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Marital Adjustment in Medical-Science Students: Roles of Self-Differentiation and Alexithymia

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Abstract

Introduction: This article examines the intersection between psychological constructs—self-differentiation and alexithymia—and communicative competence in marital adjustment, reframing the discussion within applied linguistics. Marital relationships rely heavily on effective communication, which in turn depends on emotional awareness, regulation, and linguistic expression.

Materials and Methods: Drawing on a sample of 130 Married Medical Science Students at the University of Tehran, this study investigates how emotional variables influence communicative patterns that sustain or hinder marital adjustment.

Results: Findings revealed that self-differentiation positively predicts marital adjustment, while alexithymia negatively predicts it, together explaining 64% of the variance. These results are discussed in light of applied linguistics theories of discourse, intercultural pragmatics, and language pedagogy.

Conclusion: The study contributes to an interdisciplinary understanding of how emotional and psychological constructs interact with communicative competence in relational and linguis Book Antiqua tic contexts.

Keywords: Self-differentiation, Alexithymia, Marital adjustment, Communication, Applied linguistics

1. Introduction

Marriage is not only a psychological and social contract but also a communicative space where language plays a fundamental role in building intimacy, negotiating meaning, and resolving conflicts. In applied linguistics, communication competence—including pragmatic knowledge, discourse strategies, and emotional expression—is considered central to relational success [1, 2]. Thus, marital adjustment can

be viewed through the lens of how effectively couples use language to co-construct their shared reality.

Self-differentiation, originally articulated within Bowen's family systems theory, describes an individual's capacity to balance autonomy with intimacy [3]. From an applied linguistics perspective, self-differentiation influences how individuals manage communicative independence versus interdependence in dialogue [4]. Highly differentiated individuals may demonstrate greater discourse flexibility, clarity, and assertiveness, enhancing their ability to negotiate meaning in interactions.

Conversely, alexithymia—characterized by difficulty identifying and expressing emotions—has implications for pragmatic competence and interpersonal communication. In marital discourse, alexithymia can manifest as limited emotional vocabulary, reduced ability to engage in empathy-driven dialogue, and reliance on non-verbal cues. Such communicative constraints are detrimental to marital adjustment, as they restrict the negotiation of face, politeness strategies, and relational alignment [5].

By integrating psychological constructs into the field of applied linguistics, this study holds significant value in advancing interdisciplinary understanding of how emotional regulation influences language use and relational well-being. Its findings have important implications across multiple domains—offering new perspectives for psychology and family studies, while enriching research and practice in linguistics, second language pedagogy, and intercultural communication.

2. Materials and Methods

2.1. Literature Review

Research in applied linguistics increasingly acknowledges the role of affective and psychological variables in shaping language use and learning outcomes. Studies in second language acquisition (SLA) highlight how emotional regulation, motivation, and interpersonal skills influence communicative competence and pragmatic performance [6-8]. The constructs of self-differentiation and alexithymia, though less commonly discussed in applied linguistics, offer valuable frameworks for understanding emotional influences on discourse.

Self-differentiation has been linked to clear self-expression, lower communication anxiety, and greater adaptability in intercultural contexts [8, 9] In discourse analysis, differentiated speakers are more likely to assert an 'I-position' without succumbing to communicative fusion or avoidance, leading to constructive conversational outcomes [8]. In contrast, individuals with low differentiation often engage in face-threatening acts or communicative withdrawal, which can destabilize interpersonal alignment. Alexithymia has been studied in relation to language use, particularly emotional vocabulary and narrative coherence. People with high alexithymia scores tend to produce less elaborated discourse, avoid emotional terms, and struggle with perspective-taking in conversation [10]. From a pragmatic standpoint, alexithymia limits the ability to engage in politeness strategies, empathy-driven talk, and repair mechanisms—all critical to marital communication.

Recent scholarship in applied linguistics also emphasizes the need for interdisciplinary approaches to communication [11]. For example, intercultural pragmatics research demonstrates how cultural scripts for emotional expression affect marital satisfaction in bilingual couples [12, 13]. Similarly, studies in language pedagogy highlight that training in emotional expression and reflective dialogue can enhance learners' communicative competence and interpersonal relationships [1, 14]. Thus, exploring the role of self-differentiation and alexithymia in marital communication provides fertile ground for bridging applied linguistics with psychology. This study contributes to this dialogue by empirically linking these constructs to marital adjustment and interpreting their significance in terms of communicative competence.

2.2. Design and Participants

This correlational study was conducted in 2019 among 130 married medical science students at the University of Tehran. Participants were recruited through convenience sampling, which may limit the generalizability of the findings beyond this specific population. The sample included both bilingual and monolingual individuals, reflecting the linguistic diversity of the university context. Participants' demographic characteristics were as follows: ages ranged from 22 to 35 years (M = 27.4, SD = 3.2); 58% were female and 42% male; and marriage duration varied from 1 to 10 years (M = 4.1, SD = 2.6). These

demographic variables may influence marital adjustment, self-differentiation, and alexithymia—for instance, longer marriage duration could be associated with different adjustment patterns compared to newly married individuals, while gender-related differences in emotional expression may also affect responses.

A priori sample size estimation was conducted using G*Power 3.1 for multiple regression analyses with three predictors, an anticipated medium effect size ($f^2 = 0.15$), $\alpha = .05$, and power $(1 – \beta) = .80$. The analysis indicated a minimum required sample of 77 participants. Thus, the recruited sample of 130 exceeded this threshold, providing adequate statistical power to detect meaningful associations among the study variables. All participants completed standardized questionnaires anonymously to ensure confidentiality and minimize response bias.

2.3. Instruments

Dyadic Adjustment Scale (DAS; Spanier, 1976). The DAS is a 32-item scale that assesses marital satisfaction, consensus, and cohesion, with scores ≤101 indicating marital distress. The Persian version used in this study was translated and back-translated by bilingual experts to ensure semantic equivalence, and its validity has been established in Iranian samples (e.g., Molazadeh et al., 2013). In the present sample, the internal consistency was satisfactory (Cronbach's $\alpha = .89$).

Differentiation of Self Inventory (DSI; Skowron & Friedlander, 1998). The DSI consists of 46 items assessing emotional reactivity, I-position, emotional cutoff, and fusion. Items were culturally adapted to capture communicative behaviors relevant to Iranian interpersonal contexts. The Persian version was obtained through a translation/back-translation procedure, with prior research supporting its psychometric properties in Iranian populations (e.g., Bahrami et al., 2015). Cronbach's α for the total scale in this study was .86.

Toronto Alexithymia Scale (TAS-20; Bagby, Parker, & Taylor, 1994). The TAS-20 contains 20 items measuring difficulty identifying feelings, difficulty describing feelings, and externally oriented thinking. The Persian version, prepared via a translation/back-translation process, has demonstrated reliability and validity in Iranian samples (e.g., Besharat, 2007). In the present sample, internal consistency was acceptable (Cronbach's $\alpha = .83$).

Together, these instruments demonstrated good reliability in the current study, supporting their use for examining the associations among self-differentiation, alexithymia, and marital adjustment.

2.4. Procedure

Participants provided informed consent before completing the questionnaires in group sessions. The instruments were administered in Persian and English, depending on participant preference, to account for potential bilingual influences on emotional expression. Data were analyzed using SPSS-24 with descriptive statistics, Pearson's correlations, and multiple regression analysis.

3. Results

Descriptive Statistics

Table 1 presents descriptive statistics for the three main study variables: marital adjustment, self-differentiation, and alexithymia.

Table 1. Descriptive statistics for study variables (N = 130)

Variable	*M*	*SD*	*Range*
Marital Adjustment	*104.8*	*15.3*	*72–145*
Self-Differentiation	*158.6*	*21.4*	*98–205*
Alexithymia	*47.2*	*10.8*	*28–74*

Note. M = mean; SD = standard deviation.

Interpretively, participants reported moderate to high marital satisfaction (mean DAS score > 100), moderate to high differentiation, and below-threshold alexithymia scores on average, although a notable minority scored in the borderline alexithymic range [14].

Correlations

Table 2 presents Pearson correlation coefficients.

Table 2.Pearson correlations among study variables

Variable Pair	*r*	*p*
Marital Adjustment – Self-Diff	*.62*	*< .001*
Marital Adjustment – Alexithymia	*–.73*	*< .001*
Self-Diff – Alexithymia	*–.42*	*< .001*

Note. Self-Diff = self-differentiation. All correlations are significant at p < .001.

As expected, self-differentiation was positively associated with marital adjustment, while alexithymia was negatively associated with it. Self-differentiation and alexithymia were moderately and inversely correlated.

Regression Analysis

A multiple linear regression was performed to examine whether self-differentiation and alexithymia predicted marital adjustment.

Table 3.Multiple regression analysis predicting marital adjustment (N = 130)

Predictor	B	SE B	β	95% CI for B	p
Self-Differentiation	0.27	0.05	.38	[0.17, 0.37]	< .001
Alexithymia	–0.79	0.10	–.56	[–0.99, –0.59]	< .001

Note. R^2 = .67, Adjusted R^2 = .66, F(2, 127) = 129.04, p < .001. SE = standard error; CI = confidence interval.

The overall model accounted for 67% of the variance in marital adjustment, F(2, 127) = 129.04, p < .001. Both predictors were significant. Self-differentiation showed a positive effect (β = .38, p < .001), while alexithymia showed a stronger negative effect (β = –.56, p < .001).

Assumption Checks

Prior to regression, key assumptions were evaluated:

• Normality: Q–Q plots and Kolmogorov–Smirnov tests indicated approximate normal distribution of residuals.

• Multicollinearity: Tolerance values were > .50 and VIF values < 2.0 for both predictors, indicating no multicollinearity.

• Independence of residuals: The Durbin–Watson statistic was 1.87, consistent with independence of errors.

• Homoscedasticity: Scatterplots of standardized residuals versus predicted values showed no evidence of heteroscedasticity.

These diagnostics confirmed that regression assumptions were adequately met.

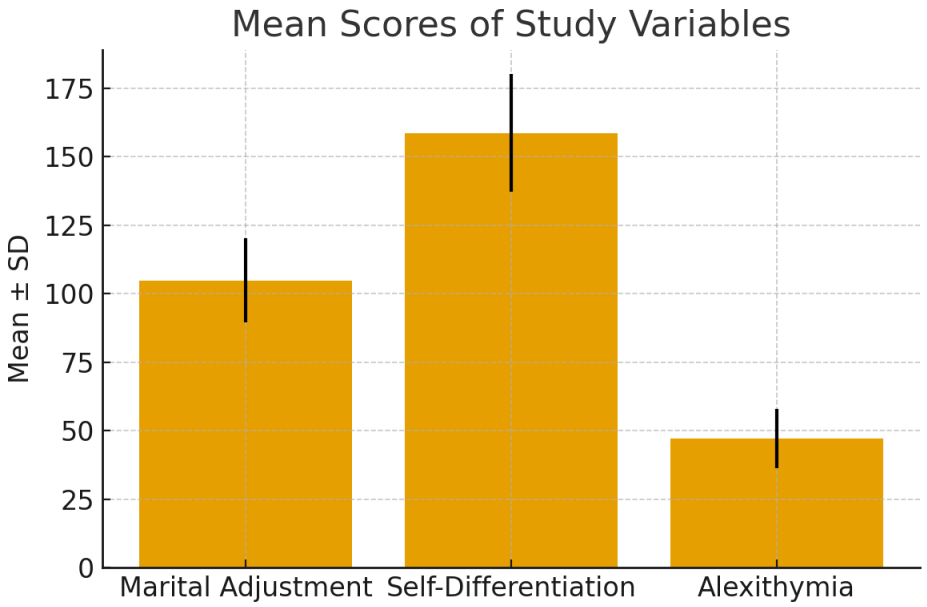


Figure 1. Mean scores of marital adjustment, self-differentiation, and alexithymia.

Summary of Findings

Taken together, self-differentiation and alexithymia emerged as strong and independent predictors of marital adjustment, accounting for two-thirds of its variance. Although both were important, alexithymia had the stronger predictive effect, underscoring the central role of emotional awareness and expression in marital satisfaction among married medical-science students.

4. Discussion

The present findings indicate that self-differentiation and alexithymia are associated with marital adjustment among married medical-science students, though the cross-sectional design prevents causal inferences. These associations nonetheless offer important implications for both family therapy and applied linguistics.

Self-differentiation appears to facilitate communicative competence by promoting assertiveness, clarity, and adaptability in dialogue. This resonates with studies in pragmatics demonstrating that emotional regulation and autonomy support the negotiation of meaning in interpersonal exchanges. In therapeutic contexts, interventions that strengthen differentiation—such as Bowenian family therapy or mindfulness-based practices—may not only enhance relational stability but also improve spouses' communicative processes.

Conversely, alexithymia was negatively associated with marital adjustment, reflecting its restrictive impact on emotional vocabulary, empathy, and rapport-building talk. These limitations parallel findings in applied linguistics research on pragmatic breakdowns and impaired discourse management. In clinical settings, targeting alexithymia through emotion-focused therapy or psychoeducational interventions may improve couples' capacity for emotional expression, thereby reducing communicative breakdowns in marital interactions.

Taken together, these findings point to a shared concern in psychology and linguistics: how emotional

awareness and self-boundary regulation enable meaningful communication. Integrating family therapy approaches with insights from applied linguistics may open promising avenues for both research and practice.

5. Conclusion

This study highlights that self-differentiation and alexithymia are significantly associated with marital adjustment, underscoring the interdependence of emotional regulation and communicative competence in close relationships. By situating these constructs within applied linguistics, the research illustrates how emotional capacities shape discourse, rapport, and relationship satisfaction.

Practically, the results suggest that family therapy and language pedagogy may benefit from incorporating emotional literacy training—such as expanding emotional vocabulary, practicing reflective dialogue, and cultivating self-expression. These strategies may enhance both relational functioning and communicative performance.

Future research should employ longitudinal or experimental designs to clarify causal mechanisms and extend investigation to intercultural marriages, bilingual couples, or second-language learning contexts. Such work could strengthen the bridge between psychology and applied linguistics, offering a more integrated understanding of how language and emotion jointly shape human connection.

Ethical Considerations

Compliance with ethical guidelines

This study was conducted in accordance with institutional guidelines for research involving human participants. Because the sample consisted of healthy, non-clinical individuals (married medical-science students) and no medical interventions or sensitive personal health data were collected, formal approval from an ethics committee was not required. Participation was entirely voluntary, and all individuals were informed of the study's aims, assured of confidentiality and anonymity, and provided written informed consent prior to data collection.

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Author's contributions

Conceptualization and Supervision: Milad Salimi Chegenie; Methodology: Zahra Moradi; Investigation, Writing – original draft, and Writing – review & editing: All authors; Data collection: All authors; Data analysis: All authors; Funding acquisition and Resources: All authors

Conflict of interest

The Authors declare that there is no conflict of interest.

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