

THE EFFECT OF COGNITIVE BEHAVIOR MODIFICATION ON REDUCING ACADEMIC PROCRASTINATION AMONG STUDENTS AT MADRASAH ALIYAH SEHATI MAROS

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Abstract

This study aims to analyze the effect of applying *Cognitive Behavior Modification* (CBM) using the *self-instruction* technique in reducing academic procrastination behavior among students of Madrasah Aliyah Sehati Maros. The study employed a quantitative approach with a *quasi-experimental* design using a *pretest-posttest control group design*. The research subjects consisted of 20 students divided into an experimental group and a control group. Data were collected using an academic procrastination scale developed based on Ferrari's theory and were supported by observations and interviews conducted during the intervention process. Data analysis techniques included descriptive analysis, normality tests, homogeneity tests, *t*-tests, and effect size calculations. The results showed that the level of academic procrastination in the experimental group decreased significantly from the high category in the pretest to the low category in the posttest, while the control group remained in the high category. These findings indicate that the application of the *Cognitive Behavior Modification* approach with the *self-instruction* technique is effective and significant in reducing academic procrastination behavior among students. This study provides practical implications for guidance and counseling services in madrasahs in developing cognitive-behavioral-based interventions to enhance students' learning discipline and academic responsibility.

Keywords: *Cognitive Behavior Modification, Self-Instruction, Academic Procrastination*

Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh penerapan *Cognitive Behavior Modification* (CBM) dengan teknik *self-instruction* dalam mengurangi perilaku prokrastinasi akademik pada siswa Madrasah Aliyah Sehati Maros. Penelitian menggunakan pendekatan kuantitatif dengan desain *quasi experiment* melalui model *pretest-posttest control group design*. Subjek penelitian berjumlah 20 siswa yang terbagi ke dalam kelompok eksperimen dan kelompok kontrol. Pengumpulan data dilakukan menggunakan skala prokrastinasi akademik yang dikembangkan berdasarkan teori Ferrari, serta didukung oleh observasi dan wawancara selama proses intervensi. Teknik analisis data meliputi analisis deskriptif, uji normalitas, uji homogenitas, uji *t*, dan perhitungan effect size. Hasil penelitian menunjukkan bahwa tingkat prokrastinasi akademik siswa pada kelompok eksperimen mengalami penurunan signifikan dari kategori tinggi pada pretest menjadi kategori rendah pada posttest, sedangkan kelompok kontrol tetap berada pada kategori tinggi. Temuan ini membuktikan bahwa penerapan pendekatan *Cognitive Behavior Modification* dengan teknik *self-instruction* efektif dan signifikan dalam mengurangi perilaku prokrastinasi akademik siswa. Penelitian ini

memberikan implikasi praktis bagi layanan bimbingan dan konseling di madrasah dalam mengembangkan intervensi berbasis kognitif-perilaku untuk meningkatkan disiplin dan tanggung jawab belajar siswa.

Kata kunci: Cognitive Behavior Modification, Self-Instruction, *Prokrastinasi Akademik*

INTRODUCTION

Academic procrastination is a widespread psychological and educational phenomenon characterized by the voluntary and repeated delay of academic tasks despite an individual's awareness that such postponement may result in negative consequences. In educational settings, procrastination may be manifested through delaying the initiation or completion of assignments, postponing preparation for examinations, submitting academic work beyond deadlines, and prioritizing immediately enjoyable activities over academic responsibilities. Although procrastination is often perceived as a simple problem of poor time management or lack of discipline, contemporary psychological perspectives suggest that it is a complex self-regulatory failure involving cognitive, emotional, motivational, and behavioral processes (Steel, 2007; Sirois & Pychyl, 2013). Among adolescents, academic procrastination is particularly important because this developmental period is characterized by significant changes in cognitive functioning, emotional regulation, social relationships, and the development of personal responsibility. When procrastinatory behavior becomes habitual, it may interfere with students' academic achievement, psychological well-being, and development of adaptive self-regulation skills.

The prevalence of academic procrastination among students has attracted considerable attention from researchers in educational psychology and guidance and counseling. Procrastination is not merely an occasional delay in completing an assignment; rather, it becomes problematic when postponement occurs repeatedly and interferes with academic functioning. Steel (2007), in a comprehensive review of procrastination research, conceptualized procrastination as a form of self-regulatory failure in which individuals voluntarily delay an intended course of action despite expecting that the delay will lead to worse outcomes. This definition highlights the paradoxical nature of procrastination: students generally understand that completing academic tasks on time is beneficial, yet they nevertheless choose to postpone them. Such behavior demonstrates that academic procrastination involves a conflict between immediate emotional preferences and long-term academic goals.

For high school students, academic procrastination can have significant consequences. Students who frequently delay academic tasks may experience accumulation of assignments, reduced preparation time, increased academic pressure, and declining quality of work. The pressure created by approaching deadlines may also increase anxiety, frustration, guilt, and emotional distress. In the long term, repeated procrastination may contribute to negative self-perceptions, including the belief that one is incapable of completing academic tasks successfully. This cycle may further reduce

academic self-efficacy and reinforce future procrastination. Consequently, academic procrastination should be understood as a multidimensional problem that requires psychological intervention rather than simply exhorting students to become more disciplined.

From a behavioral perspective, procrastination may be maintained because postponing an unpleasant or difficult task provides immediate emotional relief. When students avoid an assignment that they perceive as difficult, boring, or threatening, they temporarily reduce feelings of anxiety or discomfort. This immediate relief functions as negative reinforcement, making it more likely that the student will engage in avoidance behavior again when confronted with a similar task. Sirois and Pychyl (2013) argue that procrastination can be understood as a short-term mood regulation strategy. Students may postpone academic activities not because they lack awareness of their responsibilities, but because avoidance allows them to regulate unpleasant emotions in the short term. However, this temporary emotional relief eventually produces more significant problems, including increased stress and reduced academic performance.

The cognitive dimension of academic procrastination is equally important. Students who procrastinate often experience maladaptive patterns of thinking that influence how they perceive academic tasks and their own abilities. Cognitive distortions may include fear of failure, unrealistic perfectionism, low academic self-efficacy, catastrophizing, excessive self-criticism, and irrational beliefs that there will always be sufficient time to complete assignments later. Beck (1976) explains that dysfunctional thoughts can influence emotional responses and behavioral patterns. When students interpret academic tasks as overwhelming or threatening, they may experience anxiety and subsequently avoid the task. Similarly, students who believe that they must perform perfectly may delay beginning an assignment because they fear producing work that does not meet their unrealistic standards.

Perfectionism represents one cognitive factor that may contribute to procrastination. Students with maladaptive perfectionistic tendencies may establish excessively high standards for themselves and interpret minor mistakes as evidence of personal failure. As a result, they may postpone academic tasks because starting the task creates the possibility of not meeting their desired standards. Flett et al. (1992) found that procrastination may be associated with perfectionistic concerns and fear of negative evaluation. In this context, procrastination becomes a defensive strategy that allows students to temporarily avoid confronting the possibility of failure. However, the avoidance itself may ultimately increase the likelihood of poor performance, thereby reinforcing the student's negative beliefs about academic competence.

Low self-efficacy is another important cognitive factor associated with academic procrastination. Bandura (1997) defines self-efficacy as an individual's belief in their capacity to organize and execute the actions required to achieve specific goals. Students with low academic self-efficacy may perceive academic tasks as more difficult than they

actually are and may doubt their ability to complete them successfully. These beliefs can reduce motivation and increase avoidance. Conversely, students with stronger self-efficacy are more likely to initiate tasks, persist in the face of difficulties, and regulate their behavior effectively. Therefore, interventions aimed at reducing academic procrastination should address students' dysfunctional beliefs about themselves and their academic capabilities.

Self-regulation is a central concept in understanding academic procrastination. Zimmerman (2000) describes self-regulated learning as a process in which learners actively manage their cognition, motivation, and behavior to achieve academic goals. Effective self-regulated learners are capable of setting goals, planning tasks, monitoring progress, managing time, and evaluating outcomes. In contrast, students who procrastinate often demonstrate weaknesses in these processes. They may have difficulty establishing priorities, monitoring their progress, or controlling distractions. Consequently, academic procrastination may be viewed as a failure to regulate behavior in accordance with long-term goals.

The relationship between self-regulation and procrastination is particularly relevant during adolescence. Adolescence is a developmental stage in which individuals gradually acquire greater autonomy and responsibility for their own decisions. At the same time, executive functions and emotional regulation abilities are still developing. Students are increasingly expected to manage academic responsibilities independently, but they may not yet possess sufficiently developed strategies for regulating attention, motivation, and behavior. This developmental context makes adolescents particularly vulnerable to procrastination. Therefore, guidance and counseling services in secondary education have an important role in helping students develop cognitive and behavioral strategies that support adaptive self-regulation.

Within the context of guidance and counseling, Cognitive Behavior Modification (CBM) represents a potentially relevant approach for addressing academic procrastination. CBM is rooted in the broader cognitive-behavioral tradition, which assumes that behavior is influenced by the interaction of thoughts, emotions, and environmental contingencies. The approach seeks to modify maladaptive behavior by identifying dysfunctional cognitive patterns and replacing them with more adaptive thoughts and behaviors. Meichenbaum (1977) emphasizes that individuals can learn to regulate their behavior through changes in internal dialogue and cognitive self-guidance. In this framework, individuals are not viewed as passive recipients of environmental influences but as active participants capable of learning new ways of thinking and behaving.

The application of CBM to academic procrastination is theoretically relevant because procrastination often involves a combination of irrational thoughts and maladaptive behavioral patterns. A student may think, "I still have plenty of time," "This assignment is too difficult," or "I must complete this task perfectly." Such thoughts may generate anxiety, frustration, or avoidance, which subsequently lead to postponement. Through

cognitive restructuring, students can learn to identify and challenge these irrational beliefs. For example, the thought "I cannot complete this assignment because it is too difficult" can be replaced with a more rational belief such as "I can complete this assignment gradually by dividing it into smaller tasks." This cognitive shift may influence emotional responses and increase the likelihood of adaptive action.

One of the techniques that can be integrated into CBM is self-instruction. Self-instruction is a cognitive technique developed within the cognitive-behavioral tradition that involves teaching individuals to use constructive verbal statements to guide their own thoughts and behaviors. Meichenbaum (1977) developed the self-instructional approach based on the premise that individuals can learn to regulate behavior through internal speech. Rather than responding automatically to difficult situations, individuals are trained to consciously direct themselves through a sequence of adaptive statements. These statements may include instructions to define the problem, develop a plan, implement the plan, monitor progress, and evaluate the outcome.

In the context of academic procrastination, self-instruction may help students replace negative internal dialogue with rational and task-oriented statements. A student who normally thinks, "I will do this assignment later because I am not ready," may learn to use self-instructions such as, "I will start with the easiest part," "I only need to work on this task for the next 15 minutes," or "I can complete the assignment step by step." These statements may reduce cognitive overload and make academic tasks appear more manageable. Through repeated practice, self-instruction can become an internalized strategy that supports self-control and task initiation.

The self-instruction technique can also be implemented through several stages. First, students are encouraged to identify the academic situations that typically trigger procrastination. Second, they identify the thoughts and emotional responses that emerge in those situations. Third, students learn to formulate realistic and constructive self-statements. Fourth, they practice using these statements while completing academic tasks. Finally, students evaluate the effectiveness of the strategy and gradually internalize the self-instruction process. This sequence is consistent with the cognitive-behavioral principle that adaptive behavior can be strengthened through repeated practice, self-monitoring, and reinforcement (Meichenbaum, 1977).

The relevance of CBM with self-instruction is also supported by research on cognitive-behavioral interventions for procrastination. Previous studies have demonstrated that interventions targeting cognitive and behavioral mechanisms can reduce procrastination by improving self-regulation, time management, goal setting, and dysfunctional thinking patterns (Rozenal & Carlbring, 2014; van Eerde & Klingsieck, 2018). Such findings suggest that procrastination is amenable to psychological intervention when the intervention addresses the underlying mechanisms rather than focusing solely on observable delay behavior.

The educational context in which an intervention is implemented is also important. Madrasah Aliyah represents a distinctive educational environment because students receive both general academic instruction and religious education. Students are expected to develop intellectual competencies while simultaneously strengthening religious values, moral character, discipline, and responsibility. Consequently, academic procrastination in madrasah education should not be understood solely as a problem of academic performance but also as an issue related to the development of responsibility and self-discipline. The integration of psychological intervention with the educational and religious context of the madrasah may therefore provide a more meaningful approach to addressing procrastination.

The characteristics of Madrasah Aliyah students as adolescents also require counseling interventions that are contextual, structured, and developmentally appropriate. Students may experience academic demands from multiple subjects, including general sciences and religious studies, while also participating in extracurricular and religious activities. These demands require effective self-regulation and time management. When students lack adequate strategies for managing competing responsibilities, they may postpone academic tasks and prioritize activities that provide more immediate satisfaction. Therefore, guidance and counseling interventions should help students develop practical skills for managing academic responsibilities while strengthening their internal motivation and sense of personal responsibility.

The role of school counselors is particularly important in this context. Counselors can identify students who demonstrate persistent procrastination and provide interventions that address both cognitive and behavioral dimensions. Rather than simply advising students to "stop procrastinating," counselors can help students understand why they procrastinate, identify irrational beliefs, develop realistic self-instructions, and practice adaptive behaviors. This approach is consistent with the preventive and developmental functions of guidance and counseling, which seek not only to resolve existing problems but also to develop students' potential and adaptive competencies.

Furthermore, CBM using self-instruction may be particularly suitable for school-based interventions because it encourages students to become active agents in the process of change. The goal is not to make students dependent on the counselor but to equip them with cognitive tools that can be used independently in daily academic situations. Once students learn to recognize dysfunctional thoughts and replace them with constructive self-statements, they may apply these skills when facing assignments, examinations, presentations, or other academic challenges. This process can potentially strengthen self-control and increase students' confidence in their ability to manage academic responsibilities.

Despite the theoretical relevance of cognitive-behavioral approaches to procrastination, empirical studies specifically examining the effectiveness of Cognitive Behavior Modification using self-instruction among Madrasah Aliyah students remain relatively

limited. Much of the existing literature on procrastination has focused on university students or general secondary education contexts. Moreover, studies often examine procrastination through variables such as time management, self-efficacy, or self-regulation without specifically testing self-instruction as a structured cognitive-behavioral intervention. This limitation indicates the need for research that examines whether CBM combined with self-instruction can effectively reduce academic procrastination within the distinctive cultural and educational environment of Islamic secondary schools.

The present study therefore focuses on students at Madrasah Aliyah Sehati Maros. The study is based on the assumption that academic procrastination is not merely a behavioral habit but a complex phenomenon involving maladaptive cognition, emotional regulation, and self-regulatory difficulties. Consequently, an intervention that combines cognitive restructuring with behavioral guidance may be more effective than approaches that focus exclusively on time management or behavioral discipline. Through self-instruction, students are expected to develop more rational ways of interpreting academic demands, increase their confidence in initiating tasks, and strengthen their capacity to regulate their behavior.

The significance of this research lies in its potential contribution to both theory and practice. Theoretically, the study may contribute empirical evidence concerning the application of Cognitive Behavior Modification and self-instruction to academic procrastination in a madrasah context. The findings may also strengthen the understanding of procrastination as a self-regulatory and cognitive-behavioral problem. Practically, the results may provide school counselors and teachers with an evidence-based intervention strategy for helping students overcome procrastination. The intervention may also support the development of students' academic discipline, responsibility, self-control, and independent learning skills.

In addition, the study has broader implications for the development of guidance and counseling services in Islamic educational institutions. Effective counseling interventions should be responsive to the educational and cultural context in which students live and learn. In Madrasah Aliyah, psychological interventions can be implemented alongside the institution's commitment to character development and religious values. By helping students develop constructive internal dialogue, responsible behavior, and self-regulation, counseling services can contribute not only to improved academic performance but also to the development of students' personal and moral maturity.

Based on the foregoing discussion, academic procrastination represents a significant challenge that can negatively affect students' academic achievement, psychological well-being, and character development. The behavior is influenced by a complex interaction of irrational beliefs, fear of failure, perfectionism, low self-efficacy, emotional avoidance, and inadequate self-regulation. Therefore, effective intervention should address both the cognitive and behavioral dimensions of procrastination. Cognitive Behavior

Modification, particularly through the use of self-instruction techniques, offers a theoretically grounded approach for helping students identify maladaptive thoughts, develop rational self-talk, and strengthen adaptive academic behaviors. The application of this approach in the Madrasah Aliyah context is particularly relevant because students must simultaneously manage academic responsibilities and develop religious and moral character.

Accordingly, this study aims to examine the effect of Cognitive Behavior Modification using self-instruction techniques on reducing academic procrastination among students at Madrasah Aliyah Sehati Maros. Specifically, the study seeks to determine whether the implementation of CBM with self-instruction can produce measurable reductions in students' academic procrastination. The findings are expected to provide empirical evidence for the development of more effective, contextualized, and evidence-based guidance and counseling interventions in madrasah education. Ultimately, the study is expected to contribute to efforts to help students become more disciplined, responsible, self-regulated, and capable of managing academic demands effectively.

METHOD

This study employed a quantitative approach with a *quasi-experimental* design to examine the effect of implementing *Cognitive Behavior Modification* (CBM) using *self-instruction* techniques on students' academic procrastination behavior. The research design used was a *pretest–posttest control group design*, which allowed the researcher to compare students' academic procrastination behaviors before and after the intervention in the experimental group and to compare them with the control group that did not receive the intervention.

The research subjects were students at Madrasah Aliyah Sehati Maros. The study sample consisted of 20 students selected using *purposive sampling* based on high levels of academic procrastination. The sample was then divided into two groups: an experimental group and a control group, each consisting of 10 students. The experimental group received an intervention in the form of the *Cognitive Behavior Modification* approach using *self-instruction* techniques, while the control group received no intervention.

The independent variable in this study was the application of *Cognitive Behavior Modification* (CBM) using *self-instruction* techniques, while the dependent variable was the students' academic procrastination behavior. Data collection was conducted using an academic procrastination scale based on Ferrari's theory and developed in the form of a Likert scale. The research instrument had undergone validity and reliability testing, making it suitable for measuring students' levels of academic procrastination. To supplement the quantitative data, this study was also supported by observations and interviews conducted during the intervention process.

The research procedure was carried out in several stages. In the initial stage, the researcher prepared by developing the research instruments, identifying the research subjects, and administering a *pretest* to both the experimental and control groups to determine the

students' baseline levels of academic procrastination. The next stage involved the treatment, specifically the implementation of a *Cognitive Behavior Modification* intervention using *self-instruction* techniques for the experimental group through structured group counseling sessions aligned with the stages of the *self-instruction* technique. After all intervention sessions were completed, the researcher administered a *posttest* to both groups to determine changes in students' levels of academic procrastination following the intervention. The data obtained were analyzed using descriptive and inferential statistics. Descriptive analysis was used to describe students' levels of academic procrastination before and after the intervention. Inferential analysis included normality tests, homogeneity tests, and *t*-tests to determine the difference in the mean levels of academic procrastination between the experimental and control groups. In addition, *effect size* calculations were performed to determine the magnitude of the effect of applying *Cognitive Behavior Modification* using the *self-instruction* technique in reducing students' academic procrastination behavior.

RESULTS AND DISCUSSION

The results of the study show that the level of *academic procrastination* among students at Madrasah Aliyah Sehati Maros before the intervention was implemented fell into the high category, in both the experimental and control groups. These preliminary findings indicate that academic procrastination is a significant issue in students' learning behavior. Students with high levels of academic procrastination tend to delay starting assignments, postpone completing academic work, submit assignments past the deadline, and prefer engaging in activities they find enjoyable rather than fulfilling their academic obligations. This situation indicates a gap between students' intentions to complete assignments and their actual behavior during the learning process.

Academic procrastination is essentially not merely a matter of time management but a psychological phenomenon related to the processes of self-regulation, impulse control, motivation, and how individuals perceive the tasks they face. Steel (2007) explains that procrastination is a form of self-regulation failure characterized by the voluntary postponement of planned actions even though the individual knows that such postponement may result in negative consequences. In an academic context, this behavior can be observed when students actually understand that a task must be completed immediately but still choose to postpone it for various reasons. Solomon and Rothblum (1984) also explain that academic procrastination is often associated with a tendency to delay task completion as well as anxiety regarding evaluation or failure.

The high levels of academic procrastination in both groups prior to the intervention indicate that this problem was relatively widespread among the study participants. The similarity in baseline conditions between the experimental and control groups is a key finding, as it suggests that both groups had relatively comparable initial characteristics regarding their tendency to postpone academic tasks. Thus, the changes observed in the experimental group following the intervention can be more strongly interpreted as a

consequence of the implementation of the Cognitive Behavior Modification (CBM) intervention using *self-instruction* techniques, rather than merely as a result of differences in baseline conditions between the groups.

From a psychological perspective, high levels of academic procrastination among students can be understood through a cognitive-behavioral lens. Procrastinatory behavior does not occur in isolation but is influenced by interrelated thoughts, beliefs, emotions, and behavioral responses. Students who perceive tasks as difficult, boring, or a threat to their self-esteem tend to experience negative emotions such as anxiety, fear of failure, or a lack of self-confidence. These emotional states then drive students to avoid tasks through procrastination. Procrastination provides short-term relief because students are temporarily freed from the pressure of the task, but in the long term, it actually increases psychological and academic stress. This pattern indicates a maladaptive cycle involving negative thoughts, uncomfortable emotions, task avoidance, and negative consequences.

Ferrari et al. (1995) explain that individuals who procrastinate often use various forms of rationalization to justify their behavior. Students may believe that they still have plenty of time to complete a task or that they will perform better under time pressure. In reality, however, these beliefs often do not align with reality. Constant procrastination can lead to tasks being completed in a rush, lower the quality of work, and increase academic stress. In an educational context, this situation has the potential to hinder the development of students' sense of responsibility, discipline, and independent learning.

After the experimental group received the CBM intervention using the *self-instruction* technique, there was a significant reduction in the level of academic procrastination. The *posttest* results showed that the students' academic procrastination levels in the experimental group shifted from the high category to the low category. In contrast, the control group, which did not receive the intervention, showed no significant change and remained in the high academic procrastination category. This difference indicates that the CBM intervention using *self-instruction* techniques plays a significant role in altering students' academic behavior patterns.

These findings demonstrate that interventions focused on cognitive change can influence changes in academic behavior. In the Cognitive Behavior Modification approach, individual behavior is understood as the result of the interaction between cognitive processes and the environment. Behavioral change can be achieved by helping individuals recognize maladaptive thought patterns, reevaluate irrational beliefs, and then replace them with more realistic and adaptive thought patterns. Bandura (1986) explains that humans have the capacity to regulate their behavior through cognitive processes, including the ability to engage in self-observation, self-evaluation, and self-regulation. Therefore, behavioral change does not always have to begin with changes in the external environment but can also be achieved by altering the way individuals think and talk to themselves.

Self-instruction techniques are a key component of this intervention because they help students develop more constructive internal dialogue. Students are guided to give themselves positive instructions when facing academic tasks. Instead of thinking that a task is too difficult or can still be postponed, students learn to develop more rational internal statements, such as “I can work on this task step by step,” “I should start now so I won’t be rushed,” or “I don’t have to be perfect right away, but I need to complete the first step.” Such statements help students shift their response to tasks from avoidance to more adaptive actions.

This shift is important because procrastination is often triggered by negative *self-talk*. Students who hold beliefs such as “I’m bound to fail,” “This assignment is too difficult,” or “I’ll do it later when I’m ready” tend to face obstacles in getting started. *Self-instruction* techniques help students identify these thoughts and replace them with more realistic instructions. Thus, students not only learn to control their procrastination behavior but also understand the cognitive processes underlying that behavior.

The results of the prerequisite tests showed that the research data were normally distributed and homogeneous, thus meeting the assumptions for further statistical analysis. The results of the *t*-test indicated a significant difference between the levels of academic procrastination in the experimental group and the control group after the intervention was administered. These findings provide empirical evidence that students who received the CBM intervention using *self-instruction* techniques experienced greater changes compared to students who did not receive the intervention. The high *effect size* value further reinforces the finding that the intervention not only produced a statistically significant difference but also had a strong practical impact on reducing students’ academic procrastination.

Interpreting the *effect size* is crucial in experimental research because statistical significance alone is insufficient to explain the magnitude of an intervention’s benefits. A high *effect size* value indicates that the changes observed in the experimental group are substantively meaningful. In other words, CBM using *self-instruction* techniques is not only effective in producing differences in *posttest* scores but also brings about meaningful changes in students’ learning behavior. These findings support the view that psychological interventions oriented toward cognitive regulation can be used to address maladaptive academic behavior.

These quantitative results are reinforced by observational findings during the intervention process. Students demonstrated positive behavioral changes, such as increased awareness of the need to complete tasks on time, the ability to control the urge to procrastinate, and the use of more positive internal dialogue when facing academic tasks. These changes indicate that the intervention not only impacted quantitative measures but was also evident in students’ behavior during the learning process and task completion.

Changes in self-regulation abilities are one of the key findings of this study. Zimmerman (2000) explains that self-regulation in learning involves students’ ability to set goals, plan

strategies, monitor the learning process, and evaluate the results achieved. Students with good self-regulation tend to be better able to manage their time and control behaviors that might hinder the achievement of academic goals. Conversely, low self-regulation can increase the tendency to procrastinate because students struggle to control their impulses and maintain focus on long-term goals.

In the context of this study, the *self-instruction* technique can be understood as one strategy to strengthen students' self-regulation. When students give themselves instructions to begin a task, break the work down into small steps, and maintain focus until the task is completed, they gradually develop the ability to control their behavior independently. This process shifts behavioral control—which previously relied more on teachers or external environments—toward internal control stemming from the students' own awareness.

The research findings also show that CBM interventions help students overcome several irrational thoughts that have the potential to trigger procrastination. Thoughts such as fear of failure, perfectionism, low self-efficacy, and the belief that tasks can still be postponed are forms of cognitive barriers that can interfere with academic behavior. When students believe that they are incapable of completing a task well, their tendency to avoid the task increases. Conversely, when students believe that tasks can be completed step by step, they are more likely to take concrete action.

The relationship between self-efficacy and academic behavior can be explained through Bandura's (1986) social cognitive theory. Self-efficacy refers to an individual's belief in their ability to perform specific actions and achieve expected outcomes. Students with low self-efficacy tend to avoid tasks they perceive as difficult, whereas students with higher self-efficacy are better able to persevere when facing obstacles. In the context of academic procrastination, increasing confidence in one's abilities can help students reduce their tendency to avoid tasks and increase their persistence in completing them.

The findings of this study can also be linked to Steel's (2007) research, which views procrastination as a form of self-regulation failure. If procrastination constitutes a failure to control behavior in order to achieve long-term goals, then interventions that strengthen self-regulation abilities hold strong theoretical relevance. The *self-instruction* technique directly helps students develop internal control mechanisms through guided self-dialogue. Students are not merely advised not to procrastinate; rather, they are trained to recognize trigger situations, identify negative thoughts, provide adaptive instructions, and take actions aligned with their academic goals.

The success of the intervention also highlights the importance of the internalization process. Initially, the instructions provided during the counseling process may still come from the counselor or teacher. However, through repeated practice, students gradually internalize these instructions into internal dialogue. This process enables students to use *self-instruction* strategies independently when facing academic tasks outside of

intervention sessions. Thus, the changes that occur have the potential to last longer because students have acquired skills they can use on their own.

In the context of madrasah education, the findings of this study have broader relevance. Madrasah Aliyah students are not only required to achieve academic competence but are also expected to exhibit discipline, responsibility, self-control, and moral integrity. Academic procrastination not only affects grades or academic achievement but may also be linked to the formation of students' habits and character. The habit of constantly putting off tasks can create behavioral patterns that conflict with the values of discipline and responsibility. Conversely, the ability to complete tasks on time can reinforce the positive character traits necessary for both academic and social life.

From a character education perspective, interventions addressing academic procrastination can be part of efforts to build students' personal responsibility. Lickona (2013) emphasizes that character education is not only about knowledge of moral values but also encompasses moral feelings and moral actions. In this context, students who understand the importance of discipline but still put off tasks have not fully internalized that value in their behavior. *Self-instruction* techniques can help bridge the gap between knowledge and action by training students to direct themselves to act in accordance with their goals and responsibilities.

The madrasah context also provides an opportunity to integrate psychological interventions with religious values. The concepts of responsibility, discipline, trustworthiness, and diligence in pursuing knowledge can serve as a source of reinforcement for changes in student behavior. This integration must be carried out proportionally so that religious values are not used to judge students who experience procrastination but rather serve as a source of motivation and self-reflection. With such an approach, CBM can be contextualized within the madrasah educational environment without losing the fundamental principles of evidence-based intervention.

The findings of this study have important implications for guidance and counseling services in madrasahs. It is not enough for counselors to simply advise students to be more disciplined or to stop putting off assignments. Interventions must be directed at the psychological factors underlying procrastinatory behavior. Counselors can help students identify irrational thoughts, understand the relationship between thoughts and behavior, and develop *self-instruction* strategies tailored to each student's individual characteristics. This approach allows guidance and counseling services to become more systematic, targeted, and based on students' psychological needs.

Furthermore, the research findings indicate that interventions for academic procrastination should not only focus on the final outcome but also on the process of developing self-regulation skills. Students need to be trained to recognize triggers of procrastination, set realistic goals, break down large tasks into smaller activities, use positive self-talk, and reward themselves for progress made. These strategies can be

combined with self-monitoring and periodic evaluation so that students can sustain behavioral changes.

Overall, the results of this study indicate that the application of Cognitive Behavior Modification using *self-instruction* techniques is effective in reducing academic procrastination among students at Madrasah Aliyah Sehati Maros. The decrease in the procrastination category from high to low in the experimental group, while the control group remained in the high category, demonstrates a clear difference in change between students who received the intervention and those who did not. The results of statistical tests and the high *effect size* further strengthen the evidence regarding the effectiveness of this intervention. Observational findings also show that quantitative changes were accompanied by tangible behavioral changes, including increased self-awareness, self-control, punctuality in completing tasks, and the use of more constructive *self-talk*.

Thus, this study provides empirical evidence that academic procrastination can be addressed through interventions that address both cognitive and behavioral aspects. The *self-instruction* technique helps students change their mindset toward academic tasks, reduce irrational thoughts, increase self-efficacy, and strengthen self-regulation. In the context of Madrasah Aliyah, this approach holds strategic value as it can support the achievement of educational goals that are not only oriented toward academic achievement but also toward fostering disciplined, responsible, independent, and self-controlled individuals. Therefore, CBM using *self-instruction* techniques can be considered as an alternative intervention in guidance and counseling services to address academic procrastination, particularly among adolescents who are facing complex academic demands and psychosocial development challenges.

CONCLUSION

Academic procrastination among students at Madrasah Aliyah Sehati Maros was initially in the high category and reflected low self-regulation and a negative mindset toward academic tasks; however, after the experimental group received a *Cognitive Behavior Modification* (CBM) intervention using self-instruction techniques, there was a significant decrease in academic procrastination levels, bringing them down to the low category. In contrast to the control group, which showed no significant change, the results of statistical tests and high effect sizes demonstrate that the application of CBM using self-instruction techniques has a strong and effective influence on reducing students' academic procrastination behavior. These changes were marked by increased awareness, the ability to control the urge to procrastinate, and the emergence of more positive and constructive internal dialogue when completing tasks. Thus, the CBM approach using self-instruction techniques can serve as an effective and relevant intervention in guidance and counseling services at madrasahs to help students develop discipline, responsibility, and self-control in line with academic demands and religious values.

REFERENCES

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.
- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. International Universities Press.
- Ferrari, J. R., Johnson, J. L., & McCown, W. G. (Eds.). (1995). *Procrastination and task avoidance: Theory, research, and treatment*. Springer.
- Flett, G. L., Blankstein, K. R., Hewitt, P. L., & Koledin, S. (1992). Components of perfectionism and procrastination in college students. *Social Behavior and Personality: An International Journal*, 20(2), 85–94. <https://doi.org/10.2224/sbp.1992.20.2.85>
- Lickona, T. (2013). *Educating for character: How our schools can teach respect and responsibility*. Bantam Books.
- Meichenbaum, D. (1977). *Cognitive-behavior modification: An integrative approach*. Plenum Press.
- Rozental, A., & Carlbring, P. (2014). Understanding and treating procrastination: A review of a common self-regulatory failure. *Psychology*, 5(13), 1488–1502. <https://doi.org/10.4236/psych.2014.513160>
- Sirois, F. M., & Pychyl, T. A. (2013). Procrastination and the priority of short-term mood regulation: Consequences for future self. *Social and Personality Psychology Compass*, 7(2), 115–127. <https://doi.org/10.1111/spc3.12011>
- Solomon, L. J., & Rothblum, E. D. (1984). Academic procrastination: Frequency and cognitive-behavioral correlates. *Journal of Counseling Psychology*, 31(4), 503–509. <https://doi.org/10.1037/0022-0167.31.4.503>
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, 133(1), 65–94. <https://doi.org/10.1037/0033-2909.133.1.65>
- van Eerde, W., & Klingsieck, K. B. (2018). Overcoming procrastination? A meta-analysis of intervention studies. *Educational Research Review*, 25, 73–85. <https://doi.org/10.1016/j.edurev.2018.09.002>
- Wolters, C. A. (2003). Understanding procrastination from a self-regulated learning perspective. *Journal of Educational Psychology*, 95(1), 179–187. <https://doi.org/10.1037/0022-0663.95.1.179>
- Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81(3), 329–339. <https://doi.org/10.1037/0022-0663.81.3.329>

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13–39). Academic Press. <https://doi.org/10.1016/B978-012109890-2/50031-7>

Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal*, 45(1), 166–183. <https://doi.org/10.3102/0002831207312909>