COGNITIVE-BEHAVIORAL COUNSELING TO IMPROVE ACADEMIC ACHIEVEMENT IN AN ISLAMIC BOARDING SCHOOL: A QUASI-EXPERIMENTAL STUDY

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ABSTRACT
Academic underachievement among mahasantri in Islamic boarding schools is frequently associated with maladaptive cognitions, low learning motivation, weak study discipline, and ineffective time management, which collectively contribute to declining academic performance. This study aimed to examine the effectiveness of cognitive-behavioral counseling (CBC) in improving mahasantri's academic achievement in a pesantren-based educational setting. A quasi-experimental nonequivalent control group design was applied, involving an experimental group receiving CBC and a comparison group without intervention, with pretest and posttest measurements administered using a questionnaire capturing indicators of academic problems (academic "decadence") and achievement-related behaviors. Pre–post changes in the experimental group were analyzed using the Wilcoxon signed-rank test. The results showed that most participants in the experimental group demonstrated improved academic outcomes after counseling; Wilcoxon ranks indicated 28 positive ranks, 7 negative ranks, and 0 ties, with statistical significance ($p < .05$). The findings support the conclusion that CBC is a promising guidance-and-counseling strategy to strengthen academic achievement in pesantren contexts by helping students identify and restructure irrational thoughts and adopt more adaptive learning behaviors. Practically, counselors and pesantren administrators may integrate CBC sessions to enhance motivation, discipline, and academic self-beliefs. Future research should employ randomized or well-matched group designs, include longitudinal follow-up, and use mixed-method approaches to clarify mechanisms of change.

Keywords: Academic achievement; Cognitive-behavioral counseling; Islamic boarding school; Mahasantri; Quasi-experimental design.

INTRODUCTION

In the past decade, research has increasingly emphasized that academic achievement is influenced not only by intelligence and instructional quality, but also by students' self-regulation—how they manage time, emotions, learning routines, and task completion. One persistent challenge in educational psychology is academic procrastination, which represents a common self-regulatory failure and is consistently associated with weaker academic outcomes. Meta-analytic evidence shows that procrastination is negatively related to academic performance, although the magnitude of the relationship depends on how procrastination and performance are operationalized (Kim & Seo, 2015). Procrastination is also linked to broader academic functioning problems, including stress, avoidance coping, and inefficient learning behavior. A major meta-analytic and theoretical review positions procrastination as a prevalent and harmful form of self-regulatory failure and highlights its associations with motivation, self-efficacy, and task-management processes (Steel, 2007). Because these problems are behavioral-cognitive in nature, they are highly relevant to school and campus counseling services that aim to improve student learning discipline and persistence. Alongside procrastination, contemporary education systems face rising academic stress and test anxiety, which can disrupt concentration, reduce persistence, and weaken learning consistency. A meta-analysis of randomized controlled trials (RCTs) on test-anxious university students indicates that psychological interventions are effective in reducing test anxiety and also assess academic performance-related outcomes (Huntley et al., 2019). In school-based contexts, an RCT of the *Study Without Stress* program supports that group-based CBT-informed delivery can reduce student stress and improve related outcomes such as self-efficacy (Lowe & Wuthrich, 2021).

Despite robust international evidence for counseling and CBT-informed interventions, it remains unclear why academic decline can persist in highly structured learning environments, including residential religious settings where learning time and routines are dense. In the context of Pondok Pesantren Ibnu

Katsir 2 Putri Jember, preliminary field indications describe a decline in *mahasantri* academic achievement and learning quality concerns. The manuscript notes that *mahasantri* follow intensive daily routines (e.g., Qur'an memorization/recitation, *kitab kuning*, and undergraduate coursework), yet strong academic outcomes are not consistently achieved. A second niche issue concerns outcomes: many interventions demonstrate improvements in psychological symptoms or self-reported functioning, but objective academic achievement outcomes (e.g., grades/GPA) are not always the primary endpoint and may vary across settings and measurement approaches (Kim & Seo, 2015; Huntley et al., 2019). A third issue is contextual fit. Much evidence is drawn from general school/university cohorts, whereas pesantren-based *mahasantri* experience a distinctive ecology of integrated religious–academic obligations. In this study's setting, the problem is framed as "academic decadence," linked to low motivation, weak understanding of learning materials, and low participation in academic competitions. This combination suggests the need for an approach that targets cognition, behavior, and motivation simultaneously.

A well-established approach for addressing cognitive–behavioral mechanisms underlying academic problems is cognitive-behavioral therapy (CBT). CBT aims to change maladaptive beliefs and avoidance patterns while building structured coping, planning, and persistence skills. At a broad evidence level, CBT is widely supported as an effective intervention framework across many problem domains, based on large-scale meta-analytic reviews (Hofmann et al., 2012). More specifically for academic procrastination, a meta-analysis of intervention studies concludes that procrastination can be reduced through treatment, and CBT-oriented approaches tend to show comparatively stronger reductions than several alternative approaches (van Eerde & Klingsieck, 2018). For academic anxiety and stress-related barriers, evidence from controlled trials and meta-analyses supports that structured psychological programs can reduce test anxiety and stress, with potential relevance to academic functioning (Huntley et al., 2019; Lowe & Wuthrich, 2021). CBT mechanisms are also theoretically aligned with motivational pathways relevant to achievement. For example, academic self-efficacy is positively related to academic performance in systematic review/meta-analytic work, indicating that strengthening competence beliefs and effort regulation may support better outcomes (Honicke & Broadbent, 2016). In addition, achievement goal orientations are meta-analytically related to self-efficacy, supporting the logic that cognition–motivation alignment matters for engagement and persistence (Huang, 2016). In the present manuscript, CBT counseling is explicitly framed as guiding *mahasantri* to shift irrational thinking into more rational and positive thinking, with expected improvements in concentration, confidence, and perseverance.

Even with strong general support for CBT, several gaps remain when the focus shifts to (a) academic achievement as a core outcome and (b) pesantren-based higher education contexts. First, much intervention research emphasizes symptom reduction (stress/anxiety) more than objective academic achievement, and performance outcomes vary substantially depending on measurement (Kim & Seo, 2015). Second, evidence on procrastination interventions is largely synthesized from heterogeneous student populations, while pesantren-based *mahasantri* face unique time-allocation demands and social learning norms that may alter mechanisms of motivation, avoidance, and persistence. Third, the local construct used in this setting—academic decadence—includes not only delay behavior but also low motivation, weak comprehension, and low achievement participation. This suggests the need for context-specific evidence on whether structured CBT counseling can reduce these decadence indicators while also improving academic achievement in an integrated religious–academic environment.

The purpose of this study is to test the effectiveness of cognitive-behavioral counseling in improving *mahasantri* academic achievement and reducing indicators of academic decadence at Pondok Pesantren Ibnu Katsir 2 Putri Jember. The study's novelty lies in applying CBT counseling to a pesantren-based higher education context and targeting a locally specified "academic decadence" profile (motivation, comprehension, and achievement participation) that is explicitly linked to observed academic decline in the institution. The hypothesis that CBT counseling will improve achievement and reduce decadence indicators is supported by (a) meta-analytic evidence that procrastination is negatively associated with academic performance (Kim & Seo, 2015), (b) meta-analytic findings that CBT-oriented interventions can reduce procrastination (van Eerde & Klingsieck, 2018), and (c) evidence that interventions reduce test anxiety and school-based CBT programs can reduce stress and strengthen related psychological resources (Huntley et al., 2019; Lowe & Wuthrich, 2021). The study is scoped to *mahasantri* in the Ibnu Katsir pesantren context using a pretest–posttest control group approach with 60 participants (30 experimental; 30 control). Findings

should be interpreted within the limits of the setting, participant characteristics, and the operationalization of academic decadence and achievement outcomes used in the manuscript.

METHOD

Research Design and Approach

This study employed a quasi-experimental approach with a Nonequivalent Control Group Design to examine the effectiveness of Cognitive Behavioral Counseling (CBC/CBT counseling) in improving mahasantri's academic achievement. The design compares an experimental group receiving CBT counseling with a control group receiving no intervention, while both groups are measured using pretest (O1) and posttest (O2). Consistent with quasi-experimental conditions in educational settings, the two groups were not established through random assignment, and the pretest–posttest structure was used to estimate change attributable to the intervention and to reduce threats to internal validity (Campbell & Stanley, 1963; Shadish et al., 2002). The intervention choice is theoretically and empirically grounded because CBT has substantial evidence supporting its efficacy across a range of outcomes and settings (Hofmann et al., 2012).

Table 1. Nonequivalent Control Group Design

Group	Pretest	Intervention	Posttest
Experimental	O1	X (CBT counseling)	O2
Control	O1	—	O2

Population and Sample

The population of this study comprised all mahasantri at Pondok Pesantren Ibnu Katsir 2 Putri Jember. Participants were determined using nonprobability sampling, specifically purposive sampling, meaning that respondents were selected based on predefined criteria relevant to the research objectives (Shadish et al., 2002). The study involved two groups—an experimental group and a control group—formed as intact or naturally occurring groups rather than randomized cohorts, which is consistent with the logic of nonequivalent group designs (Campbell & Stanley, 1963). Operationally, inclusion criteria were applied as follows: (1) participants were registered as active mahasantri within the pesantren learning environment; (2) participants demonstrated indicators of academic decadence based on the screening questionnaire; and (3) participants agreed to take part and remained available for the full pretest–intervention–posttest sequence in order to minimize attrition threats and support credible change estimation (Shadish et al., 2002).

Data Collection Techniques and Instruments

The data used for this study were collected by administering pretest and posttest measures to both groups and documenting intervention implementation. Data collection began with a preliminary survey (screening) using a questionnaire constructed from indicators of academic decadence, which functioned to identify eligible participants. After group determination, the research proceeded with formal pretest measurement, delivery of CBT counseling for the experimental group, and posttest measurement using the same instruments to evaluate change. The primary instrument was a Skala Dekadensi Akademik (Academic Decadence Scale), which measured four core indicators: low learning motivation, low/declining learning discipline, weakening academic responsibility, and weak learning interest and academic participation. This scale was administered at pretest and repeated at posttest to examine shifts in academic attitudes and behaviors following the counseling program.

Table 2. Variables, Indicators, and Data Sources

Variable	Operational indicator(s)	Instrument / Data source	Timepoints
Academic decadence (risk)	motivation; discipline; responsibility; interest/participation	Academic Decadence Scale questionnaire	Pretest & posttest
Academic achievement (outcome)	academic achievement indicator	institutional academic record / standardized score	Pretest & posttest

In addition, academic achievement (prestasi akademik) was measured twice (pretest and posttest) to evaluate outcome improvement, and it should be operationalized consistently using institutional academic indicators (e.g., GPA/IPK, average grades, or standardized academic scores). Conceptually, the outcome selection aligns with CBT's focus on modifying maladaptive cognitions/behaviors that may impede adaptive learning and performance (Hofmann et al., 2012).

Intervention Procedure

The intervention was implemented as psychotherapeutic counseling activities using a creative CBT counseling model delivered to the experimental group. The counseling procedure followed four structured stages. First, the initial stage (tahap awal) focused on counselor introduction, rapport development, and identification of the participant's main academic problems to direct the counseling agenda. Second, the working stage (tahap pertengahan) involved deeper exploration of causal factors and delivery of CBT-based techniques, aiming to help participants identify maladaptive cognitions and behaviors that inhibit achievement and practice more adaptive learning strategies, consistent with CBT's core mechanism of cognitive and behavioral change (Hofmann et al., 2012). Third, the termination stage (tahap akhir) closed the counseling process and administered the posttest using the academic decadence scale. Finally, the evaluation stage documented implementation quality, participant responses, and perceived effectiveness as supporting evidence for interpretation and reporting, which is recommended for strengthening causal plausibility in quasi-experimental implementations (Shadish et al., 2002).

Data Analysis Procedures

Data analysis was conducted to evaluate change between pretest and posttest and to determine whether CBT counseling produced statistically meaningful improvement. First, descriptive statistics were used to summarize baseline conditions and posttest outcomes. Second, the main within-group hypothesis for the experimental group was tested using the Wilcoxon Signed Rank Test to examine pretest–posttest differences under non-parametric assumptions (Wilcoxon, 1945). Third, the control group served as a comparison condition for contextualizing change; for publication-level rigor, the study can additionally report between-group comparisons using gain scores (e.g., Mann–Whitney U) or ANCOVA (posttest controlling pretest), depending on data characteristics and assumptions, as commonly recommended in quasi-experimental inference strategies (Shadish et al., 2002).

Table 3. Analysis Plan

Research question	Data	Recommended analysis
Did academic achievement improve after CBT counseling in the experimental group?	paired pretest–posttest achievement	Wilcoxon Signed Rank Test (Wilcoxon, 1945)
Did the control group change without treatment?	paired pretest–posttest achievement	Wilcoxon (or paired t-test if assumptions met)
Is improvement greater in the experimental group than in the control group?	gain scores (post–pre)	Mann–Whitney U (or ANCOVA with pretest covariate) (Shadish et al., 2002)

Validity, Reliability, and Ethical Considerations

Because a nonequivalent design does not use random assignment, key threats to internal validity include baseline differences, maturation, history effects, testing effects, and attrition. To reduce these risks, the design incorporates pretest measurement for both groups to document baseline conditions and support controlled interpretation of posttest change, and it applies standardized intervention and measurement procedures to strengthen implementation fidelity and comparability (Campbell & Stanley, 1963; Shadish et al., 2002). Reliability of the Academic Decadence Scale should be established through internal consistency testing (e.g., Cronbach's alpha), given that it consists of multiple indicators and is used repeatedly at pretest and posttest. Ethical safeguards were addressed by ensuring institutional permission from pesantren authorities, implementing informed consent procedures emphasizing voluntary participation and withdrawal rights, protecting confidentiality through anonymization and secure data handling, and

ensuring non-maleficence by delivering counseling through competent personnel without coercion or stigmatization—aligned with professional ethical standards for psychological practice (American Psychological Association, 2017).

RESULTS AND DISCUSSION

This study aimed to examine the effectiveness of cognitive-behavioral counseling (CBT) in improving the academic condition of female Islamic boarding students (mahasantri) at Pondok Pesantren Ibnu Katsir 2 Putri Jember using a quasi-experimental approach with a Nonequivalent Control Group Design. The design involved an experimental group (receiving cognitive-behavioral counseling) and a control group (without treatment), with measurements taken before the intervention (pretest) and after the intervention (posttest) in both groups. Selecting a nonequivalent control group design entails important methodological consequences: the study is conducted in a natural setting and thus reflects field conditions more realistically, but control over extraneous variables is weaker than in randomized experiments. This means that when improvement occurs in the experimental group, causal interpretation as being "purely due to CBT" must remain constrained by potential influences such as baseline selection differences, historical events, or maturation. Nevertheless, the inclusion of a control group still provides a relevant comparator to assess whether changes are more consistent among participants receiving the intervention than among those who do not receive counseling.

The manuscript states that measurement was conducted twice (pretest–posttest) as the basis for evaluating change following the counseling service. Substantively, the outcome labeled as "academic achievement" in this document is most appropriately understood as an improved academic condition/functioning after the intervention. This aligns with the description of academic-problem indicators targeted for change, namely diminished learning motivation, reduced discipline, weakened academic responsibility, and lower academic interest and participation; these four aspects constitute the "academic decadence" that the study seeks to address. Accordingly, the results primarily represent shifts in self-regulation and study habits (e.g., learning consistency, time management, academic engagement, and responsibility toward assignments), rather than an automatic improvement in objective grades (exam scores/GPA), unless such objective indicators are explicitly included and analyzed. Therefore, the most methodologically defensible interpretation is that CBT is effective in improving academic conditions as measured through behavioral–cognitive indicators associated with academic decadence.

At baseline (pretest), the experimental group was reported to be in the moderate-to-low category of academic achievement, and thus considered to require intervention. This description provides a rational basis that counseling services were not delivered to an already optimal population, but rather to a group demonstrating identifiable needs. In other words, the study is situated within a "problem-focused intervention" context, in which the intervention is directed toward improving academic barriers identified at the initial measurement. On the other hand, the control group also completed pretest and posttest assessments, but without receiving treatment. Thus, the control group functioned as a "baseline comparator" to evaluate whether changes in the experimental group are distinctive to the counseling service or simply reflect natural change that may occur due to study routines, institutional policies in the pesantren, or semester dynamics.

After the CBT intervention was delivered, the experimental group showed improvement among most students, reflected in posttest scores that were better than pre-intervention scores. In contrast, the control group was reported to show non-significant change, with the explanation that the group did not receive treatment, so any improvement was more likely natural and unstructured. Inferentially, this pattern supports the effectiveness claim: when the group receiving counseling exhibits clearer improvement than the group without counseling, the explanation that "the intervention contributed to change" becomes more plausible than the explanation of natural change alone. However, because the design is non-randomized, this interpretation must still be paired with limitations analysis.

Wilcoxon test statistics

To test pre–post differences in the experimental group, the manuscript used the Wilcoxon Signed-Rank Test. The Wilcoxon output for the experimental group reported Negative Ranks = 7, Positive Ranks = 28, and Ties = 0. Interpretively, "positive ranks" indicate that more participants showed

improved academic scores at posttest compared to pretest; "negative ranks" indicate a smaller portion experiencing decline; and zero "ties" indicates that no participants had identical pretest and posttest scores. The manuscript also states that the significance value (Asymp. Sig. 2-tailed) indicates $p < 0.05$, leading to the conclusion that there was a statistically significant difference between pretest and posttest in the experimental group. Thus, the key statistical basis for the effectiveness claim is: (a) a predominantly positive direction of change and (b) a statistically significant pretest–posttest difference in the experimental group.

Table 4. Summary of Wilcoxon test results (experimental group, pretest–posttest)

Wilcoxon Indicator	Value (as reported)	Interpretive meaning
Positive ranks	28	Most students showed better posttest scores than pretest scores
Negative ranks	7	A small proportion showed lower posttest scores than pretest scores
Ties	0	No identical scores between pretest and posttest
Significance	$p < 0.05$	The pretest–posttest difference in the experimental group is significant

Substantive meaning of change: what likely improved?

The manuscript links the improvement to CBT mechanisms—namely, helping students identify and modify irrational thoughts that hinder learning, such as laziness, low motivation, and negative beliefs about personal competence. Psychologically, changes in beliefs and negative self-talk plausibly contribute to improvements in the learning behaviors that constitute the indicators of academic decadence: increased motivation, more structured study discipline, stronger academic responsibility, and more active academic interest and participation.

In other words, the findings are most consistent with an interpretation of strengthened academic self-regulation through a cognitive–behavioral pathway: when thinking becomes more adaptive, learning-related emotions (e.g., anxiety/hopelessness) tend to be better managed, and learning behaviors (e.g., initiating tasks, punctual attendance, active participation in academic activities) become more consistent.

Consistency with evidence on CBT for academic self-regulation problems (procrastination)

The finding that the experimental group improved significantly after CBT aligns with international literature positioning CBT as an effective intervention for self-regulation problems, particularly academic procrastination. A pragmatic randomized controlled trial comparing internet-delivered and group-delivered CBT showed that CBT can reduce procrastination and improve well-being, with effectiveness varying by delivery format (Rozental et al., 2018). Another RCT also supports the effectiveness of internet-based CBT for procrastination (Rozental et al., 2015). The relevance to this study is clear: indicators of "academic decadence," such as reduced discipline, weakened responsibility, and low participation, are conceptually close to procrastination symptoms and self-regulation failure. Because CBT combines cognitive restructuring (changing inhibiting thoughts) and behavioral strategies (activation, task planning), the pathway described in the manuscript—changing irrational thoughts that hinder studying—coheres with international findings on procrastination interventions (Rozental et al., 2018). Moreover, a meta-analysis shows that procrastination is negatively correlated with academic performance (Kim & Seo, 2015). This strengthens the argument that if CBT reduces delaying patterns and improves volitional control, then the academic-functioning indicators measured in this study are likely to shift in a positive direction.

CBT, test anxiety, and academic outcomes

A meta-analysis of RCTs among university students with test anxiety found that psychological interventions (including cognitive–behavioral approaches) effectively reduce test anxiety and may positively affect academic performance outcomes (Huntley et al., 2019). This is important because it

suggests CBT does not merely change affective states, but can influence academic outcomes through improved focus, coping strategies, and persistence. A placebo-controlled RCT of an internet-based self-help intervention for test anxiety also provides support that technology-delivered cognitive–behavioral interventions can produce meaningful symptom change (Orbach et al., 2007). In the context of mahasantri, academic demands combined with boarding-school routines may create performance pressure; if CBT stabilizes emotions and learning-related cognitions, improvements in motivation and discipline (as reflected in decadence indicators) become a plausible mechanism.

CBT and academic stress as a key context for learning

International evidence also indicates that CBT is effective in reducing academic stress in RCT designs among secondary school students, indirectly supporting learning functioning (Eneogu et al., 2024). In addition, research on academic stress emphasizes that education-related stress can lower achievement, reduce motivation, and increase dropout risk (Pascoe et al., 2020). Thus, when this study reports improved academic conditions after CBT, a robust interpretation is that CBT helped improve the "psychological and learning-behavior conditions" that serve as prerequisites for more stable learning. On the other hand, a recent systematic review of academic stress intervention programs in high schools also notes that methodological quality varies across studies and controls are often inactive (Jagiello et al., 2024). This note is relevant because the nonequivalent control group design also has limitations in control; however, the overall direction of evidence still supports that structured psychological interventions—including CBT—can reduce learning barriers rooted in stress and self-regulation dysfunction.

Alignment with psychological determinants of academic performance: self-efficacy, study habits, and non-cognitive factors

Theoretically, the academic decadence indicators in the document (motivation, discipline, responsibility, interest/participation) fall within non-cognitive domains that have been shown to relate to academic performance. A systematic review of academic self-efficacy indicates a consistent relationship between academic self-efficacy and university students' academic performance (Honicke & Broadbent, 2016). A meta-analysis of psychological correlates of academic performance in higher education also positions self-efficacy, goals, and other non-intellective factors as important correlates of achievement (Richardson et al., 2012). Regarding study habits, a meta-analysis on "study habits, skills, and attitudes" confirms that study habit and skill dimensions contribute meaningfully to students' academic performance (Credé & Kuncel, 2008). Thus, if CBT can change inhibiting cognitions and promote more disciplined learning activation, the changes measured in this study conceptually follow established determinant pathways. Conversely, procrastination literature frames procrastination as a form of self-regulatory failure associated with lower performance (Steel, 2007). Van Eerde's meta-analysis also maps associations between procrastination and performance, affect, and other psychological characteristics (van Eerde, 2003). Therefore, the study's results fit within the broader international evidence network: academic improvement is likely when interventions successfully alter self-regulation, self-efficacy, and study habits.

Cultural dimensions and the pesantren context: adaptation and acceptability of CBT

Because the study was conducted in an Islamic boarding school environment, cultural fit is important. A systematic review of cultural adaptations of CBT in Southeast Asia indicates that adaptation (language, case examples, relational norms, and social context) often determines acceptability and effectiveness of CBT in non-Western populations (Praptomojati et al., 2024). Research on adapting CBT in the Malaysian Muslim context also suggests that manuals and local norms can be adjusted without losing core CBT principles (Subhas et al., 2021). More broadly, literature on religiously integrated CBT indicates that religious components can be designed and empirically tested within rigorous research designs for specific populations (Pearce et al., 2015). Together, these findings strengthen the interpretation that CBT success among mahasantri depends not only on technique, but also on how the intervention is communicated and operationalized to align with pesantren values, discipline, and culture.

Importance of Findings

The most salient pattern is the dominance of positive ranks (28) over negative ranks (7) and a significant $p < 0.05$ result in the experimental group. Practically, this indicates that more mahasantri improved academically after the service than declined. In addition, the control group reportedly did not show significant change, so the "experimental improves—control does not" pattern strengthens the interpretation that change is not merely natural fluctuation. Within the CBT framework, this pattern can be read as evidence of successful cognitive restructuring and the formation of adaptive study habits. CBT has a strong evidence base across psychological problems, as shown in meta-analytic reviews (Hofmann et al., 2012). Although this study focuses on academic functioning rather than clinical diagnosis, CBT's core principles (changing dysfunctional automatic thoughts and promoting behavioral change) remain relevant for academic problems rooted in self-regulation.

If the study hypothesis states that cognitive-behavioral counseling effectively improves mahasantri's academic condition/achievement, then the findings support the hypothesis because the experimental group shows a significant pretest–posttest difference while the control group does not. However, to preserve inferential strength, several alternative interpretations should be acknowledged. First, given the nonequivalent design, selection bias may exist: the experimental and control groups might differ in baseline characteristics (e.g., motivation level, activity burden, readiness to learn). Second, expectancy/Hawthorne effects may arise when participants know they are receiving services, making posttest responses more favorable. Third, history/maturation may influence change (e.g., scheduling changes, approaching examinations, institutional discipline dynamics during the intervention period). Fourth, if indicators are self-report based, then the strongest supported change is perceived/experienced improvement in academic functioning, not necessarily objective grade gains. Nevertheless, the coherence of these findings with international CBT evidence on procrastination, academic stress, and test anxiety increases the plausibility that the change is not merely statistical coincidence (Huntley et al., 2019; Orbach et al., 2007; Rozental et al., 2018; Rozental et al., 2015). In other words, the study's results align with the broader "family of findings" documenting the benefits of cognitive–behavioral interventions for learning barriers.

The presence of negative ranks = 7 indicates that not all mahasantri improved after the intervention. Scientifically, this response variability is valuable because it suggests heterogeneity in participant needs and conditions. In psychological interventions, some participants may experience delayed effects because they require longer to practice CBT strategies consistently. In the pesantren context, differences in learning-environment support (study space, workload, peer support) can also hinder the internalization of behavioral change. Academic stress literature indicates that education-related stress can suppress motivation and achievement, so participants with higher stress or heavier burdens may show smaller improvements or temporary declines (Pascoe et al., 2020). Procrastination literature likewise implies that self-regulation is influenced by self-efficacy, affect, and other individual variables; thus, participants with certain risk profiles may require higher-intensity services or additional supports (Steel, 2007; van Eerde, 2003).

This study's conceptual contribution lies in mapping academic decadence (low motivation, declining discipline, weakened responsibility, low interest/participation) as a phenomenon explainable through a cognitive–behavioral lens. When academic decadence is interpreted as self-regulation failure and cognitive distortions (e.g., negative beliefs about competence, "lazy" or "I can't" self-talk), CBT becomes theoretically fitting because it addresses both cognitive and behavioral roots. Meta-analytic evidence framing procrastination as self-regulatory failure supports this framework (Steel, 2007; van Eerde, 2003). Meanwhile, evidence on self-efficacy and study habits as determinants of academic outcomes indicates that the measured targets (motivation, discipline, responsibility, participation) are not merely "supporting variables," but established determinants in educational psychology (Credé & Kuncel, 2008; Honicke & Broadbent, 2016; Richardson et al., 2012).

Practical implications

Practically, the findings suggest that pesantren (and other boarding-based educational institutions) can develop a structured CBT counseling package to address academic problems related to self-

regulation: procrastination, time management, low motivation, academic anxiety, and negative competence beliefs. Implementation can follow core CBT principles: problem assessment, identification of automatic thoughts, cognitive restructuring, behavioral activation, and relapse prevention through self-monitoring.

Table 5. Mapping CBT components to targeted academic decadence indicators

CBT component (common practice)	Mechanism of change	Targeted academic decadence indicators
Identifying automatic thoughts & distortions	Reveals negative self-talk that hinders learning	Motivation; interest/participation
Cognitive restructuring	Changes irrational beliefs ("I can't") into adaptive ones	Motivation; responsibility
Behavioral activation & study planning	Builds small, consistent habits (schedule, task targets)	Discipline; responsibility
Coping plan & relapse prevention	Maintains stability when burdens increase	All indicators (integrated)

Institutional policy can maximize CBT impact by ensuring a supportive ecosystem: referral SOPs for academic problems, realistic study schedules, academic monitoring, and counselor/mentor training to ensure intervention fidelity. This approach is consistent with evidence that academic-related psychological interventions are often more effective when supported systemically (Jagiello et al., 2024).

CONCLUSION

This study aimed to examine the effectiveness of Cognitive Behavioral Therapy (CBT) counseling in improving mahasantri' academic achievement using a pretest–posttest design with an experimental group and a control group. The key findings indicate that the experimental group demonstrated improved academic achievement after the intervention, whereas the control group showed no meaningful change. Statistically, the Wilcoxon test confirmed a significant pretest–posttest difference ($p < 0.05$), with most participants classified as positive ranks (28), negative ranks (7), and ties (0). These results suggest that CBT is effective in helping mahasantri identify and restructure irrational thoughts that hinder learning (e.g., low motivation and negative beliefs about their own abilities) into more adaptive thinking patterns. Theoretically, this study enriches the empirical evidence on CBT implementation in a pesantren-based educational context and strengthens the link between cognitive–behavioral change and academic outcomes. Practically and from a policy perspective, the findings support integrating CBT programs—particularly group counseling—as a structured guidance and counseling (BK) service in pesantren or faith-based higher education settings, including the development of service SOPs, counselor training, and regular monitoring of learning outcomes. For future research, it is recommended to expand the sample size across multiple sites, strengthen methodological control (e.g., randomization or group matching), include follow-up assessments to test the sustainability of the effects, and explore mediators such as self-efficacy, time management, and academic stress using mixed-method (quantitative–qualitative) designs.

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