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Structured CBT Intervention for Low Self-Esteem: A Case Study on the Impact of Social Appraisal

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ABSTRACT

This study explored the effectiveness of cognitive behavioral therapy (CBT) in improving self-esteem in a first-year university student experiencing persistent self-doubt and social withdrawal within an academic setting. The intervention was prompted by the subject's frequent negative self-evaluations, largely influenced by social comparison, socioeconomic background, and academic adjustment difficulties. A structured six-session CBT program was conducted, focusing on identifying automatic negative thoughts, applying cognitive restructuring, practicing positive affirmations, and engaging in self-evaluation. Data were collected through observations, interviews, projective tests, and the Rosenberg Self-Esteem Scale administered pre- and post-intervention. Findings suggest an increase in the subject's self-esteem score, supported by behavioral changes such as improved classroom participation and interpersonal confidence. These results should be interpreted with caution due to the single-subject design. Overall, the case suggests that CBT may be beneficial for university students with low self-esteem, particularly when contextualized within their academic and social environments.



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Introduction

Self-esteem is a fundamental component of psychological development that plays a vital role in shaping emotional well-being, academic performance, and social adjustment, especially during the transition to higher education. First-year university students, who often face major changes in their academic and social environments, are particularly vulnerable to declining self-esteem. This condition can negatively impact their academic engagement, social participation, and even general mental health. It is therefore essential to understand the psychological factors underlying low self-esteem as a foundation for developing effective interventions.

Low self-esteem rarely exists in isolation; rather, it often co-occurs with social pressure, unsatisfactory academic experiences, and a lack of support from family and economic background. In this study, the subject is a first-year female student whose self-esteem declined following a two-year gap period, social comparison, and persistent negative perceptions of her own abilities. As Fang et al. (2023) noted, family background strongly influences students' self-esteem, both emotionally and socially.

While such individual experiences are important, theoretical models of self-esteem emphasize the interaction between internal cognitive schemas and external sociocultural contexts, including social comparison processes (Festinger, 1954) and stereotype threat in academic settings (Steele & Aronson, 1995). Thus, understanding self-esteem in university students requires a framework that integrates both psychological and structural influences.

The shift from secondary school to university can cause psychological stress, particularly when students feel socially or academically inadequate. This transition becomes even more difficult for students from lower-middle-income families, who are more likely to experience feelings of inferiority. Wu et al. (2024) found that self-esteem plays both a direct and indirect role in shaping students' sociocultural adaptation, with social support acting as a key mediating factor.

However, not all studies agree on the linear benefits of self-esteem; some scholars argue that overemphasis on boosting self-esteem without addressing structural barriers can lead to defensive self-enhancement or fragile self-worth (Baumeister et al., 2003). This highlights the need for critical examination of interventions aimed at self-esteem enhancement, especially in diverse student populations.

Low self-esteem has also been shown to reduce students' ability to manage academic stress and psychosocial challenges on campus. Ni et al. (2024) found that higher self-esteem reduces burnout and improves students' learning adaptability, particularly by enhancing their sense of self-efficacy. This reflects the condition of the subject in this study, who exhibited a chronic negative thought pattern, social anxiety, and a tendency to withdraw during her early months at university.

A growing body of research has shown that cognitive behavioral therapy (CBT) is effective in addressing low self-esteem, particularly because it targets deep-rooted irrational thinking patterns. Techniques such as challenging negative beliefs, practicing positive affirmations, and developing emotional regulation skills help individuals construct a healthier and more realistic self-perception. Aspinwall and Taylor (1992) emphasized that self-confidence and psychological control mediate students' adjustment by enabling more active coping strategies, which form the theoretical basis for this intervention.

Yet, questions remain about how CBT interventions function in specific educational settings, where academic performance and peer evaluation serve as constant sources of stress. This context-specificity calls for deeper exploration through targeted case studies. However, there remains a lack of empirical studies that document CBT interventions in vulnerable student populations particularly those dealing with socioeconomic stress, gap years, and chronic self-doubt. Much of the existing literature focuses on correlational or large-scale survey data. Thus, there is a need for detailed case-based narratives to enrich our understanding of CBT's effectiveness in individual contexts with multidimensional pressures.

This gap in the literature provides the rationale for this case study, which seeks to examine how CBT techniques can be meaningfully adapted to the lived experiences of a university student navigating academic and social transitions. This case study aims to explore whether a structured CBT intervention can effectively address low self-esteem in a university student experiencing academic adjustment difficulties and social comparison stressors.

Method

This study employed a qualitative case study approach to explore a psychological intervention based on Cognitive Behavioral Therapy (CBT) for a university student experiencing low self-esteem. The subject was a 21-year-old first-year female student, selected through purposive sampling. This approach was chosen to allow for an in-depth exploration of the cognitive, emotional, and social dynamics influencing the subject's self-esteem (Yin, 2018).

The subject was referred by a university psychologist due to her consistent difficulties in social functioning, academic adjustment, and self-perception. She reported low self-confidence when interacting with peers, feelings of academic inferiority despite her efforts, and socioeconomic concerns related to appearance and status. These characteristics made her highly relevant to the core phenomenon under investigation which is low self-esteem in the university adjustment context.

Data were collected using multiple methods, including observation, clinical interviews, psychological testing, and pre-post intervention evaluations. Observations took place both on campus and at the subject's

residence, focusing on her social interactions and academic activities. Four interview sessions were conducted to explore the subject's core beliefs, social experiences, and patterns of negative thinking. Method triangulation was applied to enhance the validity of the findings (Patton, 1999).

Assessment instruments included the Wechsler Adult Intelligence Scale (WAIS) to measure cognitive functioning, as well as the SSCT, Wartegg test, and projective drawing tests (Draw-A-Person and House-Tree-Person) to examine personality traits and emotional dynamics. The Rosenberg Self-Esteem Scale (RSES) was used as a quantitative tool to monitor changes in self-esteem before and after the intervention.

The intervention consisted of six counseling sessions using a CBT approach, with a focus on cognitive restructuring techniques. Each session lasted approximately 60 to 75 minutes and was conducted twice a week over a three-week period. The intervention followed the structure of the "Cognitive Behavioral Counseling Module with Cognitive Restructuring Techniques for Student Self-Esteem" developed by Damayanti and (Damayanti & Nurjannah, 2016), which was adapted to meet the subject's specific needs and presenting symptoms.

Prior to participation, written informed consent was obtained from the subject, who was assured of her right to withdraw at any time. To maintain confidentiality, a pseudonym was used and all data were stored securely in password-protected digital files. The intervention posed minimal psychological risk, and no adverse effects were observed.

The intervention materials were adapted from a self-esteem enhancement module by Damayanti and Nurjannah, (2016) emphasizing the identification of negative automatic thoughts, challenging dysfunctional beliefs, and using positive affirmations to build healthier self-schemas.

The effectiveness of the intervention was evaluated by comparing pre- and post-intervention RSES scores, along with a qualitative analysis of counseling session notes. Data validity was further supported through source triangulation using field observations and post-session reflections provided by the subject.

Although this study focuses on a single case, the case study approach was deemed appropriate for its capacity to provide detailed, contextualized insight into the individualized therapeutic process. While generalizability is limited, this method allows for a deep understanding of how CBT can be applied to complex, real-life student adjustment issues.

Results and Discussions

The subject of this study was a 21-year-old first-year female university student who reported persistent feelings of low self-confidence, social anxiety, and a belief that she lacked value compared to her peers. Her modest socioeconomic background and two-year gap period prior to enrollment contributed to a sense of falling behind and feeling unworthy of her place in the academic environment. These concerns led to a comprehensive psychological assessment and the implementation of a targeted intervention to address suspected low self-esteem.

Initial assessment using the Rosenberg Self-Esteem Scale (RSES) showed a score of 14, placing her in the low self-esteem category. The subject rated statements such as "I feel I have nothing to be proud of" and "I am not as valuable as others" with the lowest possible score. These responses indicate not only self-doubt regarding her abilities but also a deeper questioning of her overall self-worth. These negative beliefs align with common cognitive distortions found in individuals with low self-esteem, who often exhibit a strong negative attribution bias toward themselves (Taylor & Montgomery, 2007). This pattern may also reflect low self-efficacy beliefs, which according to (Bandura, 1997), influence individuals' motivation, persistence, and emotional resilience in challenging academic environments.

Findings from the SSCT supported this interpretation, with statements like "I always fail" and "I can't do anything well," reflecting deeply held dysfunctional core beliefs. In the Wartegg test and HTP drawing task, the subject depicted small, closed-off figures with light and uncertain strokes, symbolizing a lack of confidence and a desire to avoid external judgment. These projective test results suggest that the subject's self-doubt was not only cognitive but also expressed symbolically through her perception of herself. Together, the findings confirm significant difficulty in self-acceptance and self-appreciation.

The psychological intervention was delivered through six counseling sessions based on Cognitive Behavioral Therapy (CBT), with a primary focus on restructuring negative thinking and building positive affirmations. The subject was guided to identify maladaptive automatic thoughts, challenge them using

objective reasoning, and replace them with more rational and supportive alternatives. Table 1. below summarizes the outcomes of each intervention session.

Table 1. CBT Intervention Sessions Results

Intervention Session	Result
Session I	The subject gained an understanding of the concept of self-esteem and recognized her tendency to compare herself with others. She began to identify negative thoughts rooted in social influences.
Session II	The subject understood the importance of self-acceptance. She connected her negative thoughts to family background and social pressure.
Session III	The subject became aware of the impact of negative thinking and began to challenge those thoughts. She formulated positive affirmations to replace irrational beliefs.
Session IV	The subject learned to think more rationally and grasped the value of affirmations. She started engaging in self-evaluation and viewing situations from a new perspective.
Session V	The subject strengthened her self-confidence through affirmations. She learned to focus on the positive and stopped comparing herself to others.
Session VI	The subject was able to maintain a positive mindset. She reinforced affirmations and turned to spirituality to help sustain her emotional well-being.

Post-intervention evaluation showed an increase in the subject's Rosenberg Self-Esteem Scale (RSES) score to 19, placing her within the normal range of self-esteem. Notable improvements were observed in items such as "I feel I am a person of equal worth to others" and "I feel reasonably competent," both of which increased from a score of 1 to 4. While this improvement may suggest a positive response to the intervention, it is important to interpret the findings with caution given the single-case design and potential influence of factors such as the Hawthorne effect or therapeutic alliance (McCambridge et al., 2014). This finding is consistent with Toroghi et al. (2012), who reported that CBT significantly enhances self-esteem dimensions in adolescent females by fostering logical thinking and internal reinforcement.

In terms of behavior changes, the subject demonstrated a clear increase in self-confidence. Initially passive and withdrawn, she began to actively participate in class discussions, ask questions, and take initiative in group assignments. She also reported feeling more comfortable initiating conversations with peers and no longer feeling inferior in social situations. Table 2 presents the behavioral changes before and after the CBT intervention. These behavioral changes reflect an improvement in self-confidence, which is a core component of self-esteem. According to resilience theory (Masten, 2001), such adaptive behaviors can emerge when psychological resources are strengthened through targeted intervention, particularly in educational settings where performance pressure is high. Enhanced self-perception directly contributes to greater social engagement and adaptive functioning (Beattie & Beattie, 2018).

Table 2. Result Pre and Post Intervention

Pre intervention	Post Intervention
1. The subject had no prior understanding of self-esteem.	1. The subject became familiar with the definition of self-esteem.
2. She believed her abilities were inferior compared to her peers.	2. She was able to identify her negative thoughts.
3. She had not reflected on or evaluated her past achievements.	3. She learned to respond to those thoughts with positive affirmations.
4. She held negative thoughts toward her peers and lecturers.	4. She began to think more positively about her peers and lecturers.

5. She was preoccupied with comments from her neighbors, who often compared her unfavorably to peers who had already secured stable jobs.	5. She became more capable of completing assignments independently.
	6. She learned to filter and manage the comments from her neighbors to avoid being influenced by them. She also practiced letting go of those thoughts so they would not affect her mindset.
	7. The subject reported personal benefits such as increased patience, greater self-reliance, and improved self-confidence.

One of the most prominent findings of this study is the role of social comparison as a key factor contributing to the subject's low self-esteem. The subject perceived herself as less intelligent than her peers due to her parents' lower educational background and frequent comparisons made by neighbors who viewed others as more "successful." This reflects the concept of academic identity threat, where students from underrepresented or disadvantaged backgrounds may internalize external evaluations, leading to withdrawal and reduced engagement (Steele, 1997). A study by Saleem & Tariq (2025) supports this, showing that students with a stronger tendency to compare themselves with others tend to have lower levels of self-esteem.

Throughout the intervention process, meaningful changes occurred not only in the subject's thoughts but also in how she evaluated herself. She began forming more balanced and rational habits of self-reflection, acknowledging strengths she had previously overlooked and responding to social criticism with more constructive thinking. This may indicate that CBT techniques not only challenge maladaptive cognitions but also foster metacognitive awareness, a skill linked to improved motivation and academic self-regulation (Zimmerman, 2002). These findings align with Griffioen et al. (2017), who found that cognitive reflection promoted through CBT significantly increases self-acceptance in individuals with low self-esteem.

The subject also demonstrated notable improvements in adaptive behavior, transitioning from a passive and withdrawn student to one who actively engaged in classroom discussions and confidently took initiative in group tasks. Such behavioral shifts may contribute to a stronger sense of academic belonging, which is associated with higher motivation, persistence, and student retention (Goodenow, 1993). A study by Hapangama et al. (2021) similarly found that group-based CBT interventions can reduce social anxiety and increase students' active participation in academic environments.

It is important to acknowledge the limitations of this study. As a single-case design, the results are not generalizable to larger populations. The possibility of observer bias, demand characteristics, and the subject's awareness of being studied may have influenced the outcomes. Additionally, the therapeutic context and rapport with the counselor could have independently contributed to behavioral changes. These factors should be carefully considered in interpreting the results.

Ultimately, this study suggests that CBT, when combined with sensitivity to the subject's social and spiritual context, may serve as an effective approach to rebuilding self-esteem in university students. However, as this is a single-case study, the findings remain exploratory. Future research involving a larger number of participants and more rigorous experimental designs is needed to evaluate the consistency and long-term impact of this intervention model.

Conclusions

This case study suggests that cognitive behavioral therapy (CBT) may be beneficial in enhancing self-esteem in a first-year university student experiencing self-doubt, negative self-perception, and social anxiety. Through six structured sessions focused on cognitive restructuring, the subject learned to identify and challenge irrational beliefs, practice self-affirmation, and engage in more constructive self-evaluation. The intervention was associated with improvements in the subject's self-esteem score and was accompanied by observable behavioral changes, including increased social engagement, confidence, and emotional regulation.

A key insight from this case is the role of social comparison and external judgment as salient contributors to low self-esteem in academic settings. This underscores the need to consider contextual, cultural, and

socioeconomic factors such as financial background and spiritual identity when applying CBT interventions in university environments.

The findings from this case support the value of individualized CBT interventions in addressing self-esteem challenges among university students and point to the importance of campus-based mental health support, psychoeducational counseling, and educator awareness of the psychological barriers students may face during academic transitions.

Given the limitations of a single-case design, these results should be interpreted cautiously. Nonetheless, this case highlights the potential for therapeutic interventions to support emotional well-being and academic engagement. Future studies are recommended to explore the long-term effectiveness of tailored CBT approaches in more diverse student populations.

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