or self-handicapping behavior.

Approximately one-quarter of students report that procrastination creates tension and interferes with their academic performance, to the extent that they are unable to utilize their true potential in the learning process and consequently fail (Ren et al., 2023). Research indicates that procrastination has a negative impact on health and well-being (Yang et al., 2022), and on life satisfaction across various demographics. The internal consequences of procrastination include anxiety, distress, self-blame, hopelessness, and regret (Eisenbeck et al., 2019). The external consequences of procrastination can be severe, potentially harming an individual's career and academic progress. These include causing the loss of opportunities and damaging personal relationships (Shaked & Altarac, 2022). Furthermore, procrastination may be a negative predictor of Grade Point Average (GPA) and consequently academic probation (Caratıquıt & Caratıquıt, 2023), and may result in significant academic costs for students. Due to postponing tasks, procrastinating individuals lack adequate control and influence over their environment, fail to achieve their personal goals, delay their personal growth, and experience difficulty in self-acceptance (Agustin & Winarso, 2021).

Researchers have pointed to various factors as antecedents of procrastination. A common belief about the nature of procrastination is that this behavior stems from high standards (Kurtovic et al., 2019). An individual's tendency to set perfect and unattainable criteria is indicative of perfectionistic beliefs. Delaying the start of a task may be due to the desire to execute it perfectly and flawlessly. This, in turn, makes task completion difficult or unpleasant. Consequently, the

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procrastinating individual perceives the task as premature due to encountering perfectionistic standards and subsequently avoids it (Ashraf et al., 2023). Procrastination can be viewed as both a cause and an effect. It may be a consequence of factors such as low self-efficacy and irrational beliefs (Ma et al., 2023). Conversely, procrastination may be a detrimental habit with negative psychological outcomes, including stress, worry, and fear of failure (Cho & Lee, 2022), chronic anxiety (Ko & Chang, 2019), and depression (Kınık & Odacı, 2020). It appears that some of these correlates, which have been examined as both antecedents and consequences of procrastination, are the experience of negative emotions, which in turn impact the procrastinating individual's life satisfaction. Life satisfaction is a global evaluation process of one's life that is sensitive to situational changes and is considered based on individuals' own perceptions and perspectives (Çıkrıkçı & Erzen, 2020).

As mentioned, procrastination can impact various aspects of an individual’s personal and social life, affecting academic and educational domains (Akpur, 2020), economic spheres (Gamst-Klaussen et al., 2019), and consequently, both mental and physical health (Johansson et al., 2023). Furthermore, there is a possibility of its occurrence in future occupational settings, which would entail consequences for organizations. Research in this area can aid in designing measures and interventions to reduce or eliminate procrastination. Academic procrastination is prevalent, increasing among students, and carries undesirable consequences. It is linked to multiple factors, and research findings vary among students across different disciplines, genders, and ages. Furthermore, despite the recognized necessity for promoting mental health, preventing academic procrastination, and ensuring the safety and empowerment of students, a fundamental research gap exists in this area. Given the critical role of students as the main link in the nation's educational development, the presence of students' procrastinating behaviors leads to numerous problems across various educational levels and can result in significant challenges, undesirable behaviors, and difficulties. Therefore, conducting this research can yield important implicit achievements for the academic community. Given the lack of a comprehensive body of research on procrastination, and considering that procrastination is a complex, multi-dimensional cognitive-cultural-social-personality construct whose full scope has not been thoroughly investigated in existing studies—particularly with a lack of comprehensive research on the conceptual structure of procrastination within the student population—the main research problems of the current study can be stated as

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follows: Can the core genesis of academic procrastination be identified?, What are the causes of procrastination?, What are the contexts and underlying factors of procrastination? and, Which strategies are most effective for coping with procrastination?

While previous research in the field of procrastination generally focused on identifying the contributing factors to procrastination and proposing coping strategies (Akbarpour et al., 2023; Costa, 2019; Fridayani, 2023; Kurniawan, 2024; Mehrjoo, 2023; Pourkarimi et al., 2019; Yastibas, 2020) the present study, utilizing a qualitative approach and the Grounded Theory (GT) method, investigates the process of procrastination formation and, thus, presents distinct differences from prior research. In this study, procrastination is conceptualized as a complex and dynamic system that accounts for various cultural, social, organizational, and individual influences. This study also aims to determine the various roles that contribute to the formation of procrastination, illustrating how these roles interact with each other and influence procrastination. With this innovative approach, the present research achieves the deepest possible understanding of the procrastination formation process across different environments and offers strategies for procrastination prevention that are designed based on this profound comprehension of the influencing factors. Thus, by providing a novel and innovative perspective on procrastination, the current study can contribute to the development of more effective approaches for coping with it.

Therefore, considering the aforementioned importance of conducting the present study, as well as the research gap in prior investigations, the current research seeks to explore the phenomenon of procrastination from the perspective of students who experience it.

Thus, the main question and sub-questions of this research are:

1. What causal factors influence the process of procrastination formation?
2. What actions and strategies do students employ in coping with procrastination?
3. What contextual and intervening factors influence the process of procrastination formation?
4. What consequences result from procrastination?
5. What is the core phenomenon in the process of procrastination formation?

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Material and Methods

The method of this research is qualitative, conducted using the Grounded Theory (GT) approach as outlined by Strauss & Corbin (1998). Initially, the Tuckman Procrastination Scale (2001) was administered to 1,000 volunteer students at Persian Gulf University. Students identified as procrastinators (scoring two standard deviations above the mean) and whose scores were above 52 were considered for the qualitative research sample. The sample of the present study consisted of 22 undergraduate students (17 women, 5 men). The average age of the procrastinating students was 21 years. Of this group, 9 individuals (40.91%) were from the Faculty of Literature, 8 (36.36%) from the Faculty of Engineering, 4 (18.18%) from the Faculty of Petroleum (or Oil), and 1 (4.55%) from the Faculty of Basic Sciences. The interviews were conducted at times convenient for the participants and continued until data saturation was reached and a comprehensive description of the phenomenon had been achieved. The research participants were selected using purposive sampling based on their willingness to participate in the study. All interviews were recorded with the participants' permission, transcribed, and analyzed before the subsequent interview was conducted.

In the process of generating Grounded Theory, the collected data are interconnected through three stages: Open Coding, Axial Coding, and Selective Coding. The process of data interpretation is carried out step-by-step, moving from the level of raw data to the level of abstract concepts, ultimately culminating in a logical theory (Strauss & Corbin, 1998).

In the present study, after transcribing the interviews into typed texts and performing a line-by-line analysis of the interviews, the data were broken down into meaningful segments. In this stage, the main phrases were extracted, and a code was assigned to each phrase corresponding to the concepts within that sentence. These codes were either derived from the participants' own words or were the result of the researcher's inference from the latent concepts in the data. These codes were noted as suggestions in the margin of the interview text using Microsoft Word. Subsequently, the researcher compared these codes, and similar codes were grouped based on their properties and dimensions. This process led to the initial categorization of the codes, and a number of key concepts and categories were identified that reflected specific aspects of the participants' experiences. In this stage, initially, a large number (1,159) of raw preliminary codes were generated. However, through reduction and the elimination of overlapping codes, the number was

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decreased. As a result of continuous reduction and refinement of the codes, coupled with the researcher's increased mastery and ability to select appropriate concepts, approximately 190 initial codes or sub-concepts remained. The same process was applied to the initial concepts. The outcome of the Open Coding stage was the emergence of 190 sub-concepts, 39 initial concepts, and 13 core categories.

Axial coding focuses on how the categories intersect with one another and how they connect. In other words, the core categories extracted during the open coding phase must be logically, abstractly, and analytically related and linked to each other within a theoretical model, encompassing conditions, strategies, and consequences, all revolving around the phenomenon under study (Strauss & Corbin, 1998). This model is referred to as the conceptual model. In the present study, the transition from open coding to axial coding was necessary, a process greatly assisted by the repeated re-reading of the data and interviews. Drawing diagrams to illustrate the interactions, processes, and relationships among the concepts during the analysis was also helpful. This component is presented in the form of a diagram at the end of the findings section.

Selective Coding is the process of integrating and refining the theory. In integration, categories are ordered around a central concept that possesses explanatory power (Strauss & Corbin, 1998). The process of integrating and refining the theory in selective coding is accomplished through narratives, such as the storyline, which connects the categories. In a storyline, the researcher examines how specific factors influence the phenomenon, leading to the use of particular strategies with special outcomes. In other words, selective coding takes the findings from the previous coding stages, selects the core category, systematically relates it to other categories, and validates these relationships. This approach has been applied in the present research.

To validate the data, the criterion of trustworthiness (Guba & Lincoln, 1994), was utilized. The criteria most often associated with the discussion of trustworthiness in qualitative studies are: Credibility, Dependability, Confirmability, and Transferability (Guba & Lincoln, 1994).

Credibility refers to the congruence between what the participants intend to convey and how the researcher interprets the participants' statements. In the present study, during the interviews, if the researcher felt that an interpretation of a topic or message might differ from the participant's intended meaning, it was repeatedly shared with the participants, and they were asked whether the interpretation was correct. Furthermore, in this research, after transcribing the recorded interviews,

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the researcher listened to the recordings again. If, even then, an interpretation of a participant's statement was derived and felt to be potentially different from what was intended, the participant was contacted and the issue was raised.

Dependability is established by checking the researcher's assumptions with several knowledgeable individuals, including those who participated in the research. Essentially, it involves examining the degree of consistency and alignment between the participants' intended meanings in their statements and the interviewer's interpretation of those statements. In the present study, dependability was achieved through several steps. In the first step, all codes in the research were clearly identified and defined, and the statements from various participants that were codable were subsequently coded. In the second step, precise descriptions were made regarding the sequential process for developing and constructing the model, documenting the process and the theoretical decisions that guided the researcher toward building the model.

Confirmability refers to the researcher's ability to prevent their personal opinions, feelings, and beliefs from influencing the research findings. In the present study, the primary data from all interviews were captured through both field notes and electronic recordings. These were then transcribed and repeatedly checked against the typed versions to ensure they precisely matched the participants' spoken words. External auditors and the participants themselves were used to confirm the data's integrity and neutrality.

Transferability refers to the probability of the findings being meaningful and applicable in similar contexts, serving as the qualitative equivalent of external validity or generalizability in quantitative methods. In the present research, the criterion of transferability was addressed by reviewing the literature related to the study's findings, comparing them with results from other studies, and discussing the convergences and divergences regarding similar and different cases.

The inclusion criteria for the research were: completion of an informed consent form to participate in group training sessions according to the schedule; a diagnosis of procrastination, evidenced by obtaining a score higher than 48 (Note: A previous mention used 52, which is a common discrepancy in translated texts, but 48 is retained here as stated in the source text); and no prior treatment history related to procrastination. The exclusion criterion for the research was failure to attend more than three sessions. Participants were given a general explanation of the research objectives, assured of the confidentiality and privacy of the information obtained, and guaranteed

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that the research findings would be made available to them upon request. Informed consent and the right to withdraw from the study were strictly observed. The interviews were conducted at the Persian Gulf University Counseling Center after obtaining permission from the center. The duration of the interviews ranged between 45 and 90 minutes.

Research Tool

Tuckman Procrastination Scale (TPS)

This scale was developed by Tuckman (1991) and contains 16 items and 1 component. The TPS was first implemented and standardized in 2001 in the University of Toronto, Canada to assess the level of procrastination in design students. Possible responses range from 1: "That's me for sure," to 4: "That's not me for sure". In total, 12 items are scored directly, whereas four items (7, 12, 14, and 16) are scored reversely. The final interpretation of the total scores is as follows: scores in the range of 16-32 are indicative of low procrastination, whereas the score ranges of 32-48 and ≥48 indicate moderate and high procrastination level, respectively. Tuckman has reported the reliability of the questionnaire at 0.86 (Tuckman, 1991). Tuckman (1991) reported a Cronbach's a of .90 in his original work, with estimates of .89. In the Iranian population, internal consistency of the scale has been determined at 0.74, and its validity has been reported at 0.56 by correlating it with the test by Schwarzer et al. (SHEHNI et al., 2006).

Results

Among the participants, 16.4% had mild procrastination (18.6% among women, 16.2% among men), 65.6% had moderate procrastination (59.1% among women, 47.3% among men), and 16% had severe procrastination (11.8% among women, 13.7% among men). In this study, 22 undergraduate participants were interviewed.

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Table 1. Categories, subcategories, and concepts regarding the causes of procrastination

Core Categories	Initial Concepts	Sub-Concepts
Self-Related Factors	Personality Traits	Low self-confidence (or low self-esteem), anxiety, low resilience (or low frustration tolerance), stubbornness (or defiance), depression, oversensitivity, inability to say no, perfectionism, fear of failure, fear of negative evaluation from others, avoidance of new situations, emotional relationships, lack of responsibility (or irresponsibility).
	Demotivation	Despair/Hopelessness, Lack of Motivation, Lack of Interest
	Lifestyle	Excessive Sleep, Irregular Sleep Schedules, Feeling of Listlessness/Fatigue due to Sleep Deprivation, Insufficient Sleep Duration on the Previous Night, Entertainment, Social Gatherings/Interactions
External Factors	Social media	Excessive Use of social media, Nighttime Entertainment, Mobile Phone Usage
	Family	The Family's Influence on Procrastination, Impact of Parenting Style, Parental Strictness, High/Excessive Family Expectations, Lack of Family Support
	Educational System Structure	Lack of Interest in the Academic Major/Field of Study, Tedious/Boring Classes, Quality of Education/Instruction, Impact of Dormitory/Residence Hall Conditions on Procrastination

1. Personality Traits: The initial concept of personality traits was derived from 13 sub-concepts (Low Self-Confidence, Anxiety, Low Resilience, Stubbornness/Obstinacy, Depression, Oversensitivity, Inability to Say No, Perfectionism, Fear of Failure, Fear of Negative Evaluation by Others, Avoidance of New Situations/Opportunities, Emotional Relationships, Lack of Responsibility).

2. Lack of Motivation (Demotivation): The initial concept of lack of motivation was derived from 3 sub-concepts (Hopelessness/Despair, Unmotivated State, Lack of Interest/Apathy).

3. Lifestyle: The initial concept of lifestyle was derived from 6 sub-concepts (Excessive Sleep, Irregular Sleep Schedules, Feeling of Listlessness/Fatigue due to Sleep Deprivation, Insufficient Sleep Duration on the Previous Night, Entertainment, Social Gatherings/Interactions).

4. social media: The initial concept of social media was derived from 3 sub-concepts (Excessive Use of social media, Nighttime Entertainment, and Mobile Phone Usage).

5. Family: The initial concept of family was derived from 5 sub-concepts (The Family's Influence on Procrastination, Impact of Parenting Style, Parental Strictness, High/Excessive Family Expectations, Lack of Family Support).

6. Educational System Structure: The initial concept of the educational system structure was derived from 4 sub-concepts (Lack of Interest in the Academic Major/Field of Study,

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Tedious/Boring Classes, Quality of Education/Instruction, Impact of Dormitory/Residence Hall Conditions on Procrastination).

Table 2. Main Categories and Initial Concepts Proposed for Procrastination Factors

Core Categories	Initial Concepts	Sub-Concepts
Contextual Factors	Personality Traits	Perfectionism, Fear of Failure, Novelty-Seeking (or: Variety-Seeking), Low Resilience, Obsession/Obsessiveness, Anxiety, Laziness/Indolence, Disorganization, Depression, Fear of Judgment/Negative Evaluation, Habituation, Lack of Responsibility, Lack of Action Orientation (or: Being Non-Action-Oriented), Stubbornness/Obstinacy, Forgetfulness, Passivity/Being Passive, Illusion of Being Gifted (or: Overestimation of Ability), Staying in the Comfort Zone, Ignoring Family Advice.
	Family	Family History of Procrastination, Family Influence on Procrastination, Lack of Emotional Support, Lack of Verbal Support (or: Unsupportive Communication), Lack of Parental Monitoring/Supervision, Inattention/Neglect, Parental Perfectionism.
	Parenting Style	Parental Strictness, Parents' Failure to Inform/Educate Children Regarding Procrastination, High/Excessive Family Expectations, Inducing Guilt (or: Generating Feelings of Guilt).
	Low Self-Confidence	Difficulty in Decision-Making, Feeling Ineffective (or: Low Self-Efficacy), Indecisiveness (or: Hesitation/Doubt).
Sustaining Factors	Social Media	Excessive use of social media, Mobile phone usage, Internet, Watching movies on a laptop, Dependence on social media.
	Burnout	Fatigue, Impact of physical condition on procrastination, Impact of psychological (mental/emotional) condition on procrastination.
	Lifestyle	Strong preference for sleep, Insufficient sleep duration on the previous night, having fun with friends, social gatherings, Entertainment instead of work, avoiding self-discipline (or: Avoiding hardship), Prioritizing sleep over task fulfillment, Irregular sleep schedules, Lack of proper education from the family.
	The COVID-19 Era	Staying at home (Homeness), COVID-19 as an intensifying factor for procrastination, Virtual classes.
Triggering Factors	Academic Context	Tardiness/Late Attendance in Class, Failure to Study on Time, Frequent Absence from Class, Lack of Interest in the Academic Major/Field of Study, Higher Rate of Procrastination in University Due to Less Coercion and Fewer Restrictions, Academic Pressure/Stress.
	Adolescence Period	Higher Levels of Procrastination During Adolescence, Increase in Procrastination Corresponding with Age Progression, The Impact of Puberty/Maturation on Procrastination
	Occupational Context	Ignoring/Neglecting Career Opportunities, Failure to Perform Assigned Duties/Tasks.

1. Personality Traits: The initial concept of personality traits was derived from 19 sub-concepts: Perfectionism, Fear of Failure, Novelty-Seeking (Variety-Seeking), Low Resilience, Obsessiveness, Anxiety, Laziness/Indolence, Disorganization, Depression, Fear of Judgment/Negative Evaluation, Habituation, Lack of Responsibility, Lack of Action Orientation (Non-Action-Oriented), Stubbornness/Obstinacy, Forgetfulness, Passivity/Being Passive, Illusion of Being Gifted (Overestimation of Ability), Staying in the Comfort Zone, and Ignoring Family Advice.

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2. Family: The initial concept of family was derived from 7 sub-concepts: Family History of Procrastination, Family Influence on Procrastination, Lack of Emotional Support, Lack of Verbal Support (Unsupportive Communication), Lack of Parental Monitoring/Supervision, Inattention/Neglect, and Parental Perfectionism

3. Parenting Styles: The initial concept of parenting styles was derived from 4 sub-concepts: Parental Strictness, Parents' Failure to Inform/Educate Children Regarding Procrastination, High/Excessive Family Expectations, and Inducing Guilt (Generating Feelings of Guilt).

4. Low Self-Esteem (or: Low Self-Confidence): The initial concept of low self-esteem was derived from 3 sub-concepts: Difficulty in Decision-Making, Feeling Ineffective (Low Self-Efficacy), and Indecisiveness (Hesitation/Doubt).

5. social media: The initial concept of cyberspace was derived from 5 sub-concepts: Excessive Use of social media, Mobile Phone Usage, Internet Usage, Watching Movies on a Laptop, and Dependence on social media.

6. Burnout: The initial concept of burnout was derived from 3 sub-concepts: Fatigue, Impact of Physical Condition on Procrastination, and Impact of Psychological (Mental/Emotional) Condition on Procrastination.

7. Lifestyle: The initial concept of lifestyle was derived from 9 sub-concepts: Strong Preference for Sleep, Insufficient Sleep Duration on the Previous Night, Having Fun with Friends, Social Gatherings/Interactions, Entertainment Instead of Work, Avoiding Self-Discipline (Avoiding Hardship), Prioritizing Sleep Over Task Fulfillment, Irregular Sleep Schedules, and Lack of Proper Education from the Family.

8. The COVID-19 Era (or: The COVID-19 Period): The initial concept of the COVID-19 era was derived from 3 sub-concepts: Staying at Home (Homeness), COVID-19 as an Intensifying Factor for Procrastination, and Virtual Classes.

9. Academic Context (or: Educational Background): The initial concept of the academic context was derived from 6 sub-concepts: Tardiness/Late Attendance in Class, Failure to Study on Time, Frequent Absence from Class, Lack of Interest in the Academic Major/Field of Study, Higher Rate of Procrastination in University Due to Less Coercion and Fewer Restrictions, and Academic Pressure/Stress.

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10. Adolescence Period: The initial concept of the adolescence period was derived from 3 sub-concepts: Higher Levels of Procrastination During Adolescence, Increase in Procrastination Corresponding with Age Progression, and The Impact of Puberty/Maturation on Procrastination.
11. Occupational Context (or: Professional/Work Setting): The initial concept of the occupational context was derived from 2 sub-concepts: Ignoring/Neglecting Career Opportunities and Failure to Perform Assigned Duties/Tasks.

Table 3. Core Categories and Initial Concepts Proposed for Procrastination Coping Strategies

Core Categories	Initial Concepts	Sub-Concepts
Avoidance Strategy	Task Avoidance	Excusing the non-completion of a task, engaging in secondary tasks instead of main tasks, escaping responsibilities/duties, delaying tasks, Postponing tasks
	Engagement in social media	Using mobile devices, Watching movies/films, Excessive use of social media
Coping Strategy	Propensity for Procrastination Prevention	Tendency toward task initiation/completion, thinking about task execution, creating motivation for task performance, Establishing mental readiness for task execution
	Planning	Note-taking, Organization/Structuring, Planning/Scheduling
Giving Up Strategy	Low Self-Efficacy	Feeling ineffective, feeling useless/unproductive, feeling defeated/failure, feeling helpless/incapable, Feeling futility/meaninglessness, Low self-esteem/confidence, social comparison
	Substitution of Sleep	Prioritizing sleep over task performance, Resting/Taking a break
Emotion-Focused Strategy	Negative Emotions	Self-dissatisfaction and self-loathing, Fear, Anger, Irritation, Self-blame/Self-reproach, Guilt/Remorse, Distress/Unhappiness, Shame
	Negative Feelings	Feeling guilty, Stress, Anxiety, Depression, Lack of calmness/restlessness, Regret

1. Task Avoidance: This initial concept was derived from 5 sub-concepts (excusing the non-completion of a task, engaging in secondary tasks instead of main tasks, escaping responsibilities/duties, delaying tasks, and postponing tasks).
2. Engagement in social media: This initial concept was derived from 3 sub-concepts (using mobile devices, watching movies/films, and excessive use of social media/virtual space).
3. Propensity for Procrastination Prevention: This initial concept was derived from 4 sub-concepts (tendency toward task initiation/completion, thinking about task execution, creating motivation for task performance, and establishing mental readiness for task execution).
4. Planning: This initial concept was derived from 3 sub-concepts (note-taking, organization/structuring, and scheduling/planning).

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5. Low Self-Efficacy: This initial concept was derived from 7 sub-concepts (feeling ineffective, feeling useless/unproductive, feeling defeated/failure, feeling helpless/incapable, feeling futility/meaninglessness, low self-esteem/confidence, and social comparison).

6. Substitution of Sleep: This initial concept was derived from 2 sub-concepts (prioritizing sleep over task performance and resting/taking a break).

7. Negative Emotions: This initial concept was derived from 8 sub-concepts (self-dissatisfaction and self-loathing, fear, anger, irritation, self-blame/self-reproach, guilt/remorse, distress/unhappiness, and shame).

8. Negative Feelings: This initial concept was derived from 6 sub-concepts (feeling guilty, stress, anxiety, depression, lack of calmness/restlessness, and regret).

Table 4. Core Categories and Initial Concepts Proposed for the Consequences of Procrastination

Core Categories	Initial Concepts	Sub-Concepts
Individual Consequences	Academic	Academic Decline, Frequent Absence, Course Withdrawal/Dropping Courses, Academic Failure, Prolongation of Study Period
	Psychological Harms/Impairments	Stress, Anxiety, Depression
	Negative Feelings	Regret, Lamenting, Feeling Upset, Self-Blame/Self-Reproach, Self-Loathing, Despair/Hopelessness, Feeling Guilty, Feeling Hatred
	Low Self-Confidence	Low Self-Confidence/Self-Esteem, Lack of Self-Reliance/Not Counting on Oneself
Interpersonal Consequences	Negative Attitude of Others	Ridicule by Friends, Negative Perception by Others, Lack of Efficacy/Ineffectiveness
	Loss of Relationships	Loss of Friends, Reduction in Relationships
	Aggression	Aggression in response to even rational behavior, being easily offended/Irritable in interactions with others

1. Academic: This initial concept was derived from 5 sub-concepts (academic decline, frequent absence, course withdrawal/dropping courses, academic failure, and prolongation of study period).

2. Psychological Harms/Impairments: This initial concept was derived from 3 sub-concepts (stress, anxiety, and depression).

3. Negative Feelings: This initial concept was derived from 8 sub-concepts (regret, lamenting, feeling upset, self-blame/self-reproach, self-loathing, despair/hopelessness, feeling guilty, and feeling hatred).

4. Weakness in Self-Confidence: This initial concept was derived from 2 sub-concepts (low self-confidence/self-esteem, and lack of self-reliance/not counting on oneself).

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5. Negative Attitude of Others: This initial concept was derived from 3 sub-concepts (ridicule by friends, negative perception by others, and lack of efficacy/ineffectiveness).

6. Loss of Relationships: This initial concept was derived from 2 sub-concepts (loss of friends, and reduction in relationships).

7. Aggression: This initial concept was derived from 2 sub-concepts (aggression in response to even rational behavior, and being easily offended/irritable in interactions with others).

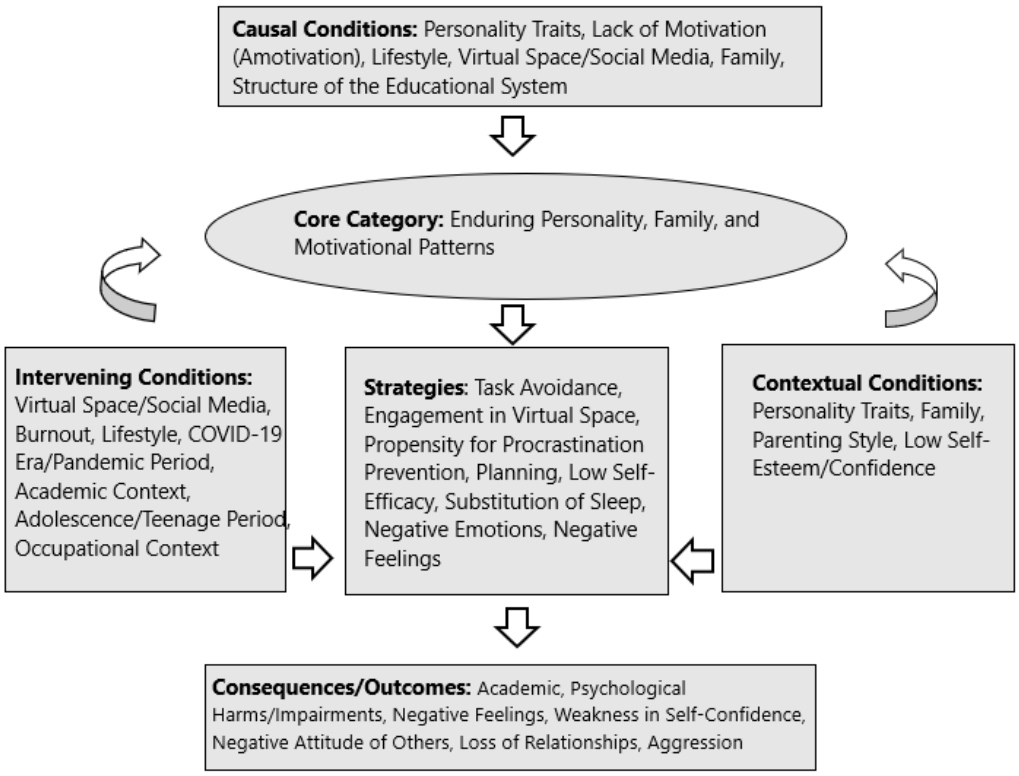


Figure 1. Paradigmatic Model of Procrastination Formation

Discussion

The current study utilized a qualitative research method and was conducted using the Grounded Theory approach by Strauss and Corbin (1998). The study sample consisted of 22 participants (17 women, 5 men) with whom in-depth, semi-structured interviews were conducted, and the Strauss and Corbin (1998) analysis method was used to extract the findings.

The research findings indicate that the causes of procrastination revealed two core categories (self-related factors and external factors) and six initial concepts (personality traits, lack of

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motivation/amotivation, lifestyle, virtual space/social media, family, and the structure of the educational system). The procrastination factors were composed of three main categories (contextual factors, sustaining factors, and revealing factors) and twelve initial concepts (personality traits, family, parenting style, low self-confidence/self-esteem, virtual space/social media, burnout, lifestyle, the COVID-19 era, academic context, relationship with others, adolescence/teenage period, and occupational context).

Anxiety is a significant factor in procrastination; in fact, procrastination can be viewed as avoidance and a type of coping mechanism against anxiety. In other words, the procrastinator delays their tasks and duties to avoid placing themselves in an anxiety-provoking situation, thus distancing themselves from the unpleasant state of anxiety. The research findings align with the studies of (James et al., 2025; Jenabi, (2024)), which have shown that students with higher levels of anxiety, particularly when confronting challenging assignments, engage in dawdling and delaying the completion of their tasks. In explaining this finding, it is stated that individuals with high performance anxiety postpone academic assignments due to fear of negative evaluation to minimize the encounter with the probability of failure.

Lack of motivation (Amotivation) is another factor in the formation of procrastination. When an individual lacks sufficient motivation to perform their duties or activities, they may find it difficult to engage with them and might postpone them. The research findings are consistent with the studies of (Hekmatiyan et al., 2024; Torrens et al., 2025; Yadegari & Salimi, 2025). In explaining this finding, it can be stated that when new content is learned, if intrinsic motivation and deep learning occur simultaneously, the complete learning of the subject takes place, and the learner can master the topic. Therefore, interest, pleasure, appeal, and willingness toward learning subjects lead to increased enthusiasm. Subjects that are approached superficially and without interest will be accompanied by greater procrastination (Klassen et al., 2008).

Lifestyle, including excessive sleep, irregular sleep hours, feelings of lethargy due to sleep deprivation, low amount of sleep the previous night, entertainment, and social gatherings (gatherings), can influence individuals' propensity for procrastination. The low amount of sleep the previous night is the top priority factor within lifestyle, concerning self-related factors. The research findings are consistent with the studies of (Ahmady et al., 2025; Ghiasi, (2015)). In explaining this finding, it can be stated that, according to cognitive theory, procrastination does

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not occur due to laziness or lack of motivation; rather, the procrastinator is interested in activities other than the designated task, and procrastination in an academic situation means that the motivational pull of studying is less than the motivational pull of other thoughts in that situation (Lian et al., 2018). Family, including family relationships and the presence or absence of family support, influences the propensity for procrastination. The research of (Nikookar & Shams, 2023) aligns with the findings of this study. In explaining this finding, it can be stated that parents who have high expectations of their children and criticize them more instill a type of perfectionism in their children. Consequently, the children of perfectionistic parents are more likely to engage in task avoidance. Consistent with the research findings, the structure of the educational system, including the educational system and the teaching method, influences students' propensity for procrastination. A lack of interest in the academic major/field of study leads to a lack of motivation regarding study-related issues, including academic procrastination. These results are aligned with the findings of (James et al., 2025; Yadegari & Salimi, 2025). Logically, when there is no motivation to learn the material related to the major, the learner's engagement with the classroom cannot be considered complete and effective, which itself leads to a lack of participation in the classroom and the manifestation of academic procrastination behavior (Sneyers & De Witte, 2017).

Another factor in procrastination is the feeling of ineffectiveness (lack of efficacy). The research findings are aligned with the studies of (Akhlaghinia et al., 2025; Jenabi, (2024)). In explaining this finding, it can be said that individuals with a lack of efficacy, when facing academic issues, focus on withdrawal and avoidance of situations. They do not trust their ability, constantly fear failure, and attempt to seek justifications for potential failure, such as believing they are ineffective (Steel & Klingsieck, 2016). Psychological conditions such as burnout can also be a sustaining factor of procrastination. When an individual feels burnt out, tired, and experiences reduced energy, the likelihood of avoiding their tasks or performing them late is higher. Since procrastination is the postponement of starting work or the avoidance of performing a duty, this issue can lead to feelings of guilt, incompetence, inferiority, and unfavorable psychological conditions in students, which, in turn, intensifies the procrastination (Ellis & Knaus, 1977).

These results are aligned with the findings of (Hekmatiyan et al., 2024; Mehrjoo, 2023). COVID-19 is identified as an intensifying factor of procrastination, holding the first priority within the

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Intervening/Sustaining factors of procrastination related to the COVID-19 era. Individuals are obligated to complete various tasks and responsibilities in their lives, the execution of which is accompanied by specific submission deadlines and distinct time constraints for carrying out those duties. Despite the ability to plan their time, effort, and resources, individuals often tend to postpone tasks in situations of tension and anxiety (Saplavska & Jerkunkova, 2018). Students' academic resilience against problems and challenges in their studies strengthens their regular attendance in class and school. Furthermore, students who have low academic persistence are more likely to avoid attending class and university and commit school absence compared to students with high academic resilience.

Coping strategies were composed of four core categories (Avoidance Strategy, Coping Strategy, Surrender Strategy, and Emotion-Focused Strategy) and eight initial concepts (Task Avoidance, Engagement in Virtual Space, Propensity for Procrastination Prevention, Planning, Low Self-Efficacy, Substitution of Sleep, Negative Emotions, and Negative Feelings). Using a mobile device is the first priority of procrastination within Engagement in Virtual Space and is a factor of the Avoidance Strategy. Behavioral theory explains procrastination based on the laws of reward and punishment from Skinner's theory. According to this theory, if an activity does not lead to immediate reinforcement, the individual will procrastinate in performing it (Schwartz, 2007). If we compare the two activities of engaging in social networks and attending to academic matters, we realize that individuals who are present on social networks continually receive content that, in turn, possesses reinforcing properties for the individual and gives them motivation to spend more time in this space. On the other hand, academic matters can be examined from two perspectives: first, the individual may entirely lack academic motivation and not want to continue their education, and second, even if they attend to academic matters, they receive either no immediate reinforcement or the reinforcement they receive is weaker compared to the reinforcement obtained from engaging in social networks (Kaliba & Ambrožová, 2021). Planning can be considered the first priority among proactive coping strategies for procrastination. By creating an effective plan tailored to task goals, individuals can become aware of important deadlines and their most critical tasks, and optimize the use of their time and energy. Having a suitable goal leads the student to plan for its achievement and move along a predetermined path (Watson, 2001).

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The consequences of procrastination were composed of two core categories (Individual Consequences and Interpersonal Consequences) and seven initial concepts (Academic, Psychological Harms/Impairments, Negative Feelings, Weakness in Self-Confidence, Negative Attitude of Others, Loss of Relationships, and Aggression). Academic decline (or underachievement) is the first priority consequence of procrastination in the academic context and is one of the individual consequences of procrastination. In explaining this finding, it can be stated that academic procrastination is seen as a delay in behaviors such as preparing for an exam, doing homework, and studying lessons. These results are aligned with the research of (González-Brignardello et al., 2023; Svartdal & Løkke, 2022). Stress is within the realm of Psychological Harms and is one of the individual consequences of procrastination. Academic procrastination is associated with fear of failure, low perseverance, negative affect, low use of cognitive strategies, and some other negative variables, including stress, which significantly reduce academic performance. These results are aligned with the research of (Salguero-Pazos & Reyes-de-Cózar, 2023). Regret is another individual consequence of procrastination. Procrastinators themselves acknowledge the undesirability of their behavior and are constantly in anguish and torment due to this inappropriate habit. This group of individuals is involved in unpleasant feelings and worthlessness. Low self-confidence (or self-esteem) is an individual consequence of procrastination. Since procrastinators delay studying until the night before the exam, this causes studying on the exam night to be done with anxiety, and this anxiety leads to academic decline. Consequently, this gives the student the feeling that they lack the necessary competence and ability, and therefore, the student's self-confidence is seriously damaged (Canter, 2008). The research findings are aligned with the research of (Sarwar et al., 2025).

In response to the overall research question, the final core category of the present study is Enduring Personality, Family, and Motivational Patterns. These patterns and personality traits, which are consistently present in individuals, can influence their likelihood of procrastination. For example, individuals possessing personality patterns such as indifference, dissatisfaction, or lack of commitment to organizational rules and regulations may have the greatest tendency toward procrastination. Furthermore, family patterns, such as inadequate parenting and support for children or unstable marriages, may also lead to an increased likelihood of procrastination. The more insufficient or unstable an individual's motivation and drives are, the greater the probability

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of procrastination becomes. Therefore, the examination and analysis of these patterns and individual characteristics can contribute to the understanding and prevention of procrastination.

Despite presenting a wide range of factors, strategies, and consequences of procrastination, this research faces certain limitations. Firstly, the analyses are primarily descriptive, and the causal relationships among different factors and the consequences of procrastination have not been comprehensively examined. Secondly, the research sample was limited to the student group, which reduces the generalizability of the findings to other age, professional, or cultural groups. Thirdly, the interaction between individual and external factors, and the role of mediating and moderating variables such as resilience, social support, and coping style, have received less attention. Accordingly, future research can address these limitations by designing longitudinal and experimental studies to investigate causal pathways and the interaction between individual and environmental factors, incorporate mediating and moderating variables into analytical models, select more diverse samples across age and cultural groups, and employ mixed-methods (qualitative and quantitative) to provide a more precise analysis of procrastination behavior, coping strategies, and its individual and social consequences.

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Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The Ethics Review Board of Bushehr University of Medical Sciences approved the present study with the code of IR.BPUMS.REC.1403.151. Also, written informed consent was obtained from the participants.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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