The Relationship Between Emotional Regulation and Academic Procrastination Among University Students

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Abstract

The literature review defines and ascertains that emotional regulation is a protective factor that has an essential impact on academic procrastination. Emotional regulation can help students regulates their psychological problem and deal with the adverse reactions caused by academic procrastination. It is found that students with high emotional regulation can effectively solve difficulties, cope with academic pressure, and avoid academic procrastination. This study will construct a theoretical and conceptual model of emotional regulation and academic procrastination. Two theories have been utilized in the theoretical framework of this study— the combination of two theories as Self-Determination Theory and B.F.Skinner's Reinforcement Theory of Motivation, which form a basis for explaining academic procrastination. This study proposed a conceptual model composed of three sub-constructs of emotional regulation raised by Daniel Goleman of emotional intelligence and three sub-constructs of Davidson's academic procrastination. The conceptual framework helps to explain the relationship between emotional regulation and academic procrastination. This theoretical and conceptual model will guide

educators and policymakers to develop an intervention for procrastination, such as "Harnessing emotions productively," whereby students are more responsible and able to focus on the task, control themselves, and less impulsive in their behavior.

Keywords: Emotional Regulation, Academic Procrastination, Protective Factor, Intervention, Impulsive

1. Introduction

In China, the number of students in the university is increasing rapidly. With the growth of the number of students, society has begun to pay more attention to the quality of students' training. China Education Quality Report (2022) states that students had become an essential asset of new human capital in China. Therefore, universities pay more attention to the training quality of students. Students in China need to learn more courses, including general courses, professional introductory theory courses, professional compulsory courses, and professional elective courses in university (Zheng, 2018). Therefore, much homework was assigned to the undergraduates during their academic year. This caused Chinese students to undergo a lot of written homework and practical homework (Zheng, 2018). A lot of homework often leads to tremendous academic pressure (Dirzyte et al., 2022). This kind of academic pressure often leads to academic procrastination (Masten, 2018). According to Ibrahim (2021), he found that procrastination is a typical problem behavior, so researchers need to pay attention to procrastination behavior and propose improvement measures. Meanwhile, Gao Yuying (2018) stated that 70% of students procrastinate academically in China.

A cross-sectional design was used to study 1184 health students in China. The questionnaire mainly involves the dimensions of academic procrastination, self-regulation, self-esteem, self-efficacy, and fear of failure of health students (Brando-Garrido et al., 2020). The study concluded that 74.1% of all students who participated in the questionnaire delayed at least one academic task. In addition, due to the outbreak of Covid-19 and online courses increased procrastination behavior. These findings are prevalent in China (Zhang et al.,2018). Academic procrastination influences cause adverse psychological problems, such as depression, anxiety,

and other negative emotions. At the same time, it will also impact their future adaptation to society. Therefore, students' academic procrastination is a serious problem in university.

One of the factors that can decrease academic procrastination is emotional regulation (Goroshit, 2018). Emotional regulation can help students regulates their psychological problem and deal with the adverse reactions caused by academic procrastination (Grunschel et al., 2018). High emotional regulation helps students to develop positive emotions when facing academic pressure. This is very important because academic pressure causes depression or consternation in the students (Zheng, 2018). Therefore, emotional regulation plays an important role in handling academic procrastination among students.

1.1 Research Problem

A researcher from the USA, Ibrahim (2021) found that approximately 80% of students are procrastinators . Many students enter the university, but the number of teachers, classrooms, and related supporting facilities has not increased. Students' insufficient learning resources will lead to a series of problems. For example, teachers will not have the motivation to attend classes seriously. Thus, it causes the students to have a negative learning attitude that leads to academic procrastination. If academic procrastination is not contemplated, then there will be a serious decline in the quality of university students, especially their tendencies toward procrastination. From the literature review, there has been a lot of research on teaching facilities, shortcomings of teachers, and enrolment of teachers' policies. According to Xue et al. (2021), it is found that there is limited research focuses on academic procrastination among university students. Therefore, this study attempts to explore more on academic procrastination among university students.

There are many factors influencing students' academic procrastination. These factors include time management, attitude, and personality factors. In academic procrastination, emotion is undoubtedly a very important factor affecting an individual's behavior (Tukaram Jagtap, 2019a; Eckert et al., 2018). Therefore, procrastination is associated with experiences of persistent stress

and negative emotions, including anxiety, depression, and fear (Campbell & Bridges, 2022). Procrastination is a multicultural problem, and many researchers focus on essential characteristics of procrastination, such as emotional regulation or self-regulation (Mitchell, 2022).

Reynolds (2018) found that there was a significant negative correlation between emotional regulation and academic procrastination. In line with the findings, a researcher from Turkey found that there is a negative correlation between emotional regulation and academic procrastination (Tukaram Jagtap, 2019a). Meanwhile, in China, a study by Guo et al. (2019) found that students who report lower emotional regulation may be at a higher risk of academic procrastination. The way to reduce a person's academic procrastination is to strengthen their emotional regulation. Another way to reduce academic procrastination is to help students develop self-control, which will enable them to face difficulties and achieve goals without fear of failure (Guo et al., 2019). Good emotional regulation can significantly reduce academic procrastination, and poor emotional regulation would significantly increase academic procrastination (Zheng, 2018). Most of the above research emphasizes the relationship between emotional regulation and academic procrastination. Hence, this study attempts to answer why procrastinators keep procrastinating academic tasks.

1.2 Research Gap

The research gap states that there is a lack in emotional regulation interventions for undergraduates. This intervention will help students to manage their thoughts and feelings to achieve goal directed actions such as organizing their behavior, controlling impulses, and solving problem constructively. It is found that students with positive emotional regulation can effectively cope with academic pressure and avoid academic procrastination (Masten, 2018).

1.3 Research Objectives

Based on the above discussion, there are two research objectives in this study.

RO1:To explore the relationship between the emotional regulation and academic procrastination among students in a university in Shaanxi Province, China.

RO2:Emotional regulation sub-constructs predict academic procrastination among students in a university in Shaanxi Province, China.

1.4 Research Questions

This study aims to answer the following two research questions:

RQ1: Is there any significant relationship between emotional regulation and academic procrastination among students in a university in Shaanxi Province, China?

RQ2: Do emotional regulation sub-constructs predict academic procrastination among students in a university in Shaanxi Province, China?

2. Literature Review

There are two parts of the literature review in this study. In the first section, this study will review the concept and types of academic procrastination, review of emotional regulation, and related theories. The related theories consist of Self-Determination Theory and B.F.Skinner Reinforcement Theory of Motivation (Achen, & Lumpkin, 2018). Each of these theories has a different perspective on the causes of academic procrastination by emphasizing specific characteristics that could prevent academic procrastination. A theoretical framework and conceptual framework are proposed to examine the relationship between emotional regulation and academic procrastination.

2.1 **Concept of Academic Procrastination**

According to the traditional American dictionary compiled by (Morris, 2012), procrastination is unnecessary procrastination or postponement of a task to a certain point in the future. Procrastination can be divided into five categories: (1) academic procrastination refers to the completion of academic papers or academic tasks by the deadline (Ziesat et al., 1978); (2) neurotic procrastination refers to the delayed decision-making made about some major events and decisions in life (Knaus, 2000); (3) life routine procrastination in life refers to the

procrastination of specified tasks that often need to be arranged and completed in life, such as household activities like cleaning and garbage clearing (Knaus, 2000); (4)decisional procrastination refers to the behavior of procrastination when facing the need for decision-making and unable to make a decisive judgment (Ferrari et al., 2018); (5)compulsive procrastination refers to the behavior that a person is often unable to make decisions and procrastinate on most things (Uzun et al., 2022).

In 1984, the concept of academic procrastination was first proposed by Solomon, a United States psychologist, in the journal Counseling Psychology. At first, there was no distinction between praise and criticism on the definition of academic procrastination, but scholars still have disputes on the definition of academic procrastination.

Some scholars have defined academic procrastination as including both delaying behavior and coping style (Ma et al., 2020; Solomon et al., 1984; Tuckman, 1991a). Solomon et al. (1984) found that academic procrastination is an act in which individuals postpone tasks indefinitely without necessity, accompanied by negative emotional experiences. Tuckman (1991b) found that academic procrastination is a behavioral tendency of individuals to take academic procrastination or even avoid it completely when facing the academic tasks they must complete, which is a manifestation of insufficient self-control. Ma et al. (2020) defined academic procrastination as an individual's failure to complete the academic tasks which he originally wanted to complete according to the completion plan. It is irrational academic procrastination accompanied by negative emotional reactions.

Some researchers defined academic procrastination from the perspective of its characteristics, including voluntary, avoidance, and irrational (Ferrari & Díaz-Morales, 2017; Steel & Klingsieck, 2016). Steel (2017) defined academic procrastination as irrational behavior which deliberately delays learning and work even though individuals realize the adverse effects of academic procrastination on themselves. Ferrari and Díaz-Morales (2017) defined academic procrastination as irrational behavior. Those who avoid procrastination choose to postpone

learning tasks to maintain their self-worth, while those who procrastinate deliberately enjoy the pleasure of the final sprint when they cannot escape the task.

Other scholars have defined procrastination from the individual trait level (Svartdal & Løkke, 2022; Milgram et al., 2018). Svartdal and Løkke (2022) found that academic procrastination is a behavioral tendency to delay the completion of tasks or goals. Milgram et al. (2018) found that academic procrastination is a personal trait in which individuals tend to procrastinate in one way or another. Meanwhile, Knaus (2019) found that academic procrastination is an important task that needs to be completed in a limited time to delay. It has become a personal habit. In conclusion, the definition of academic procrastination includes behavioral problems, personal traits, and emotional and personal habits.

2.2 Types of Academic Procrastination

In previous studies, the most used classification for different procrastinators is based on the types of personality type (Wessel et al., 2019). It can be divided into four types of academic procrastination: (1) active academic procrastination and passive academic procrastination (Wieland, 2022); (2) avoidance academic procrastination and arousal academic procrastination (Van Eerde & Venus, 2018); (3) anxious academic procrastination and relaxed academic procrastination (Can & Zeren, 2019); (4) different tasks academic procrastination (Solomon & Rothblum,1984). In this conceptual paper, different tasks and academic procrastination will be selected as the main guidance.

2.2.1 Different Types of Academic Procrastination

Solomon et al. (1984) analyzed the academic tasks that students may involve in the school learning environment and accounted for six categories of academic tasks. The six tasks are: (1) Writing a term paper; (2) Preparing for examination; (3) Keeping up with reading assignments; (4) Educational administration management tasks: filling in forms, applying for classes, getting I.D. cards, etc.; (5) Attendance tasks: meeting with tutors, making an appointment with professors, etc.; (6) General school activities. Following these six categories of academic tasks,

the procrastination frequency, procrastination disturbance, and the desire to reduce procrastination of each category of academic tasks are counted respectively.

The classification of different types of academic procrastination is based on different perspectives. Some types of academic procrastination are due to influencing factors. Table 1 shows different perspectives on the four types of academic procrastination.

Table 1:

Different Types of academic procrastination Based on Different Perspectives

SN	Different Types of academic procrastination	Different Perspectives	Author (Year)
1	Active Academic Procrastination and Passive Academic Procrastination	Intention	Wieland (2022)
2	Avoidance Academic Procrastination and Arousal Academic Procrastination	Willingness	Van Eerde and Venus (2018)
3	Anxious Academic Procrastination and Relaxed Academic Procrastination	Personality	Can and Zeren (2019)
4	Different Tasks Academic Procrastination	Task	Solomon and Rothblum (1984)

Some types are built based on the influencing factors of academic procrastination, some are built based on the human personality, and some are built based on the task of academic procrastination. The researcher conclude that the different tasks of academic procrastination by Solomon et al. (1984) are the most appropriate classification to utilize in this study. In this study,

academic procrastination refers to students' learning tasks, considering the reasons and frequency of academic procrastination. It consists of three areas of academic functioning in actual situation of the university that the researcher works. The three areas or items have been refined as below: (1) Writing Homework; (2) Preparing for Exams; and (3) Keeping Up with Reading Assignments.

2.3 Emotional Regulation

According to Goleman and Davidson (2017), self-regulation can also be called emotional regulation; it means an individual can control his or her temper and stress by being more positive and action-centered; retaining composure and the ability to think clearly under pressure; handling impulses well; and nurturing trustworthiness and self-restraint.

There are five sub-constructs of emotional regulation; they are self-control, trustworthiness, conscientiousness, adaptability, and innovation (Goleman & Davidson, 2017). Self-control is not masking or hiding one's emotions but recognizing and controlling them appropriately. This means not making sudden decisions or overreacting to a situation but remaining calm and rational. It leads to being able to make balanced decisions based on what is important and not just how he or she feel at the time. Trustworthiness is an individual's ability to maintain his or her integrity, which means ensuring that what an individual is doing is consistent with his or her values. Conscientiousness is taking responsibility for someone's performance and ensuring that it matches the individual's ability and values. Adaptability was defined by Goleman and Davidson (2017) as being flexible in responding to change. Change is difficult for many for an individual to manage (Schwartz et al., 2017).

Emotion regulation may encourage people to take charge of this effort themselves rather than relying on adults like teachers, parents, and other family members. One of the elements determining academic participation is emotional regulation. It may be argued that this is the reason procrastination is viewed as a failure of emotional regulation (Zarrin et al., 2020).

2.4 Emotional Regulation and Academic Procrastination

According to the research of Solomon et al. (1984), procrastination refers to unnecessary procrastination that should be completed. It is incredibly complicated to discuss procrastination in the context of education. It refers to not only students' procrastination of academic tasks that they need to complete but also the result of the interaction between students' cognition, emotion, and behavior. Moreover, Solomon et al. (1984) have shown that procrastination is significantly related to irrational cognition, anxiety, fear, and depression. Especially for people with procrastination, emotion is an essential factor affecting behavior. For example, if an individual can deal with negative emotions when he encounters heavy work, the probability of procrastination will be significantly reduced.

Hence, procrastination is closely related to an individual's emotional regulation ability, which is the core element of emotional intelligence (Eckert et al., 2018). Emotional regulation mainly refers to an individual's ability to control his or her emotions and achieve his or her goals properly. Therefore, emotional regulation is essential to control students' emotions to achieve their academic goals. For example, students can regulate their emotions and continuously motivate themselves to achieve more through their learning progress. That means good emotional regulation is needed to manage one's emotions. However, according to Harley et al.(2019), students with weak emotional regulation ability may continue to delay their academic tasks and fail to achieve their academic goals. Students will inevitably have various emotions in the process of learning. Therefore, in the learning environment, good emotional regulation ability impacts academic performance (Erözkan, 2018). For example, students with anxiety, tension, and disgust due to too much homework would negatively approach their academic tasks. Therefore, previous research stated that negative emotions are essential factors in procrastination (Mohammadi Bytamar, 2020; Hawaii, et al., 2022). When a student approach a task, that is, the view of aversive difficult or tedious, he or she is exposed to negative emotions. In such circumstances, the students try to eliminate this emotion as soon as possible, avoiding tasks or procrastination. It seems that students postpone their tasks to adaptive emotion regulation strategy in consequent failure in self-regulation. If they can regulate their emotions

positively, the students will overcome procrastination behavior. Similarly, Guo et al. (2019) agreed that students who experience positive emotion regulation are able to achieve better academic performance. As such, students who have good emotional regulation have a significant impact on reducing academic procrastination.

Although previous studies have investigated the relationship between emotional regulation and academic procrastination (Kansan et al., 2019; Rumahlewang et al., 2020; Sánchez-Álvarez et al., 2020), according to Rumahlewang et al., (2020), emotional regulation has a direct negative effect on students' academic procrastination. In addition, according to the research of Kandemir (2018), students' academic procrastination behavior is significantly related to emotional regulation, coping strategies, and self-esteem. Students' coping strategies can significantly reduce academic procrastination by adopting positive coping strategies. On the contrary, if students adopt harmful avoidance coping strategies, students' academic procrastination behavior will significantly increase. Furthermore, Guo et al. (2019), in their research, have found that students with low emotional regulation and low self-efficacy have a significantly increased probability of academic procrastination. One of the ways to reduce individual procrastination is to improve their emotional regulation level. Therefore, there is a significant importance to research the critical sub-construct of emotional regulation with academic procrastination.

Many scholars (Grunschel et al., 2018; Rong et al., 2021; Rumahlewang et al., 2020; Zhang et al., 2018) have researched the relationship between emotional regulation and academic procrastination. According to the research of Hen et al.(2018), there is a significant negative correlation (β= -.25 ; p<0.05) between self-control and academic procrastination. In other words, the lower the emotional regulation, the higher the probability of academic procrastination. At the same time, the study also found that emotional regulation has a significant positive correlation (β=.17;p<0.05) with students' average grades, especially in some tasks of academic procrastination such as writing homework, preparing for an examination, and keeping up with reading assignments (Zacks & Hen, 2018). This implies the lower the emotional regulation, the

lower the average score. In contrast, some researchers have found that the relationship between emotional regulation and academic procrastination is negatively and moderately correlated (rho=-0.496; $p<0.001$) (Mappakaya et al., 2019). There are also findings that showed no correlation between emotional regulation and academic procrastination (rho=-0.037; $p=0.711$). However, they explained that such results might be related to their samples from classes with excellent academic performance. The research of Mappakaya et al. (2019) found that the sub-construct, conscientiousness, and adaptability of the emotional regulation scale they used were highly correlated with the scores of academic procrastinations. Moreover, the study also found that the general emotion scale and the adaptability scale of the emotion scale have a significant predictive effect on students' locus of control. Other researchers have proved that students with high emotional regulation and self-efficacy have a lower probability of academic procrastination (Guo et al., 2019).

After reviewing the related studies discussed above, this study concludes that emotional regulation is negatively correlated with academic procrastination. Overall, the sub-construct of emotional regulation (self-control, conscientiousness, and adaptability) was studied with academic procrastination tasks such as writing homework, studying for the examination, and keeping up with reading assignments. Therefore, in this study, the researcher will explore three sub-constructs of emotional regulation with academic procrastination among students in a university in Shaanxi Province, China.

2.5 Conceptual Framework

From the above literature review, the researcher proposed a conceptual framework for future empirical study. The two (2) main variables: Emotional Regulation and Academic Procrastination, are derived from the theories and related reviews. All these variables are aligned with basic principles of psychological factors that may influence academic procrastination among students in a university.

The sub-constructs for dependent variable academic procrastination are: (1) Writing Homework; (2) Preparing for examination; (3) Keeping up with reading assignments. The independent variable is Emotional Regulation. The Emotional Regulation sub-constructs utilized in this study are Self-control, Conscientiousness, and Adaptability. As such, this study would like to explore the relationship between emotional regulation with academic procrastination.

In this conceptual framework, the researcher hypnotized that academic procrastination behavior among students is influenced by emotional regulation. This study also explores the relationship between emotional regulation and academic procrastination. Therefore, this study will not only investigate the relationship between these two (2) variables but also investigate, which emotional regulation sub-construct predictors contribute to students' academic procrastination most. As given below in Figure 1, the conceptual framework will be used to guide the implementation of this study.

Figure 1:

A Proposed Conceptual Framework on The Relationship Between Emotional Regulation And Academic Procrastination
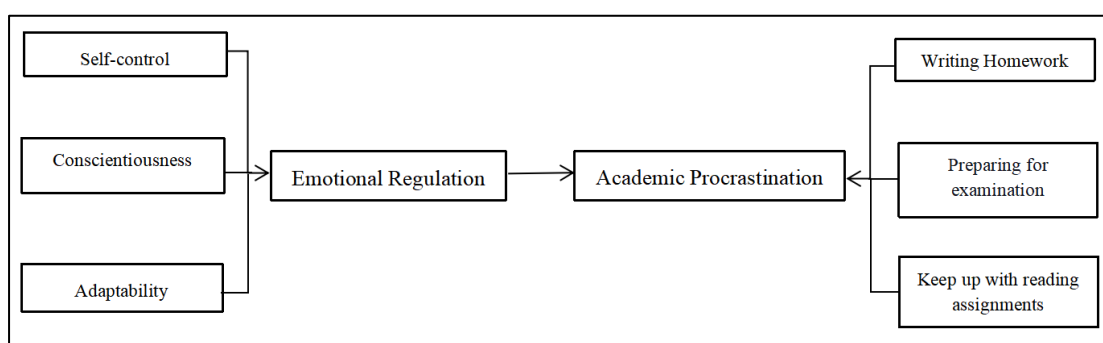
2.6 Underpinning Theories

2.6.1 Self-determination Theory

Self-determination theory (SDT) is a theory that focuses on the psychological needs, internalization, and growth of individuals (Van den Broeck et al., 2021). This theory is a macro theory of human motivation and personality (Ryan & Deci, 2019). SDT mainly discusses the subjective motivation of individuals to make choices without external interference and influence. SDT also focuses on the degree of self-motivation and self-determination of human behavior. Emotional regulation has been related to self-determination theory (Adams et al., 2017). From this perspective, emotional regulation is a motivational capacity that makes the individual pursue and aim for their personal goal.

At first, the discussion of SDT was mainly limited to the comparison of individual intrinsic motivation and extrinsic motivation and the dominant role of intrinsic motivation in individual behavior (Sansone et al.,2021) . Over time, Ryan and Deci (2019) wrote a book entitled S*elf-determination and Internal motivation in Human Behavior* in the mid-1980s. The popularity of this book makes SDT widely accepted and studied. Moreover, SDT is gradually considered to be a reliable and empirical theory. Since then, SDT has been more widely used in various fields, and the research results have also increased significantly.

Ryan & Deci (2019) continue to enrich their theories, expand their early theories to distinguish intrinsic motivation and extrinsic motivation, and put forward new theories of three basic needs according to people's internal needs. The three basic psychological needs are inspired by the initiated behavior and are the essential elements of personal mental health and happiness. The three basic psychological needs of SDT are attention to autonomy, competence, and relatedness, which determine the response to innate human needs.

SDT applies to individuals and situations (Araújo et al., 2013). These three psychological needs have different effects in different environments. According to the transformation of time, space, culture, and experience, the three psychological needs of SDT theory also change (Vansteenkiste et al., 2020). These three psychological needs: are (1) Autonomy, (2) Competence, and (3) Relatedness.

2.6.2 B.F.Skinner's Reinforcement Theory of Motivation

According to Fauzi et al. (2022), B.F. Skinner raised the reinforcement theory of motivation in 1957. Behaviorists think that B.F.Skinner's Reinforcement Theory of Motivation is to examine and reinforces human beings' actions. B.F.Skinner's reinforcement theory of motivation includes positive reinforcement and negative reinforcement.

B. F.Skinner's Reinforcement Theory of Motivation mainly discusses people's behavior form and development. Behavior reinforcement can help individuals form their motivation and beliefs. It also means that negative behaviors reinforce negative motivation. For students, academic procrastination always refers to negative behaviors. It is affected by negative motivation.

Moreover, students with negative motivation will have academic procrastination behaviors, and academic procrastination behaviors will also reinforce negative motivation. Therefore, this study utilizing B.F.Skinner's Reinforcement Theory of Motivation in this study on students' academic procrastination is suitable and persuasive.

3. Theoretical Framework

There are two theories that have been utilized in the theoretical framework of this study. Those theories are Self-determination Theory and B.F.Skinner Reinforcement Theory of Motivation. Each of these theories has a different perspective on the causes of academic procrastination by emphasizing specific characteristics that could prevent academic procrastination.

The three elements of SDT theory (relatedness, autonomy, competence) are naturally coupled with the core elements of Emotional Regulation and B.F.Skinner Reinforcement Theory of Motivation. The essential element of relatedness is inherently proactive with their potential and

mastery of their inner forces (such as drives and emotions). This essential element is closely related to emotional regulation. In this study, the sub-construct of emotional regulation is (1) Self-control, (2) Conscientiousness, and (3) Adaptability (Goleman & Boyatzis, 2017).

Moreover, autonomy will also impact an individual's motivation and emotional regulation. This element of autonomy, either satisfaction or frustration, would further affect behavior, leading to optimal well-being or unfortunate ill-being. It is deniable that emotional regulation impacts an individual's behavior. Therefore, autonomy is also closely related to emotional regulation. The conception of competence is seeking to control the tasks and experience mastery. It is related to B.F.Skinner's Reinforcement Theory of Motivation, especially in the positive reinforcement of an individual's behavior to finish their tasks. In this study, individuals should have positive reinforcement in their academic behavior and motivation to finish academic tasks and achieve competence. The academic tasks in this study could refer to different academic tasks such as writing homework, studying for exams, and keeping up with reading assignments. It is understood that competence is closely related to academic procrastination. Thus, the Self-determination Theory is the main theory that guides this study appropriately. The researcher decided to relate the component competence from Self-determination Theory with B.F.Skinner Reinforcement Theory of Motivation.

Figure 2:

A Proposed Theoretical Framework on The Relationship Between Emotional Regulation and Academic Procrastination
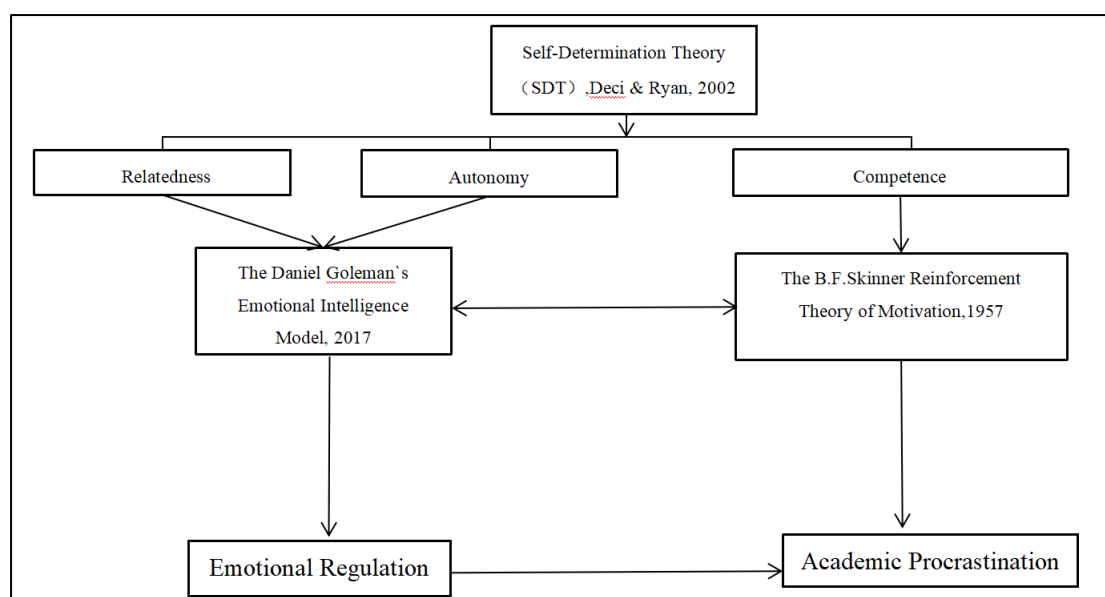
Figure 2 shows a theoretical framework that explains how Self-determination Theory and B.F.Skinner's Reinforcement Theory of Motivation is interrelated with each other. All these theories explain the factors that influence Academic Procrastination. Variables will be derived from each theory, and all these variables will be directed to Academic Procrastination.

4. Conclusion

Generally, university students are finding difficult to meet the academic requirement set by the university, especially the number of assignments given to them. They must comply to the dateline to submit their assignment. Therefore, most students tend to procrastinate. Procrastination is common among students and is always referred to as student syndrome. Reflecting to previous literature, it is found that academic procrastination is prevalent and causes psychological problems to students. Emotional regulation is believed to be a protective factor against psychological burden among students. The cognitive and emotional factors may impact their psychological demands, such as the increase in academic procrastination.

The combination of two theories, Self-Determination Theory and B.F.Skinner's Reinforcement Theory of Motivation form a basis for explaining the relationship between emotional regulation and academic procrastination. The two theories have an internal relationship and postulate ideas that center on a person's motivation and determination. The most influential theory is the self-determination theory, which is the main theory to guide this study appropriately. It is hoped

that this study can provide a model of emotional regulation dimensions for education authorities, university administrators, professional teachers, students, and their parents. This model will be used as a guidance to develop an intervention for procrastination, such as "Harnessing emotions productively".

References

Brando-Garrido, C., Montes-Hidalgo, J., Limonero, J. T., Gómez-Romero, M. J., & Tomás-Sábado, J. (2020). Relationship of academic procrastination with perceived competence, coping, self-esteem and self-efficacy in nursing students. Enfermería Clínica (English Edition), 30(6), 398-403.

Campbell, R. L., & Bridges, A. J. (2022). Bedtime procrastination mediates the relationship between anxiety and sleep problems—Journal of Clinical Psychology.

Chen, L. J., Yang, D. L., & Ren, Q. (2015). Report on the state of children in China. Chicago: Chapin hall at the University of Chicago.

Dirzyte, A., & Patapas, A. (2022). Associations between emotional intelligence and subjective well-being in the Lithuanian youth sample. Current Psychology, 1-6.

Eckert, M., Ebert, D. D., Lehr, D., Sieland, B., & Berking, M. (2018). Does SMS support make a difference? Effectiveness of a two-week online training to overcome procrastination. A randomized controlled Trial. Frontiers in Psychology, 9, 1103.

Fauzi, M. S. D., Nawangsari, A. L. F., & Rosyada, M. F. (2022). The Role of Language Acquisition Theory in Arabic Online Learning (Skinner's Behaviorism Perspective). Izdihar: Journal of Arabic Language Teaching, Linguistics, and Literature, 5(1), 75-86.

Ferrari, J. R., & Díaz-Morales, J. F. (2017). Procrastination: Different time orientations reflect different motives. Journal of research in personality, 41(3), 707-714.

Ge, J., Wu, J., Li, K., & Zheng, Y. (2019). Self-compassion and subjective well-being mediate the impact of mindfulness on a balanced time perspective in Chinese college students. Frontiers in Psychology, 10, 367.

Goleman, D., & Boyatzis, R. (2017). Emotional intelligence has 12 elements. Which do you need to work on? Harvard Business Review, 84(2), 1-5.

Goleman, D., & Davidson, R. J. (2017). Altered traits: Science reveals how meditation changes your mind, brain, and body. Penguin.

Goroshit, M. (2018). Academic procrastination and academic performance: An initial basis for intervention. Journal of prevention & intervention in the community, 46(2), 131–142.

Grunschel, C., Patrzek, J., Klingsieck, K. B., & Fries, S. (2018). "I'll stop procrastinating now!" Fostering specific processes of self-regulated learning to reduce academic procrastination. Journal of Prevention & Intervention in the Community, 46(2), 143-157.

Guo, M., Yin, X., Wang, C., Nie, L., & Wang, G. (2019). Emotional intelligence academic procrastination among junior college nursing students. Journal of advanced nursing, 75(11), 2710-2718.

Harley, J. M., Pekrun, R., Taxer, J. L., & Gross, J. J. (2019). Emotion regulation in achievement situations: An integrated model. Educational Psychologist, 54(2), 106-126.

Ibrahim, H., Loo, C. K., & Alnajjar, F. (2021). Speech emotion recognition by late fusion for bidirectional reservoir computing with random projection. IEEE Access, 9, 122855-122871.

Jafariharandi, R., Setayeshi Azhari, M., & Fazlollahighomeshi, S. (2019). The Structural Relationships between school bonding and Academic procrastination in Primary School Students: The Mediating Role of academic self-efficacy. Knowledge & Research in Applied Psychology, 20(3), 110-121.

Jagtap, T. T. (2019). A Study Of The Academic Procrastination And Emotional Intelligence Relation With Gender And Educational Stream. Think India Journal, 22(38), 182-188.

Jeong, M., Block, M., Kim, S. Y., Oh, H., & Lee, H. K. (2021). The Effects of Adapted Physical Education Practicums on Pre-Service Physical Education Teachers' Confidence. Palaestra, 35(3).

Kanesan, P., & Fauzan, N. (2019). Models of emotional intelligence: A review. E-Bangi, 16, 1-9.

Knaus, W. J. (2019). Procrastination, blame, and change. Journal of Social Behavior and Personality, 15(5), 153.

Lumpkin, A., & Achen, R. M. (2018). Explicating the synergies of self-determination theory, ethical leadership, servant leadership, and emotional intelligence. Journal of Leadership Studies, 12(1), 6–20.

Ma, X., Zhang, H., Wang, L., Ding, K., & Li, R. (2015, March). How to play the role of network service in ideological and political education under the new situation. In 2015 International Conference on Education Technology, Management and Humanities Science (ETMHS 2015) (pp. 555–558). Atlantis Press.

Masten, A. S., & Barnes, A. J. (2018). Resilience in children: Developmental perspectives. Children, 5(7), 98.

Milgram, N., & Tenne, R. (2018). Personality correlates of decisional and task avoidant procrastination. European Journal of Personality, 14(2), 141-156.

Mitchell, K. (2022). How Perfectionism, Procrastination, and Parenting Styles Impact Students' Mental Health and How Mindfulness and Self-Compassion may be the Antidote. Mental Health and Higher Education in Australia, pp. 191–208.

Mohammadi Bytamar, J., Saed, O., & Kapoor, S. (2020). Emotion regulation difficulties and academic procrastination. Frontiers in Psychology, p. 11, 524588.

Mutlu, A. K. (2018). Academic Self-Efficacy and Academic Procrastination: Exploring the Mediating Role of Academic Motivation in Turkish University Students. Universal Journal of Educational Research, 6(10), 2087-2093.

Nomura, M., & Ferrari, J. R. (2018). Factor Structure of a Japanese Version of the Adult Inventory of Procrastination Scale: Delay is Not Culture Specific. North American Journal of Psychology, 20(1).

Nugraha, T., & Prabawanto, S. (2021). They are investigating students' self-regulated learning and academic procrastination in primary school during distance learning. In Educational Innovation in Society 5.0 Era: Challenges and Opportunities (pp. 69-73). Routledge.

Patrzek, J., Grunschel, C., & Fries, S. (2012). Academic procrastination: The perspective of university counselors. International Journal for the Advancement of Counselling, 34(3), 185-201.

Peksöz, R., Karaıslı, S., Erözkan, K., & Ağırman, E. (2021). Basic blood parameters' role in determining intestinal tissue viability in incarcerated hernias. International Journal of Clinical Practice, 75(10), e14664.

Rumahlewang, E., & Latar, I. M. (2020). Analysis Of The Effect Of Self-Effection And Emotional Intelligence Academic Procrastination Of Senior High School Students In Ambon City. Palarch's Journal Of Archaeology Of Egypt/Egyptology, 17(4), 3241-3250.

Ryan, R. M., & Deci, E. L. (2019). Brick by brick: The origins, development, and future of self-determination theory. In Advances in motivation science (Vol. 6, pp. 111-156). Elsevier.

Sansone, C., & Tang, Y. (2021). Intrinsic and extrinsic motivation and self-determination theory. Motivation Science, 7(2), 113.

Schwartz, G. E., Davidson, R. J., & Goleman, D. J. (2017). Patterning of cognitive and somatic processes in the self-regulation of anxiety: Effects of meditation versus exercise. In Meditation (pp. 572-580). Routledge.

Solomon, L. J., & Rothblum, E. D. (1984). Academic procrastination: Frequency and cognitive-behavioral correlates. Journal of counseling psychology, 31(4), 503.

Squincalha, G. R., Leal, E. A., & Silva, T. D. (2021). Relationship between Academic Motivation and Perceived Stress: a study with Accounting Science Students/Relacao entre Motivacao

Academica to Estresse Percebido: um Estudo com discounts de Ciencias Contabeis. Revista Contabilidade, Gestao e Governanca (CGG), 24(1), 72-91.

Stainton, M., & Lay, C. H. (2007). Behavior/Trait-Specific Cognitions.

Steel, P., & Klingsieck, K. B. (2016). Academic procrastination: Psychological antecedents revisited. Australian Psychologist, 51(1), 36-46.

Tuckman, B. W. (1991). The development and concurrent validity of the procrastination scale. Educational and psychological measurement, 51(2), 473-480.

Uzun, B., LeBlanc, S., Guclu, I. O., Ferrari, J. R., & Aydemir, A. (2022). Mediation effect of family environment on academic procrastination and life satisfaction: Assessing emerging adults. Current Psychology, 41(2), 1124-1130.

Van den Broeck, A., Howard, J. L., Van Vaerenbergh, Y., Leroy, H., & Gagné, M. (2021). Beyond intrinsic and extrinsic motivation: A meta-analysis on self-determination theory's multidimensional conceptualization of work motivation. Organizational Psychology Review, 11(3), 240-273.

Wiyatama, U., & Hawadi, L. F. (2022). Emotion Regulation: Potential Mediators of the Relationship Between Muraqabah and Academic Procrastination. Budapest International Research and Critics Institute-Journal (BIRCI-Journal), 5(3), 20524-20534.

Xue, X., Wang, Y., Li, H., Gao, J., & Si, J. (2021). The association between mathematical attitudes, academic procrastination and mathematical achievement among primary school students: the moderating effect of mathematical metacognition. Current Psychology, 1-12.

Zacks, S., & Hen, M. (2018). Academic interventions for academic procrastination: A review of the literature. Journal of prevention & intervention in the community, 46(2), 117–130.

Zarrin, S. A., Gracia, E., & Paixão, M. P. (2020). Prediction of academic procrastination by fear of failure and self-regulation. Educational Sciences: Theory & Practice, 20(3), 34-43.

Zhang, Y., Dong, S., Fang, W., Chai, X., Mei, J., & Fan, X. (2018). Self-efficacy for self-regulation and fear of failure as mediators between self-esteem and academic procrastination among undergraduates in health professions. Advances in Health Sciences Education, 23(4), 817–830.

Zheng, S. (2018). A Comparison of Reproducibility Guidelines and Its Implications on Undergraduate Statistical Education. arXiv preprint arXiv:2210.16350.

Ziesat Jr, H. A., Rosenthal, T. L., & White, G. M. (1978). Behavioral self-control in treating procrastination of studying. Psychological Reports, 42(1), 59-69.