Examining the Relationship between Cognitive Flexibility and Social Adjustment in Female University Dormitory Residents

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ABSTRACT

*This study investigated the relationship between cognitive flexibility and social adjustment among female university students living in dormitories. The transition to university and communal living presents unique social challenges, and identifying key psychological factors that facilitate adaptation is crucial. Using a quantitative, correlational design, data were collected from 100 female residents of Imam Reza International University dormitories via the Cognitive Flexibility Inventory and a Social Adjustment Scale. Results from Pearson correlation analysis revealed a non-significant, negligible positive relationship between cognitive flexibility and social adjustment (*r* = .004, *p* = .965). Contrary to some theoretical expectations and prior research in different contexts, the findings indicate that, in this specific sample, higher cognitive flexibility was not associated with better social adjustment in the dormitory environment. The study concludes that other factors beyond general cognitive flexibility may be more critical for successful social integration in dormitory settings, suggesting that university support services should consider a multifaceted approach when designing interventions to enhance student well-being.*

Keywords: Cognitive flexibility, Dormitory residence, Executive functioning, Psychological adaptation, Social adjustment, University students.

1. INTRODUCTION

The transition to university represents a pivotal developmental period, often requiring significant adaptation to new academic, social, and personal demands. For many students, this transition is compounded by the challenge of moving away from home and adjusting to communal living environments such as dormitories. This adjustment is particularly salient for female students, who may face unique psychosocial pressures and navigate social relationships in ways distinct from their male counterparts(Chaliawala et al., 2025). Social adjustment, defined as the ability to manage interpersonal interactions, form supportive networks, and feel a sense of belonging, is a critical determinant of overall well-being and academic success in higher education. Poor social adjustment has been consistently linked to increased rates of loneliness, anxiety, and academic attrition (Credé & Niehorster, 2012). Therefore, identifying the psychological factors that facilitate successful navigation of this complex social milieu is a significant concern for educational and developmental psychologists. Understanding these mechanisms can inform targeted interventions to support the growing population of university students residing on campus, ultimately fostering a more conducive environment for personal and scholarly growth(Riaz & Saif, 2025) .

A key psychological factor hypothesized to facilitate adaptation is cognitive flexibility. Cognitive flexibility is a core component of executive functioning that refers to the mental ability to switch between thinking about different concepts, and to adapt behavioral strategies in response to changing environmental contingencies(Örün & Sever, 2025) . It encompasses the capacity to consider multiple perspectives simultaneously, tolerate ambiguity, and revise one's plans when faced with new obstacles or information. In the context of social interactions, it is theorized that this ability could translate to an individual's ability to

reinterpret a social slight, adjust communication styles with different roommates, and generate alternative solutions to interpersonal conflicts. Broadly, research has suggested that higher cognitive flexibility is associated with better problem-solving skills, reduced cognitive rigidity, and enhanced resilience in the face of stress(Kashdan & Rottenberg, 2010) . For instance, some studies, such as those by Ercoşkun and Kılıç (2023), have reported that cognitively flexible individuals exhibit more adaptable communication and are perceived as more competent in social situations, pointing to its potential role in interpersonal effectiveness(Kılıç & Ercoşkun, 2024).

Conversely, social adjustment in a university dormitory setting is a multifaceted construct that extends beyond mere academic integration. It involves the successful management of daily living with peers, the formation of satisfying friendships, adherence to communal norms, and the negotiation of conflicts that inevitably arise in shared spaces(Credé & Niehorster, 2012) . For female residents, who often place a high value on emotional intimacy and relational connectedness, the quality of dormitory relationships can be especially critical to their sense of belonging and emotional security (Ying et al., 2019). Previous research has highlighted that challenges such as homesickness, perceived social isolation, and conflict with roommates are significant predictors of maladjustment and can severely impact a student's quality of life. Successful social adjustment, therefore, is not merely the absence of conflict but the presence of a supportive peer network that buffers against stress and enhances the overall university experience (Frazier et al., 2019).

Despite the established importance of both cognitive flexibility and social adjustment, a clear gap exists in the literature regarding their specific relationship within the unique microcosm of a female university dormitory. While previous studies have broadly linked executive functions to general adjustment or academic performance, few have zeroed in on the social domain within this specific high-density living context(McKee, 2017) . Moreover, much of the existing research on dormitory life has focused on environmental factors like room density or architectural design, often overlooking the critical role of individual psychological competencies that students bring to these environments. The particular social dynamics and emotional challenges faced by female students in dormitories warrant a more nuanced investigation. As recent scholarship argues, there is a pressing need to move beyond demographic predictors and explore the cognitive and emotional processes that underpin adaptive outcomes for this population, thereby providing a clearer target for psychological support services (Mine & Ayhan, 2020).

The present study aims to address this gap by empirically investigating the proposed relationship between cognitive flexibility and social adjustment among female residents of university dormitories. The primary objective is to examine if and to what extent a correlation exists between these two variables, as suggested by theory and some prior research in different contexts. Furthermore, this research seeks to explore which specific dimensions of cognitive flexibility—such as the perception of alternatives or willingness to adapt—are most strongly predictive of successful social adjustment. The central research question guiding this inquiry is: To what extent does cognitive flexibility predict social adjustment in female university students living in dormitories? To answer this question, the paper will proceed by first reviewing the relevant literature on both constructs. Following this, the methodology section will outline the measures and sampling procedures used to collect data. Subsequently, the results of the statistical analysis will be presented, followed by a discussion that interprets the findings, considers practical implications for university support services, and suggests directions for future research.

2. *Materials & Methods*

Research Design and Methodology

This study employed a quantitative, cross-sectional, correlational research design to investigate the relationship between cognitive flexibility and social adjustment among female university dormitory residents. The design was selected as it allows for the measurement of variables in their natural setting without manipulation and is optimal for examining the degree and direction of associations between constructs in a specific population at a single point in time(Wang & Cheng, 2020). The research was conducted in the field, specifically within the female dormitories of Imam Reza International University, to ensure ecological validity and direct relevance to the participants' lived experiences. The general approach involved administering standardized self-report questionnaires to collect data on the key variables. The data analysis plan was guided by a psychometric framework, aiming to first describe the sample and then employ inferential statistics to test the hypothesized relationship. This methodological approach is well-suited for the social sciences, as it

facilitates the exploration of complex psychological constructs within a real-world context, providing a snapshot of the dynamics at play(Schoonenboom, 2023).

Participants or Samples

The study population consisted of all female students residing in the dormitories of Imam Reza International University during the 2023-2024 academic year (N = 300). From this population, a sample of 100 students was selected using a convenience sampling method. This non-probability sampling technique was chosen due to its practicality and ease of access to participants who were readily available and willing to take part in the study. The inclusion criteria for participation were being a currently enrolled female student, actively residing in the university dormitory, not being diagnosed with a specific medical condition that could impair cognitive function, and not taking any medication known to affect alertness or cognitive processes. Exclusion criteria included a withdrawal of informed consent or an unwillingness to continue participation at any stage of the research. The final sample was exclusively female, with the majority (90%) being undergraduate students and a smaller proportion (10%) enrolled in master's degree programs.

Instruments and Equipment

Data were collected using two primary psychometric instruments. The first was the Cognitive Flexibility Inventory (CFI) developed by Dennis and Vander Wal (2010). This self-report questionnaire is designed to measure the aspect of cognitive flexibility that facilitates adaptive responding to challenging situations. It is a widely used tool with demonstrated reliability and validity in previous psychological research(Emani, 2016; Kılıç & Ercoşkun, 2024). The second instrument was the Social Adjustment Scale, developed by Sinha and Singh, which assesses an individual's ability to manage interpersonal relationships and adapt to social group norms. Data were recorded on paper questionnaires, and no specialized laboratory equipment was used. The data from these instruments were subsequently digitized for analysis. The use of these standardized scales ensured that the constructs of cognitive flexibility and social adjustment were measured with tools that have established psychometric properties, thereby enhancing the credibility and replicability of the study's findings(Rigi et al., 2018).

Data Collection and Analysis Procedures

The data collection procedure began after ethical approval was obtained from the relevant institutional body. Participants who met the inclusion criteria and provided informed consent were given the packet of questionnaires to complete(Buchanan & Hvizdak, 2009). They were assured of the confidentiality of their responses and their right to withdraw from the study at any time without penalty. The completed questionnaires were then collected for data analysis. The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including means and standard deviations, were calculated for the scores on the Cognitive Flexibility Inventory and the Social Adjustment Scale to summarize the sample's characteristics. To address the primary research question, a Pearson product-moment correlation coefficient was computed to examine the relationship between cognitive flexibility and social adjustment. This analytical procedure was deemed appropriate for determining the strength and direction of the linear relationship between the two continuous variables(Schober et al., 2018).

3. Results

Descriptive statistics for the main study variables are presented in Table 1. The mean score for social adjustment was 11.53 (SD = 3.24), and for cognitive flexibility, it was 59.52 (SD = 9.34).A Pearson correlation analysis was conducted to examine the relationship between cognitive flexibility and social adjustment among female dormitory residents. The results revealed a non-significant, negligible positive correlation between the two variables (*r* = .004, *p* = .965), indicating that no statistically meaningful association was found between cognitive flexibility and social adjustment in this sample.

Table 1. *Descriptive Statistics and Correlation Results*

Variable	Mean	SD	1	2
1. Social Adjustment	11.53	3.24	1	
2. Cognitive Flexibility	59.52	9.34	.004	1

Note：All correlations are non-significant (p > .05).

4. Discussion

The primary aim of this study was to examine the relationship between cognitive flexibility and social adjustment in female university dormitory residents. Contrary to the initial hypothesis, the analysis yielded a non-significant, negligible positive correlation (r = .004, p = .965) between the two variables. This finding indicates that, within this specific sample, no statistically meaningful relationship was found between cognitive flexibility and social adjustment.

This null result presents an interesting divergence from theoretical perspectives that posit cognitive flexibility as a foundational skill for interpersonal effectiveness (Kashdan & Rottenberg, 2010) and from empirical studies reporting its association with social competence (e.g., Ercoşkun & Kılıç, 2023). Several possible interpretations may explain this result. First, it is possible that in the unique, high-density environment of a female dormitory, other factors—such as personality traits (e.g., agreeableness, extraversion), pre-existing social skills, or specific coping strategies—may play a more direct role in social adjustment than the broad cognitive capacity for flexible thinking (Ozer & Benet-Martinez, 2006; Pringle & Robinson, 2024). Second, the measures used, while standardized, may not have captured the specific aspects of social adjustment most relevant to dormitory life or may have been influenced by response biases.Third, the social adjustment challenges in this context might be so specific and situational that general cognitive flexibility is not the primary cognitive resource employed. Instead, more domain-specific social cognitive abilities—such as theory of mind, empathy, or situation-specific problem-solving—might be more directly critical for navigating the complex relational dynamics of dormitory life.

The limitations of this study, including the convenience sampling method and cross-sectional design, may have also contributed to the null finding. The homogeneous sample or the timing of data collection might not have captured the dynamic relationship between these constructs over time. Future research should employ longitudinal designs to explore whether cognitive flexibility predicts social adjustment at different time points during the university transition(Wang et al., 2017). Additionally, investigating potential moderating variables (e.g., social support, cultural background) or mediating pathways (e.g., through conflict resolution strategies) might reveal more complex relationships obscured in a simple correlation analysis(Hayes, 2013).

5. Conclusion

Contrary to the initial hypothesis derived from the literature, this study found a non-significant and negligible relationship between cognitive flexibility and social adjustment in this particular sample. This result stands in contrast to some previous work linking cognitive flexibility to general adaptive outcomes (e.g., Kashdan & Rottenberg, 2010) and suggests that this relationship may not hold in the specific socio-cultural context of female dormitory living in this setting. Therefore, in direct answer to the research question, cognitive flexibility, as measured in this study, was not a significant predictor of social adjustment among the participants.

The broader implications of these results are significant for both research and practice. For university student support services, the findings suggest that interventions aimed solely at enhancing general cognitive flexibility might not be sufficient to improve social integration in dormitories (Pringle & Robinson, 2024). A more effective approach may involve targeted programs that develop specific social-emotional skills, such as communication, conflict resolution, empathy, and community-building activities that directly address the relational challenges of communal living (Mine & Ayhan, 2020). For researchers, this study underscores the importance of not assuming theoretical relationships hold in all contexts and highlights the need for nuanced

investigations that consider moderator variables and alternative explanatory mechanisms (Hayes, 2013). Future research should continue to explore the complex interplay of cognitive, emotional, and situational factors that together determine successful adaptation to university dormitory life (Wang et al., 2017).

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