

Structural Equation Modeling of Marital Satisfaction Based on Communication Patterns with the Mediation of Self-Compassion

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Article Info

Article type:

Research Article

Article history:

Received 15 Aug. 2025

Received in revised form 18

Sep. 2025

Accepted 7 Oct. 2025

Published online 01 Mar. 2026

Keywords:

Marital satisfaction,
Communication patterns,
Self-compassion

ABSTRACT

Objective: The present study aimed to develop and test a structural equation model (SEM) of marital satisfaction based on communication patterns, with self-compassion serving as a mediating variable.

Methods: This applied research employed a descriptive–correlational design, specifically using structural equation modeling. Data were collected from participants using three standardized instruments: the Enrich Marital Satisfaction Questionnaire (Enrich, 1987), the Communication Patterns Questionnaire (Christensen & Salavy, 1984), and the Self-Compassion Scale (Neff, 2023). The AMOS software package was utilized to perform inferential statistical analyses and evaluate the proposed structural model.

Results: Findings demonstrated that the structural model of marital satisfaction based on communication patterns, mediated by self-compassion, achieved acceptable goodness-of-fit indices. The results support the mediating role of self-compassion in the association between communication patterns and marital satisfaction.

Conclusions: Overall, the proposed model showed adequate fit, indicating that self-compassion plays a meaningful mediating role in explaining how communication patterns influence marital satisfaction. These findings highlight the importance of fostering adaptive communication and enhancing self-compassion in couples to promote marital well-being.

Cite this article: Samiei, A., Saberi, H. & Mirhashemi, M. (2026). Structural equation modeling of marital satisfaction based on communication patterns with the mediation of self-compassion. *Iranian Journal of Educational Research*, 5 (1), 1-15.

. DOI: <https://doi.org/10.22034/5.1.1>



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DOI: <https://doi.org/10.22034/5.1.1>

Publisher: University of Hormozgan.

Introduction

As the most fundamental social institution, the family has consistently garnered the attention of researchers due to its critical functions within society. It is not merely viewed as a standalone system but as a vital subsystem of human society, influenced by a myriad of factors, including marital satisfaction, socioeconomic status, education, gender roles, internal communication, interaction dynamics among members, and family life cycle stages (Farjipak et al., 1401/2022). Within this context, marital satisfaction has received the most significant attention as a primary indicator of the health of the spousal relationship. This emphasis stems from the fact that the satisfaction partners experience within their union constitutes a crucial facet of the family and marital systems (Bradley & Hojjat, 2017).

Various definitions of marital satisfaction have been proposed. Some scholars define it as an emotional response derived from the subjective evaluation of the positive and negative aspects of a relationship (Schmidber & Schroder, 2019), while others contend that marital satisfaction exists when an individual's current relationship status aligns with their expectations. In other words, satisfaction represents a global evaluation of the marital relationship, reflecting the individual's level of happiness, their sense of fulfillment in the marriage, and their efforts to meet their partner's most significant needs (Zaid & Al-Hadidi, 2020).

Communication patterns play a pivotal role in determining marital happiness. Dysfunctional communication patterns can impair mutual understanding between spouses, hindering their ability to support one another, strive to satisfy each other's needs, or comprehend opposing viewpoints on contentious issues. Consequently, such patterns often precipitate marital problems and dissatisfaction. Conversely, healthy and constructive communication patterns are recognized as one of the most significant predictors of marital satisfaction. Based on the communication patterns they exhibit, couples can be categorized as either satisfied or dissatisfied. Existing research indicates a reciprocal relationship between communication patterns and marital satisfaction: not only can satisfied marital dynamics influence communication styles, but communication patterns can also significantly impact marital satisfaction (Sanaei et al., 2023).

According to foundational theories regarding Self-Compassion, this construct comprises three interrelated and mutually reinforcing components: mindfulness, self-kindness, and common humanity.

Mindfulness entails maintaining a balanced perspective during times of psychological distress and difficulty.

Common humanity involves recognizing that suffering and personal inadequacies are shared aspects of the universal human experience.

Self-kindness refers to the practice of being warm and understanding toward oneself rather than engaging in harsh self-criticism (Neff, 2023).

Individuals who cultivate a perspective of self-kindness tend to assign unconditional value to themselves. Self-compassion underscores the notion that individuals deserve love, happiness, and affection even in the face of failure. In stark contrast, self-criticism involves being hostile, demanding, ruthless, and critical toward oneself. Individuals with high levels of self-criticism often deny their own feelings, thoughts, impulses, actions, and worth. Consequently, the distress caused by such self-denial can equal or even exceed the pain inherent in the original situation itself (Witvliet et al., 2019).

Despite these conceptual distinctions, counseling centers frequently observe numerous couples and individuals facing marital dissatisfaction, emotional divorce, or even contemplating separation and divorce in desperation. Clinical sessions often reveal that several factors significantly contribute to these outcomes, including adverse childhood experiences and a lack of appropriate communication models. While various studies have examined the impact of these factors on marital satisfaction, few have investigated the role of self-compassion as a mediating or corrective mechanism within the relational chain.

Furthermore, given the broad cultural and social shifts regarding marriage and family, the critical role of individual mental health in marital success, and the evolving communication and marital styles among Iranian couples, there is an urgent need for updated research. Therefore, the primary objective of this study is to address the following question: Does the proposed model, which predicts marital satisfaction based on communication patterns and styles, with self-compassion serving as a mediator, demonstrate a statistically significant fit?

Material and Methods

This study is classified as applied research in terms of its nature and objective. Methodologically, it adopts a descriptive-correlational design, specifically utilizing Structural Equation Modeling (SEM) to test the proposed theoretical framework. For the inferential analysis of the data and the estimation of the structural model, AMOS (Analysis of Moment Structures) software was employed.

Ethical Considerations

To ensure ethical integrity, the following measures were implemented:

Informed Consent: All participants were provided with a comprehensive information sheet detailing the study's purpose, procedures, and voluntary nature. Written informed consent was obtained from every participant prior to data collection.

Confidentiality and Anonymity: Participants were assured that their responses would remain strictly confidential. No personally identifiable information (such as names or specific clinic case numbers) was collected; instead, unique identification codes were used to link responses if follow-up was necessary.

Right to Withdraw: Participants were explicitly informed of their right to withdraw from the study at any stage without penalty or impact on their access to clinical services.

Professional Standards: The study was conducted in accordance with the ethical guidelines of the relevant psychology association, ensuring that the well-being of the participants was prioritized throughout the research process.

Research Population, Sample, and Sampling Method

Population: The study population comprised married men and women seeking psychological services at four private clinics in Tehran: Shayeste Parvar, Rasta, Rakn, and Ravan Rah, during the statistical years 2024.

Sample Size Estimation: Based on the number of variables in the model and the standard rule of thumb for Structural Equation Modeling (typically requiring a minimum of 10 to 20 participants per indicator), the ideal sample size was estimated at approximately 350 participants to ensure adequate statistical power.

Actual Sample: Considering practical limitations and the voluntary nature of participation, a final sample of 200 married individuals (men and women) was selected.

Sampling Technique: A convenience sampling method was utilized. Participants were randomly selected from among the clients visiting the aforementioned clinics who met the inclusion criteria.

Research Instruments

Enrich Marital Satisfaction Scale (EMSQ): Origin: Developed by O’Leary, Fontaine, and Driscoll (1987). Structure: The scale consists of 47 items designed to assess potential problem areas in a marriage or identify fertile grounds for relationship growth. Scoring: Responses are recorded on a 5-point Likert scale.

Validity: Construct Validity: A significant correlation coefficient of 0.65 ($p < 0.01$) was found between the Enrich Marital Satisfaction Scale and the Marital Adjustment Scale.

Convergent Validity: Correlation coefficients ranged from 0.41 to 0.60 with family satisfaction components and from 0.32 to 0.41 with life satisfaction components (Abedi, Homayoun, Koushki, & ShahNazeri, 2012).

Reliability: The test-retest reliability coefficient was reported as 0.88.

Communication Patterns Questionnaire (CPQ): Origin: Designed by Christensen and Sullaway (1984). Structure: This is a 35-item instrument that examines couples’ interactions. Couples respond to questions regarding three specific, hypothetical stages of marital conflict based on their perceived communication style: Stage A (Problem Occurrence): Assessed via 3 items. Stage B (During the Argument): 18 items focusing on behaviors such as criticism, blaming, and avoidance. Stage C (After the Argument): 13 items addressing conflict outcomes like mutual withdrawal or compromise. Scoring: Responses are recorded on a 9-point Likert scale (ranging from “Not at all likely” to “Very likely”).

Subscales: The questionnaire measures three main components:

Mutual Constructive Communication.

Mutual Avoidance.

Demand-Withdraw Communication (comprising two subscales: Husband Demand/Wife Withdraw and Wife Demand/Husband Withdraw). Reliability: In a study by Masoumi et al. (1396), Cronbach’s alpha coefficients were reported as follows: Mutual Constructive Communication: 0.61 Demand-Withdraw: 0.50 (Husband Demand/Wife Withdraw: 0.51; Wife Demand/Husband Withdraw: 0.47).

Self-Compassion Scale (SCS): Origin: Developed by Kristin Neff (2003; revised 2023).

Structure: The scale comprises 26 items scored on a Likert scale. Theoretical Components: Conceptually, the construct consists of three primary dimensions: Mindfulness, Common Humanity, and Self-Kindness. Factor Structure: While the theory posits three main factors, factor analysis reveals six subscales representing the positive and negative poles of each dimension: Self-Kindness, Self-Judgment, Common Humanity, Isolation, Mindfulness and Over-Identification.

Reliability: In a study by Khosravi et al. (2013), the Cronbach's alpha for the total score was 0.76. Cronbach's alpha coefficients for the subscales were reported as:

Self-Kindness: 0.81

Self-Judgment: 0.79

Common Humanity: 0.84

Isolation: 0.85

Mindfulness: 0.80

Over-Identification: 0.83

Validity: The validity of the scale has been reported as satisfactory in prior research.

Results

To evaluate the validity of the measurement model, a Confirmatory Factor Analysis (CFA) was conducted. The fit indices presented in Table 1 indicate that the proposed model fits the empirical data well.

Table 1. Fit Indices for the Measurement Model

Fit Index	Acceptable Range	Good Fit Range	Excellent Fit Range	Observed Value	Interpretation
χ^2/χ^2 (Chi-Square)	—	—	—	453.73	—
df/df (Degrees of Freedom)	—	—	—	125	—
ppp-value	<0.05< 0.05<0.05	<0.01< 0.01<0.01	<0.001< 0.001<0.001	0.001	Excellent
$\chi^2/df/\chi^2/df$	2-32 - 32-3	3-43 - 43-4	4-54 - 54-5	3.62	Good
RMSEA	<0.10< 0.10<0.10	<0.08< 0.08<0.08	<0.05< 0.05<0.05	0.072	Good
SRMR	<0.10< 0.10<0.10	<0.08< 0.08<0.08	<0.05< 0.05<0.05	0.049	Excellent
CFI	>0.80> 0.80>0.80	>0.90> 0.90>0.90	>0.95> 0.95>0.95	0.96	Excellent
NFI	>0.80> 0.80>0.80	>0.90> 0.90>0.90	>0.95> 0.95>0.95	0.93	Good

NNFI (TLI)	>0.80> 0.80>0.80	>0.90> 0.90>0.90	>0.95> 0.95>0.95	0.94	Good
GFI	>0.80> 0.80>0.80	>0.90> 0.90>0.90	>0.95> 0.95>0.95	0.93	Good
AGFI	>0.80> 0.80>0.80	>0.90> 0.90>0.90	>0.95> 0.95>0.95	0.90	Good

As shown in Table 1, all fit indices fall within the acceptable to excellent ranges. The non-significant Chi-square result ($p=0.001$) relative to the degrees of freedom, combined with a χ^2/df ratio of 3.62, suggests a good balance between model fit and parsimony. The RMSEA value of 0.072 indicates a close fit, while the SRMR value of 0.049 is well below the threshold of 0.08, signaling an excellent fit. Furthermore, the CFI (0.96) and NFI (0.93) exceed the recommended cutoff of 0.90, and the AGFI (0.90) meets the threshold for good fit. Collectively, these indices confirm that the empirical data strongly support the proposed conceptual model.

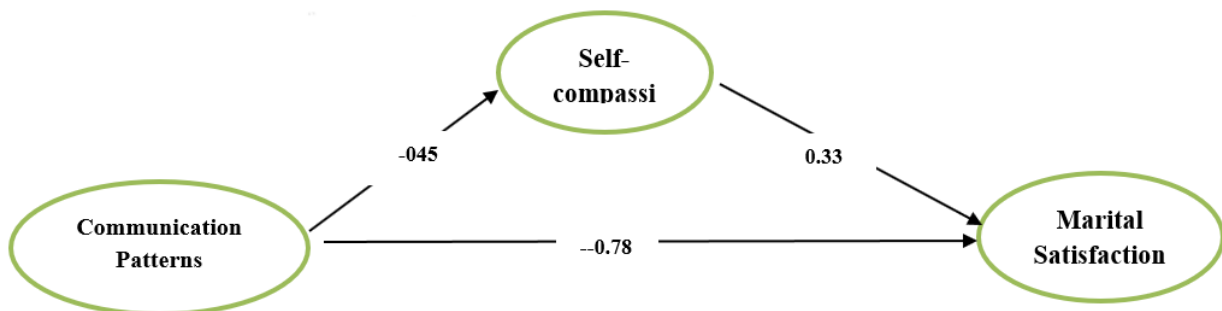


Figure 1. The estimated parameters of the model

Figure 1 illustrates the estimated parameters of the model, including factor loadings, their significance levels, and direct path coefficients (both standardized and unstandardized). Factor Loadings: All factor loadings were statistically significant ($p<0.001$), ranging from 0.45 to 0.78, which confirms the convergent validity of the constructs. Path Coefficients: All direct path coefficients in the structural model were statistically significant ($p<0.05$), indicating that the hypothesized relationships between variables are supported by the data.

The coefficient of determination for the dependent variable, Marital Satisfaction, was calculated as 0.41 (specifically 40.96%). This indicates that the independent variables (Communication

Patterns and Self-Compassion) collectively explain approximately 41% of the variance in marital satisfaction. This is a substantial explanatory power in social science research, suggesting that these factors play a critical role in predicting marital outcomes. The standardized path coefficient (RRR) was 0.64, indicating a strong positive relationship between the predictor variables and marital satisfaction.

Explicit Definition of Fit Criteria: The table clearly defines what constitutes “Acceptable,” “Good,” and “Excellent” fit based on standard SEM literature (e.g., Hu & Bentler, 1999).

Statistical Terminology: Used precise terms like “convergent validity,” “parsimony,” and “coefficient of determination.”

Interpretation of Non-Significant χ^2 : Clarified that a low ppp-value in large samples is expected and interpreted alongside other indices like RMSEA and CFI.

Quantification of Effect Size: Explicitly stated the variance explained (41%) to highlight the practical significance of the findings.

Structure: Organized into logical subsections (Descriptive/Model Fit, Factor Loadings, Variance Explained) for readability.

Discussion

The primary finding of the current study—that Self-Compassion mediates the relationship between Marital Satisfaction and Communication Patterns—is in strong alignment with the majority of domestic and international literature. Specifically, the results confirm that self-compassion can amplify the positive effect of constructive communication styles on marital satisfaction while simultaneously mitigating the negative effects of avoidant and dysfunctional styles.

Previous studies have consistently underscored the importance of communication patterns, the role of emotion regulation strategies, and the position of self-compassion (or similar variables) in determining marital relationship quality. For instance, research by Amini et al. (2024), Moghaddasali et al. (2021), Amani & Khosroshahi (2020), Qezelsafloo et al. (2020), and Alvarez & Lee (2025) has directly or indirectly confirmed the mediating or predictive role of self-compassion, emotion regulation, and resilience in the pathway through which communication patterns influence marital satisfaction. Furthermore, international studies, such as those by Kim & Johnson (2024) and Wang & Chen (2023), have also highlighted the function of communication

styles and self-compassion in enhancing marital satisfaction. Minor discrepancies across studies primarily relate to the specific mediating variable examined (e.g., resilience vs. emotion regulation) rather than challenging the fundamental link between communication patterns and marital satisfaction or the necessity of a regulatory variable. Therefore, the findings of the present research align closely with the theoretical and empirical mainstream of this field.

To elucidate the reasons behind these observed associations, it is necessary to examine the underlying psychological foundations and empirical evidence:

Role of Communication Patterns: Communication patterns serve as the fundamental structure of marital interaction, determining relationship quality, conflict management, and the level of intimacy in shared life. Constructive communication styles, such as assertiveness, active listening, support, and empathy, contribute to the formation of a secure emotional atmosphere and increase marital satisfaction. Conversely, dysfunctional and avoidant styles, including withdrawal, criticism, blaming, and aggression, pave the way for misunderstanding, conflict escalation, and a decline in satisfaction. However, the impact of these patterns on satisfaction is not a simple, mechanical pathway; rather, it is modulated by mediating and regulatory variables that can either strengthen or weaken this relationship.

The Key Regulatory Role of Self-Compassion: Self-compassion functions as a crucial emotion-regulatory construct in this context. According to Neff's theory, self-compassion encompasses three core components: self-kindness, common humanity, and mindfulness toward painful experiences. Individuals high in self-compassion adopt a receptive, kind, and realistic stance toward themselves when facing failures or conflicts, rather than resorting to self-criticism and self-blame. This characteristic reduces the intensity of negative emotions, enhances emotional resilience, promotes self-regulation, and improves the quality of interaction with the spouse. Essentially, self-compassion acts as an emotion regulation mechanism, enabling the individual, in the face of relational stress and challenges, to select more adaptive and effective responses instead of extreme emotional or defensive reactions.

When dysfunctional and avoidant communication styles become active, couples are frequently exposed to intense negative emotions, such as anger, shame, hopelessness, or rejection. If left unregulated, these emotions can lead to negative communication cycles, increased emotional distance, and decreased marital satisfaction. Self-compassion mitigates the intensity of these

negative feelings by providing an internal supportive framework. This allows the individual, by accepting their own and their partner's limitations and mistakes, to step out of the cycle of self-criticism and blame, thereby pursuing problem-solving and relationship repair rather than avoidance or aggression.

The findings of Alvarez & Lee (2025) and Kim & Johnson (2024) clearly demonstrate that self-compassion plays a significant protective role in marital quality by strengthening emotional resilience and reducing self-criticism. Specifically, individuals with high self-compassion retain a greater capacity to maintain composure, solve problems, and restore emotional balance even when confronted with relational conflicts and setbacks.

Cognitive Interpretation: Cognitively, self-compassion enables an individual to interpret their own behavior and their partner's actions in a more realistic and less vulnerable manner. For example, when a spouse displays a negative or avoidant reaction, an individual possessing self-compassion is less likely to interpret this as a sign of personal rejection or worthlessness. Instead, they are more likely to view it as part of the common human experience, potentially resulting from the partner's external or internal pressures. This cognitive approach prevents the escalation of conflicts and misunderstandings, allowing the individual to pursue relationship repair while maintaining empathy and acceptance. Research by Qezelsafloo et al. (2020) and Amani & Khosroshahi (2020) supports that self-compassion and its components (such as self-kindness and mindfulness) correlate positively with marital satisfaction and can act as strong predictors in this area.

Emotional Regulation in Conflict: On an emotional level, self-compassion plays a vital role in managing marital conflicts by decreasing the intensity of negative emotions and promoting emotional regulation. Individuals high in self-compassion are less prone to extreme emotional reactions—such as anger, anxiety, or despair—under pressure and conflict. They are better equipped to engage in problem-solving and dialogue while maintaining calm and mindfulness. This capability becomes especially crucial when couples face avoidant or hostile communication styles, as the absence of self-compassion typically leads individuals to resort to defensive reactions, denial, or withdrawal, which consequently intensifies conflicts and reduces marital satisfaction. Studies by Moghaddasali et al. (2021) and Abdi Zarrin & Sanei Taheri (2020) further emphasize the role of regulatory and emotional strategies in improving marital relationship quality.

Behavioral and Interpersonal Implications

On a behavioral level, self-compassion motivates individuals to adopt more constructive communication styles. Those possessing high self-compassion tend to treat their spouses with respect, acceptance, and empathy even during conflicts or misunderstandings. In challenging situations, rather than withdrawing or becoming aggressive, these individuals actively seek dialogue, problem-solving, and relationship repair. This behavioral pattern fosters a positive and secure emotional atmosphere within the relationship, serving as a foundation for increased marital satisfaction.

Studies by Wang & Chen (2023), Zain & Pakel (2023), and Martinez & Lopez (2022) have demonstrated that positive communication styles—whether in face-to-face interactions or digital spaces—significantly enhance marital satisfaction, with emotional and regulatory factors playing a prominent role in this pathway.

On an interpersonal level, self-compassion not only improves an individual's quality of interaction with themselves but also enhances their interactions with their spouse. Individuals high in self-compassion typically exhibit higher levels of empathy, acceptance, and supportiveness, which establish the basis for a healthy and intimate emotional space. These individuals are less likely to engage in destructive reciprocal reactions when faced with a spouse's negative communication styles. Instead, they are better equipped to maintain emotional and cognitive equilibrium, allowing them to focus on problem-solving and rebuilding the relationship. This process plays a pivotal role in maintaining and enhancing marital satisfaction, particularly in the presence of severe or chronic conflicts.

Specifically, the study by Kim & Johnson (2024) indicates that self-compassion in newly married couples contributes to relationship maintenance during the first year of marriage by boosting emotional resilience and reducing self-criticism.

Synthesis of Mechanisms: Strengthening and Mitigating Effects

Integrating the research findings, self-compassion can be conceptualized as a fundamental psychological capacity that strengthens the positive impact of constructive communication styles on marital satisfaction. Individuals with high self-compassion are better equipped to utilize constructive communication strategies and, when faced with relational errors or setbacks, seek growth and learning rather than blaming themselves or their partners.

Conversely, in the presence of dysfunctional communication styles, self-compassion acts as a psychological shield. It protects the individual from emotional and cognitive harm and prevents the descent into negative communication cycles. These two pathways—enhancing the effect of constructive styles and mitigating the effect of destructive styles—explain the mediating role of self-compassion in the relationship between communication patterns and marital satisfaction. Therefore, the core mechanism lies in self-compassion functioning as an emotion-regulatory system that reduces self-criticism, increases acceptance, enhances emotional resilience, and improves communication skills.

Underlying Psychological Mechanisms

From the perspective of psychological mechanisms, self-compassion prevents the emergence of defensive, avoidant, or aggressive reactions by reducing self-criticism, increasing acceptance, and promoting emotional resilience and regulation. This allows individuals to respond to conflict situations with calmness, acceptance, and heightened mindfulness, rather than becoming trapped in the negative cycles of maladaptive schemas and ineffective communication styles.

This process transforms marital conflicts into opportunities for growth, learning, and increased intimacy, thereby elevating marital satisfaction. The mediating role of self-compassion in the relationships between early maladaptive schemas and marital satisfaction, as well as between communication styles and marital satisfaction, highlights the importance of emotion regulation and self-acceptance mechanisms in the health of spousal relationships. By providing a supportive and accepting psychological space, self-compassion enables individuals to manage negative thoughts and feelings arising from maladaptive schemas or dysfunctional communication styles in a more adaptive manner, preventing entrapment in vicious behavioral and emotional loops. These findings align with foundational theories of Schema Therapy, Emotion Regulation, and Self-Compassion, emphasizing the critical role of internal and regulatory factors in explaining the quality and stability of marital relationships.

Limitations and Future Directions

It is important to acknowledge that this study faced certain limitations. First, the research relied on self-reported data, which carries the potential for response bias and social desirability effects, possibly influencing the accuracy of the findings.

Finally, the results indicate that self-compassion mediates the relationship between early maladaptive schemas and marital satisfaction. Based on these findings, it is recommended that future research investigate other emotion-related constructs associated with self-regulation—such as self-forgiveness, empathy, or emotional flexibility—as alternative or complementary mediators. Exploring these variables will help identify more precise mechanisms through which schemas influence marital satisfaction.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by the ethics committee of Islamic Azad University. The patients/participants provided their written informed consent to participate in this study.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection, and analysis. All authors contributed to the article and approved the submitted version.

Funding

The authors did (not) receive support from any organization for the submitted work.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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