

The Effectiveness of Cognitive-Behavioral Counseling in Reducing Academic Procrastination Among Students

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Abstract

Academic procrastination is one of the most prevalent behavioral issues affecting students' academic achievement and psychological well-being. The voluntary delay of tasks despite anticipating negative consequences is associated with reduced academic performance, heightened stress, and decreased self-regulation. Addressing this challenge requires effective interventions grounded in empirical evidence. This study aims to evaluate the effectiveness of Cognitive-Behavioral Therapy (CBT) in reducing academic procrastination among students by synthesizing findings from experimental research, comparative studies, and literature reviews published between 2020 and 2025. Using a systematic literature review approach, data were retrieved from databases such as Consensus, Semantic Scholar, PubMed, and Google Scholar. The analysis included randomized controlled trials, quasi-experimental studies, and narrative reviews focusing on CBT, as well as comparative studies involving Acceptance and Commitment Therapy (ACT) and Mindfulness-Based Cognitive Therapy (MBCT). Twelve eligible articles were selected after rigorous screening, data extraction, and synthesis. Findings indicate that CBT consistently reduces procrastination behaviors across diverse educational settings, with both face-to-face and online formats demonstrating significant and lasting effects for two to four months. Comparisons reveal that ACT offers longer-term sustainability, while MBCT enhances positive academic emotions and optimism. Bibliometric trends show CBT's dominance in scholarly attention between 2020 and 2025. These results underscore CBT's role as a primary evidence-based intervention for reducing academic procrastination, while also highlighting the potential benefits of integrating CBT with ACT and MBCT. Practical implications include the adoption of hybrid counseling programs in schools and universities, supported by digital delivery systems to increase accessibility and long-term effectiveness.

Keywords: CBT, Prokrastinasi Akademik, Konseling Online



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Introduction

Academic procrastination has become one of the most prevalent psychological and behavioral problems among students in higher education. It is generally defined as the voluntary delay of academic tasks despite the awareness of negative consequences that such delay may cause (Steel, 2007). Empirical evidence indicates that between 50% and 70% of students engage in procrastination on a regular basis, including postponing exam preparation, delaying daily assignments, and postponing thesis completion (Klingsieck, 2013; Khurshid et al., 2025). Such behaviors have significant implications for students' academic performance, self-confidence, and overall psychological well-being (Ferrari et al., 2005; Mutter et al., 2023).

The urgency of academic procrastination has further increased in the digital era. The rapid development of online learning platforms, especially after the COVID-19 pandemic, requires students to demonstrate a higher level of self-regulation in managing academic tasks. However, the transition to digital learning also creates new challenges, including increased digital distractions, reduced external monitoring from teachers and lecturers, and heightened psychological stress due to academic isolation (Turan & Rahman, 2024). These conditions make academic procrastination more complex and difficult to manage, thus requiring effective, evidence-based interventions.

One of the most widely researched and empirically supported approaches for addressing procrastination is Cognitive-Behavioral Therapy (CBT). CBT emphasizes identifying and restructuring irrational thought patterns that underlie procrastinatory behavior, such as perfectionistic beliefs, fear of failure, or the perception of tasks as overly difficult. In addition to cognitive restructuring, CBT introduces behavioral strategies, such as goal-setting, task segmentation, time management, and reinforcement techniques (Beck, 2011). This dual focus allows CBT to simultaneously address both the cognitive and behavioral dimensions of procrastination (Khurshid et al., 2025; Ugwuanyi et al., 2020).

Another strength of CBT lies in its delivery format. CBT can be applied in face-to-face sessions, group counseling, or digital platforms. Recent studies demonstrate that online CBT interventions are equally effective compared to in-person counseling, thereby expanding access and flexibility for students in different educational contexts (Turan & Rahman, 2024). This

flexibility makes CBT a particularly adaptive intervention for contemporary educational challenges.

Nonetheless, CBT is not the only intervention found to be effective in tackling procrastination. Other emerging approaches such as Acceptance and Commitment Therapy (ACT) and Mindfulness-Based Cognitive Therapy (MBCT) have also received considerable scholarly attention. ACT focuses on enhancing psychological flexibility by teaching individuals to accept negative emotions while committing to actions consistent with their values. This approach not only reduces procrastination but also fosters long-term motivation and resilience (Kohli et al., 2022; Afshari et al., 2022). On the other hand, MBCT integrates mindfulness practices with cognitive techniques, helping students regulate stress, increase academic optimism, and reduce task avoidance (Asani et al., 2022; Suhadianto et al., 2024). Comparative findings suggest that while CBT is highly effective in producing short-term behavioral changes, ACT provides longer-lasting effects, and MBCT strengthens emotional regulation and positive academic attitudes.

Despite these advances, there remain significant gaps in the literature. Most prior studies have examined CBT, ACT, or MBCT in isolation, with relatively few studies comparing their relative effectiveness in addressing academic procrastination. Furthermore, there has been limited bibliometric analysis that maps research trends and the dominance of specific interventions across time. Such bibliometric insights are important to determine not only the current state of knowledge but also to highlight areas where integration of interventions may be most promising.

Based on these considerations, the present study aims to provide a comprehensive synthesis of the effectiveness of CBT in reducing academic procrastination, while also drawing comparisons with ACT and MBCT. This article emphasizes not only the short-term effects of CBT but also the sustainability of outcomes, the delivery modes (in-person versus online), and research trends between 2020 and 2025. By adopting a systematic review approach, this study contributes to bridging theoretical, empirical, and practical perspectives.

From a theoretical standpoint, the findings enrich the academic literature on evidence-based interventions for procrastination and provide insights into the complementary nature of CBT, ACT, and MBCT. From a practical perspective, the study offers valuable implications for

counselors, teachers, and higher education institutions in designing more effective and sustainable counseling programs. Moreover, the findings suggest the necessity of institutional support for counselor training and digital infrastructure to enable wider implementation of CBT-based interventions. Such initiatives are expected to systematically reduce academic procrastination, thereby enhancing both academic achievement and students' psychological well-being.

Research Methodology

This study employed a Systematic Literature Review (SLR) to evaluate the effectiveness of Cognitive-Behavioral Therapy (CBT) in reducing academic procrastination, while also comparing it with Acceptance and Commitment Therapy (ACT) and Mindfulness-Based Cognitive Therapy (MBCT). Data collection was conducted between February and June 2025 through major academic databases, including Consensus, Semantic Scholar, PubMed, Google Scholar, and Scopus, supplemented by backward and forward snowballing techniques. Search strings combined keywords and Boolean operators, such as “Cognitive-Behavioral Therapy AND Academic Procrastination,” “Acceptance and Commitment Therapy AND Procrastination,” and “Mindfulness-Based Cognitive Therapy AND Academic Delay.” Article selection followed the PRISMA guidelines, with inclusion criteria consisting of peer-reviewed studies published between 2020 and 2025, indexed in Scopus, Web of Science, or SINTA, and employing designs such as randomized controlled trials, quasi-experimental studies, mixed-methods, or systematic/narrative reviews. The target population was limited to students across educational levels, with interventions focusing on CBT, ACT, or MBCT. Exclusion criteria applied to non-English or non-Indonesian publications, non-empirical works, and non-psychological interventions. From an initial 368 records, 72 duplicates were removed, leaving 296 articles for screening. After excluding 214 studies based on title and abstract, 82 full texts were assessed, of which 70 were excluded due to methodological issues or irrelevant outcomes. Finally, 12 studies were included in the review, comprising five randomized controlled trials, three quasi-experimental studies, and four reviews. Data extraction captured study characteristics, participants, intervention details, and outcomes, while synthesis was conducted

narratively due to heterogeneity in research designs. The stepwise article selection process is presented in the PRISMA flow diagram below.

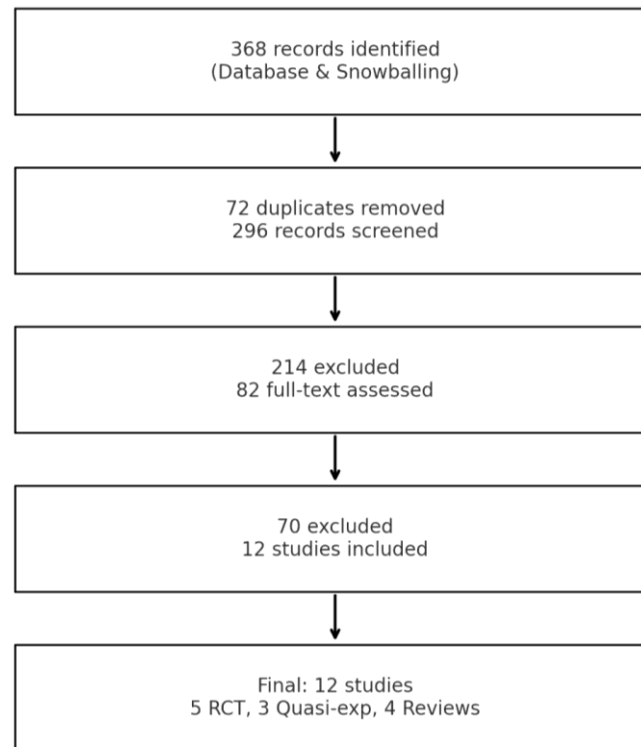


Figure 1. Prisma Flow Diagram

Results

The review of twelve empirical and theoretical studies published between 2020 and 2025 revealed a strong and consistent pattern regarding the role of Cognitive-Behavioral Therapy (CBT) in reducing academic procrastination. The majority of the reviewed studies employed experimental designs, including randomized controlled trials (RCTs) and quasi-experimental methods, which provide robust evidence of causal effects. Several literature reviews also contributed by synthesizing broader findings across contexts.

Overall, CBT consistently demonstrated significant reductions in procrastination behaviors across different student populations. For instance, Khurshid et al. (2025) reported that adolescents who underwent CBT sessions experienced not only lower procrastination but also improvements in academic burnout and reduced test anxiety. These findings suggest that CBT's benefits extend beyond procrastination itself, influencing broader academic functioning.

In higher education settings, Ugwuanyi et al. (2020) confirmed CBT's efficacy among students in demanding fields such as physics, chemistry, and mathematics, indicating its applicability in highly cognitive disciplines where procrastination often hinders performance.

Online delivery of CBT interventions also emerged as a significant trend. Turan and Rahman (2024) demonstrated that online CBT effectively reduced both procrastination and academic stress among university students. Likewise, Mutter et al. (2023) showed that digitally optimized CBT programs, delivered via internet platforms and mobile devices, produced significant reductions in procrastination scores and maintained their effects up to four months after intervention. These findings highlight that the modality of delivery online or face-to-face does not diminish the therapy's effectiveness, which is particularly important in the post-pandemic era where hybrid or fully digital learning has become the norm.

Comparisons with alternative interventions yielded additional insights. Studies comparing CBT with Acceptance and Commitment Therapy (ACT) indicated that both approaches significantly reduced procrastination, though ACT often showed greater sustainability of results. ACT achieves this by encouraging students to accept discomfort while committing to value-driven actions, thereby promoting long-term adherence to academic goals (Kohli et al., 2022; Afshari et al., 2022). Mindfulness-Based Cognitive Therapy (MBCT), on the other hand, proved effective not only in reducing procrastination but also in enhancing positive academic emotions and optimism, as documented by Asani et al. (2022, 2023) and Suhadianto et al. (2024). These findings position MBCT as particularly useful for students whose procrastination is linked to anxiety, low self-efficacy, or negative emotional states.

Table 1. Comparative Effectiveness of CBT, ACT, and MBCT in Reducing Academic Procrastination

Intervention	Effectiveness	Sustainability	Special Notes	Sources
CBT	High	2–4 months	Effective both online and offline	Khurshid et al. (2025); Ugwuanyi et al. (2020); Turan & Rahman (2024); Ayuna & Wahyuni (2023); Putri et al. (2023); Mutter et al. (2023)

ACT	High	Long-term	Focus on values and flexibility	Kohli et al. (2022); Afshari et al. (2022)
MBCT	High	Sustained	Enhances positive emotions and optimism	Asani et al. (2022, 2023); Suhadianto et al. (2024)

In addition, a bibliometric analysis of publications between 2020 and 2025 revealed that CBT dominated research outputs, with consistent publications each year. ACT and MBCT studies appeared less frequently and in a more sporadic manner.

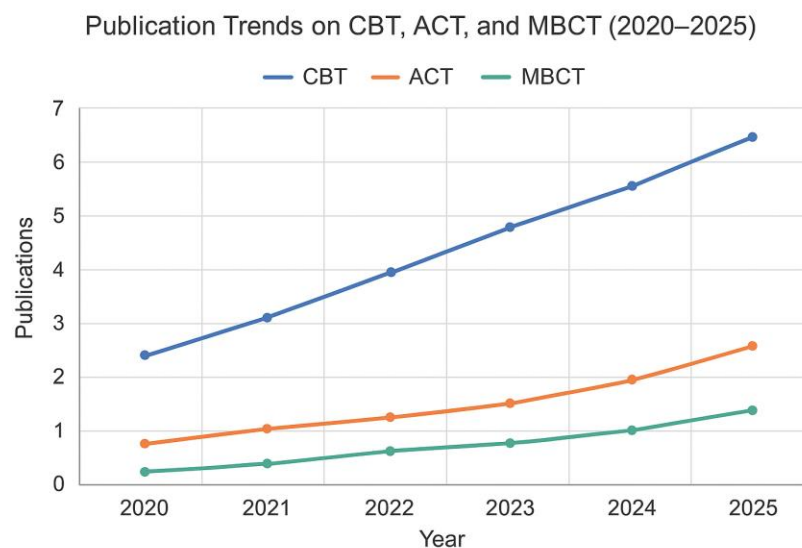


Figure 2. Publication Trends on CBT, ACT, and MBCT (2020–2025)

The figure shows that CBT research remained consistently published from 2020 to 2025, while ACT and MBCT received less but increasing attention.

Discussion

The findings of this systematic review provide compelling evidence that Cognitive-Behavioral Therapy (CBT) is a highly effective intervention for reducing academic procrastination among students across various educational levels. The consistency of results across randomized controlled trials, quasi-experimental studies, and literature reviews demonstrates that CBT can be applied flexibly without losing its effectiveness. For example, Khurshid et al. (2025) reported that adolescents who received CBT showed not only a reduction in procrastination but also improvements in academic burnout and test anxiety. Similarly,

Ugwuanyi et al. (2020) confirmed that CBT significantly improved the academic engagement of students in demanding science subjects, such as physics, chemistry, and mathematics. The success of CBT is attributed to its ability to address both maladaptive cognitions such as perfectionism, fear of failure, and negative task appraisal and maladaptive behaviors, such as avoidance and delay. By restructuring dysfunctional beliefs and combining them with behavioral strategies like time management, goal setting, and behavioral activation, CBT helps students develop more adaptive routines and reduce procrastination-related distress (Ayuna & Wahyuni, 2023; Putri et al., 2023).

While CBT remains the most researched and widely implemented approach, Acceptance and Commitment Therapy (ACT) and Mindfulness-Based Cognitive Therapy (MBCT) have also emerged as valuable alternatives or complements. Comparative studies show that ACT can be as effective as CBT, with the added benefit of more sustainable long-term outcomes. By fostering acceptance of discomfort and emphasizing value-driven commitment, ACT enables students to persist with academic tasks despite negative emotions, which makes its effects longer-lasting (Kohli et al., 2022; Afshari et al., 2022). MBCT, meanwhile, integrates mindfulness techniques with cognitive restructuring and has been shown to enhance emotional regulation, optimism, and positive academic emotions. This makes MBCT particularly relevant for students whose procrastination is closely tied to emotional difficulties, such as stress and low self-efficacy (Asani et al., 2022; Asani et al., 2023; Suhadianto et al., 2024). The growing evidence for ACT and MBCT suggests that procrastination is not merely a cognitive-behavioral issue but a multidimensional phenomenon involving cognitive, behavioral, and emotional processes.

From a practical perspective, these findings have important implications for counseling practice in schools and universities. CBT should continue to be prioritized due to its structured framework, robust evidence base, and adaptability to both offline and online delivery. Online interventions, such as those tested by Turan and Rahman (2024) and Mutter et al. (2023), further demonstrate the scalability of CBT, showing that internet- and mobile-based CBT programs can effectively reduce procrastination with effects lasting up to four months. This is particularly relevant for institutions with limited resources, as digital interventions expand access to counseling services at a lower cost. However, the fact that CBT's effects often diminish after two to four months highlights the importance of follow-up sessions or hybrid models that combine synchronous and asynchronous elements to ensure long-term impact. Integrating CBT with ACT and MBCT techniques could further enhance effectiveness, making interventions more holistic by addressing not only cognition and behavior but also values and emotions.

At the same time, several research gaps remain. Most of the studies reviewed focused on short-term outcomes, with limited evidence of effects beyond six months. Longitudinal research is therefore needed to evaluate whether CBT, ACT, or MBCT can achieve sustained

reductions in procrastination. Furthermore, only a handful of studies directly compared the effectiveness of these approaches using standardized measures, which limits the ability to draw definitive conclusions about their relative strengths. Future research should conduct large-scale randomized controlled trials that systematically evaluate CBT, ACT, and MBCT in parallel. Another notable gap lies in the lack of attention to cultural differences. Since academic procrastination and therapeutic outcomes may vary in collectivist versus individualist societies, cultural adaptation of these interventions should be an important focus in future studies (Ayuna & Wahyuni, 2023).

From a theoretical standpoint, these findings reaffirm the cognitive-behavioral model of procrastination, which highlights the role of irrational cognitions and avoidance behaviors in sustaining the problem (Ugwuanyi et al., 2020; Khurshid et al., 2025). At the same time, the evidence supporting ACT and MBCT underscores that procrastination cannot be fully understood without considering the roles of emotional regulation, mindfulness, and value orientation. This suggests the need for more integrative models that combine cognitive-behavioral, emotional, and motivational perspectives. Globally, these findings are timely given the rise in academic pressures and the transition to digital learning environments. As universities and schools face increasing mental health challenges among students, evidence-based interventions such as CBT, ACT, and MBCT are critical for fostering resilience and academic success.

Conclusion

This study highlights the effectiveness of Cognitive-Behavioral Therapy (CBT) as a primary approach in reducing academic procrastination among students across different levels of education. The findings consistently show that CBT successfully addresses both cognitive distortions and maladaptive behaviors that underlie procrastination. By helping students restructure irrational thoughts, manage perfectionism, and overcome the fear of failure while simultaneously training them in behavioral techniques such as time management, goal setting, and self-monitoring, CBT provides a comprehensive framework for improving academic engagement and reducing avoidance behaviors. The structured and evidence-based nature of CBT also makes it suitable for adaptation across diverse educational contexts and delivery modes, including face-to-face and digital platforms.

While CBT remains the most dominant and well-established method, other approaches such as Acceptance and Commitment Therapy (ACT) and Mindfulness-Based Cognitive Therapy (MBCT) also demonstrate promising outcomes. ACT enhances psychological flexibility by encouraging students to accept discomfort, manage stress, and stay committed to personal values, which helps sustain long-term behavioral changes. MBCT, by integrating mindfulness with cognitive strategies, offers additional benefits for students who struggle with emotional regulation, stress, and low self-confidence. These approaches highlight the fact that

procrastination is not only a cognitive and behavioral problem but also involves emotional and motivational dimensions. Therefore, incorporating ACT and MBCT alongside CBT may create more holistic interventions that address the complexity of procrastination in students.

The implications of these findings are significant for educational institutions and mental health practitioners. Schools and universities should consider integrating CBT-based counseling into their student support systems as a first-line intervention. With the increasing reliance on digital platforms, online CBT has become a practical solution to broaden access, especially for institutions with limited counseling resources. However, the evidence that CBT's impact may diminish after a few months indicates the need for ongoing follow-up, booster sessions, or hybrid models that combine face-to-face and online elements. Integrative programs that combine CBT with elements of ACT and MBCT may also be more effective in maintaining long-term results and fostering resilience among students.

Despite these positive outcomes, several limitations remain. Much of the existing research still focuses on short-term interventions, with limited studies investigating the long-term sustainability of outcomes. Furthermore, the influence of cultural context on the effectiveness of CBT, ACT, and MBCT has not been sufficiently explored. As academic environments and cultural expectations vary widely, further research is needed to adapt these interventions to different cultural and social contexts. Additionally, more comparative studies are required to examine the relative strengths of CBT, ACT, and MBCT in order to identify the most effective strategies for specific student populations.

In conclusion, CBT has been shown to be a highly effective intervention for reducing academic procrastination and should remain the central strategy in counseling practices aimed at improving student performance. Nevertheless, ACT and MBCT provide valuable complementary approaches that enrich the therapeutic process by addressing emotional regulation and value-based motivation. Future research should aim to integrate these methods into more comprehensive intervention models that not only reduce procrastination but also strengthen students' resilience, motivation, and overall psychological well-being. As the demands of academic life continue to grow in the digital era, evidence-based counseling interventions will play a crucial role in supporting student success and ensuring sustainable improvements in learning outcomes.

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