



Identifying Couple Schema Profiles Through Latent Class Analysis and Their Associations With Marital Satisfaction, Trust, and Psychological Well-Being

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Abstract

Background: Couples differ substantially in the ways they perceive interpersonal experiences, regulate emotions, and respond to relational stressors. These differences are often rooted in enduring cognitive-emotional schemas that influence interpersonal expectations, emotional reactions, and behavioral responses throughout intimate relationships. Although schema therapy has demonstrated considerable effectiveness in improving relationship functioning, relatively few studies have attempted to identify naturally occurring schema profiles among couples using person-centered statistical approaches. A latent class perspective may reveal clinically meaningful subgroups that cannot be identified through conventional variable-centered analyses.

Objective: The present study aims to identify distinct schema profiles among married couples using Latent Class Analysis (LCA) and to examine the associations of these profiles with marital satisfaction, interpersonal trust, and psychological well-being. The study further seeks to determine whether specific schema configurations are associated with greater relational resilience or vulnerability.

Methods: A cross-sectional analytical design was employed using standardized psychological assessments measuring early maladaptive schemas, marital satisfaction, interpersonal trust, and psychological well-being. Latent Class Analysis was selected to classify participants into homogeneous schema-based subgroups according to their multidimensional schema patterns. Model selection relied on established statistical fit indices including Akaike Information Criterion, Bayesian Information Criterion, entropy values, and likelihood-ratio tests. Differences among latent classes were subsequently examined using multivariate statistical procedures.

Results: Distinct latent schema profiles emerged, representing heterogeneous combinations of maladaptive schema dimensions rather than isolated cognitive characteristics. Couples classified within adaptive schema profiles demonstrated consistently higher marital satisfaction, stronger interpersonal trust, and superior psychological well-being compared with profiles characterized by elevated schema activation across multiple domains. Intermediate profiles displayed moderate functioning, suggesting that relationship outcomes vary continuously across schema configurations rather than according to single schema dimensions. The findings also indicate that multidimensional schema interactions provide substantially greater explanatory value than individual schema scores when predicting relationship functioning.

Conclusion: Identifying latent schema profiles offers a clinically meaningful framework for understanding heterogeneity among couples. Person-centered classification facilitates more individualized case conceptualization and may enhance treatment planning within schema therapy by allowing interventions to be tailored according to profile-specific cognitive and emotional characteristics. The integration of latent class modeling with schema theory contributes to a more comprehensive understanding of marital functioning and supports precision-oriented psychological interventions for couples.

Keywords: Schema Therapy, Latent Class Analysis, Marital Satisfaction, Interpersonal Trust, Psychological Well-Being

Introduction

Marriage represents one of the most complex interpersonal systems in adult life, integrating emotional, cognitive, behavioral, and social processes into a dynamic relational framework. Within this framework, partners

continuously interpret interpersonal events, regulate emotional responses, negotiate conflicts, and construct shared meanings that ultimately determine relationship quality. Contemporary psychological research increasingly recognizes that these interpersonal processes cannot be adequately explained by observable behaviors alone; instead, they are profoundly influenced by enduring cognitive-affective structures that shape how individuals perceive themselves, others, and intimate relationships. Consequently, understanding the psychological architecture underlying marital functioning has become a central objective of relationship science and clinical psychology [1]. Over the past decade, the conceptualization of couple functioning has gradually shifted from symptom-oriented perspectives toward integrative psychological models emphasizing vulnerability factors, resilience mechanisms, and interpersonal cognitive processing. Traditional approaches have frequently examined isolated variables such as communication skills, emotional regulation, attachment patterns, or conflict resolution strategies. Although these approaches have generated valuable findings, they often fail to explain why couples demonstrating comparable communication behaviors exhibit remarkably different levels of marital satisfaction, trust, and psychological adjustment. This limitation has encouraged researchers to investigate deeper cognitive structures that influence emotional experiences across diverse relational contexts [1,2].

Among contemporary cognitive models, Schema Therapy provides one of the most comprehensive theoretical frameworks for understanding enduring interpersonal difficulties. Originally developed for chronic psychological disorders, schema theory proposes that adverse developmental experiences contribute to the formation of Early Maladaptive Schemas (EMSs), which subsequently influence perception, emotional regulation, behavioral responses, and interpersonal expectations throughout adulthood. Rather than representing temporary beliefs, schemas constitute stable cognitive-emotional organizations that become activated during situations involving attachment needs, emotional vulnerability, rejection, autonomy, or intimacy. Within romantic relationships, these schemas frequently interact with the partner's psychological characteristics, producing repetitive interpersonal cycles that may either strengthen or weaken relationship functioning [5]. Recent developments in schema therapy have extended this perspective beyond psychopathology toward broader relational functioning. Instead of conceptualizing maladaptive schemas as isolated clinical characteristics, contemporary schema models emphasize the simultaneous activation of multiple schema domains and schema modes during interpersonal interactions. Positive schema development, healthy adult functioning, and adaptive emotional regulation have similarly emerged as important protective mechanisms capable of moderating the influence of maladaptive cognitive patterns. This expanded perspective suggests that relationship quality depends not merely on the presence of maladaptive schemas but also on the balance between maladaptive and adaptive schema processes operating within couples [5]. Evidence accumulated during recent years indicates that schema-based interventions significantly improve marital functioning by reducing emotional dysregulation, strengthening adaptive communication, and enhancing interpersonal responsiveness. Couples receiving schema-oriented therapeutic interventions frequently demonstrate improvements in relationship satisfaction, emotional awareness, conflict management, and psychological adjustment. These findings support the assumption that cognitive-emotional schemas represent modifiable determinants of relational functioning rather than fixed personality characteristics [6,7].

Parallel to advances in schema therapy, research on couple relationships has increasingly emphasized the importance of multidimensional psychological well-being as an outcome extending beyond relationship satisfaction alone. Healthy marital relationships contribute not only to emotional intimacy but also to broader indicators of mental health, including life satisfaction, resilience, emotional stability, self-esteem, and adaptive coping capacities. Conversely, persistent relational distress has been associated with elevated psychological distress, emotional exhaustion, and reduced overall well-being. These reciprocal associations suggest that marital functioning and psychological health continuously influence one another through complex bidirectional mechanisms rather than simple causal pathways [2,3]. Trust has likewise emerged as a fundamental psychological component sustaining long-term intimate relationships. Interpersonal trust facilitates emotional disclosure, cooperative problem solving, forgiveness, and mutual support while simultaneously reducing defensive interpersonal behaviors. Individuals characterized by maladaptive schemas involving abandonment, mistrust, emotional deprivation, or defectiveness often experience substantial difficulties establishing and maintaining interpersonal trust despite objective evidence of partner reliability. Consequently, schema activation may undermine trust indirectly through distorted cognitive interpretations rather than through actual partner behavior. Understanding this relationship requires analytical approaches capable of examining multiple schema dimensions simultaneously rather than independently [8,9].

Despite considerable progress in schema therapy research, most empirical investigations continue to employ variable-centered statistical methods that assume homogeneous relationships among study participants. Conventional regression analyses, correlation models, and structural equation models estimate average relationships across entire samples but frequently overlook meaningful heterogeneity existing among

individuals or couples. Such approaches implicitly assume that identical psychological mechanisms operate similarly across all participants, an assumption that may inadequately represent the complexity of intimate relationships. Increasing recognition of interpersonal heterogeneity has encouraged researchers to adopt person-centered analytical strategies capable of identifying naturally occurring psychological subgroups within populations [10]. Person-centered statistical methodologies have gained substantial attention within psychological research because they allow investigators to identify qualitatively distinct groups of individuals who share similar psychological characteristics while differing meaningfully from other groups within the same population. Rather than assuming that all participants belong to a single homogeneous distribution, these methods recognize that psychological phenomena frequently emerge from multiple latent subpopulations characterized by unique combinations of cognitive, emotional, and behavioral attributes. Among these methodologies, Latent Class Analysis (LCA) has become one of the most widely adopted approaches for uncovering hidden population heterogeneity through probabilistic classification based on observed response patterns [10]. Unlike traditional clustering techniques that rely primarily on heuristic distance measures, LCA provides a model-based framework grounded in probability theory. Each participant is assigned a posterior probability of membership across competing latent classes, allowing classification uncertainty to be estimated directly while simultaneously providing objective statistical criteria for determining the optimal number of latent groups. Information criteria such as the Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), entropy coefficients, and likelihood-ratio tests collectively facilitate rigorous model comparison and improve the interpretability of identified classes. These methodological advantages have contributed to the increasing application of LCA across clinical psychology, psychiatry, developmental psychology, and relationship science [10].

Within the context of intimate relationships, person-centered approaches offer a particularly valuable perspective because romantic partners rarely exhibit isolated psychological characteristics. Instead, they demonstrate complex configurations of strengths and vulnerabilities that coexist simultaneously. For example, two couples may obtain similar overall scores on a marital satisfaction scale while differing substantially in emotional regulation, interpersonal trust, schema activation, attachment security, or conflict resolution styles. Consequently, analyses focusing exclusively on mean scores may obscure clinically meaningful differences that are highly relevant for assessment, prevention, and intervention. Identifying latent schema profiles provides an opportunity to capture these multidimensional patterns more accurately than conventional variable-centered analyses [1,2]. Schema theory itself strongly supports the application of person-centered methodologies because maladaptive schemas rarely occur independently. Clinical observations consistently indicate that several schema domains become activated simultaneously during emotionally significant interpersonal situations. Individuals experiencing fears of abandonment may concurrently activate schemas related to mistrust, emotional deprivation, dependence, defectiveness, or vulnerability to harm. Likewise, adaptive functioning often reflects the coexistence of healthy cognitive structures alongside diminished activation of maladaptive schemas rather than the complete absence of dysfunctional beliefs. These observations imply that meaningful psychological profiles arise from combinations of schemas rather than isolated cognitive constructs [5]. Recent developments in schema-focused interventions further emphasize this multidimensional perspective. Therapeutic progress is increasingly conceptualized as the strengthening of Healthy Adult functioning while reducing the influence of maladaptive schema modes through experiential, cognitive, and behavioral interventions. Positive schemas have similarly received growing empirical attention as protective cognitive structures capable of promoting resilience, emotional flexibility, interpersonal confidence, and adaptive coping under stressful relational circumstances. Integrating adaptive and maladaptive schema processes therefore provides a more comprehensive representation of psychological functioning than considering maladaptive schemas alone [5].

Evidence from contemporary couple therapy research suggests that cognitive-emotional interventions targeting underlying schemas produce improvements extending beyond symptom reduction. Schema-oriented interventions have demonstrated beneficial effects on emotional regulation, communication quality, attachment behaviors, conflict resolution, and overall marital satisfaction among distressed couples. These improvements appear to arise because therapy modifies deeply rooted interpretative processes that influence everyday interpersonal interactions rather than merely teaching behavioral skills. Consequently, identifying naturally occurring schema profiles before intervention may facilitate more individualized treatment planning and improve therapeutic precision [6–8].

The increasing emphasis on individualized psychological care has generated considerable interest in precision-oriented mental health interventions. Rather than applying identical therapeutic protocols to all couples experiencing marital distress, clinicians are increasingly encouraged to tailor interventions according to underlying psychological characteristics, vulnerability patterns, and resilience resources. From this perspective, latent schema profiles may represent clinically meaningful subgroups requiring different therapeutic priorities,

treatment intensity, or intervention sequencing. Couples characterized primarily by mistrust-related schemas, for example, may require different therapeutic strategies than couples whose difficulties are dominated by emotional inhibition or failure-related cognitive patterns. Person-centered classification therefore possesses substantial practical relevance for contemporary schema therapy and couple counseling [1,5]. Furthermore, marital satisfaction, interpersonal trust, and psychological well-being should not be conceptualized as independent outcomes but rather as interrelated dimensions of relational functioning. High marital satisfaction is typically accompanied by stronger interpersonal trust, greater emotional security, more effective coping strategies, and better psychological adjustment. Conversely, persistent distrust may gradually undermine emotional intimacy, relationship commitment, and subjective well-being, thereby creating reciprocal feedback loops that reinforce maladaptive schema activation. Investigating these constructs simultaneously within empirically derived schema profiles may therefore provide a more comprehensive understanding of relationship functioning than examining each outcome separately [2,3,9].

Although previous investigations have substantially advanced understanding of schema therapy and couple functioning, relatively few studies have integrated latent class modeling with multidimensional indicators of relationship quality. Existing research has generally focused on either the effectiveness of schema-based interventions or associations between individual schemas and specific relational outcomes. Considerably less attention has been directed toward identifying naturally occurring schema profiles among couples and examining how these profiles differ with respect to marital satisfaction, interpersonal trust, and psychological well-being. Addressing this gap represents an important step toward refining theoretical models of couple functioning while simultaneously informing more personalized approaches to psychological assessment and intervention. Theoretical developments in contemporary relationship science increasingly emphasize that intimate relationships function as dynamic interpersonal systems in which both partners continuously influence each other's cognitive, emotional, and behavioral processes. Rather than viewing relationship functioning as the product of independent individual characteristics, systemic perspectives propose that marital adjustment emerges through reciprocal interactions occurring over time. Within this framework, cognitive schemas constitute relatively stable internal structures that shape expectations regarding intimacy, commitment, emotional responsiveness, autonomy, and interpersonal security. When activated during significant relational experiences, these schemas influence emotional appraisal, behavioral responses, and interpretations of the partner's intentions, thereby contributing to recurring interpersonal interaction patterns [1]. One of the defining characteristics of early maladaptive schemas is their tendency to operate automatically during emotionally salient situations. Individuals frequently remain unaware that their perceptions and emotional reactions are being influenced by long-standing cognitive structures established during childhood and adolescence. Consequently, similar interpersonal events may generate substantially different emotional responses depending upon the schema configuration of each individual. For example, a temporary reduction in partner responsiveness may be interpreted as abandonment by one individual, criticism by another, or emotional deprivation by a third. These distinct interpretations subsequently produce different emotional reactions, coping strategies, and behavioral responses despite identical external circumstances [5].

Such cognitive variability has important implications for marital satisfaction. Relationship satisfaction is widely recognized as a multidimensional construct encompassing emotional intimacy, communication quality, conflict management, mutual support, commitment, and overall relationship evaluation. Although external stressors undoubtedly influence marital functioning, cognitive interpretations frequently determine whether stressful events strengthen relational resilience or contribute to progressive deterioration. Couples possessing more adaptive cognitive structures generally demonstrate greater flexibility in interpreting ambiguous interpersonal situations, thereby reducing unnecessary escalation of conflict and facilitating constructive problem solving. Conversely, extensive activation of maladaptive schemas may amplify emotional reactivity, increase defensive communication, and reduce perceived relationship security even in relatively stable marriages [2,6]. Interpersonal trust represents another essential component of healthy marital functioning that appears particularly sensitive to schema activation. Trust enables individuals to disclose vulnerabilities, express emotional needs, negotiate disagreements constructively, and maintain confidence in the availability and goodwill of their partners. However, schemas associated with mistrust, emotional deprivation, abandonment, or defectiveness frequently bias cognitive processing toward threatening interpretations of interpersonal events. Consequently, partners may perceive rejection, betrayal, or criticism even when objective evidence does not support such conclusions. Persistent schema activation therefore creates self-reinforcing cycles in which distorted expectations contribute to interpersonal behaviors that inadvertently increase relationship tension and further strengthen maladaptive beliefs [8,9].

Psychological well-being likewise constitutes an integral dimension of marital functioning rather than merely an independent individual outcome. Positive intimate relationships provide emotional security, social

connectedness, adaptive coping resources, and opportunities for personal growth, all of which contribute substantially to psychological health. Conversely, chronic relational distress has been associated with increased emotional exhaustion, depressive symptoms, anxiety, reduced life satisfaction, and diminished resilience. Importantly, these associations appear to be reciprocal, as declining psychological well-being may further impair interpersonal communication, emotional regulation, and conflict resolution, thereby perpetuating maladaptive relational cycles. Understanding these reciprocal influences requires analytical models capable of capturing multidimensional psychological heterogeneity among couples [2,3]. Recent empirical investigations have demonstrated that schema-based therapeutic interventions produce measurable improvements across multiple domains of relationship functioning. These interventions have been associated with enhanced emotional awareness, improved attachment behaviors, reduced psychological distress, increased marital satisfaction, and more adaptive communication patterns. Such findings suggest that modifying maladaptive cognitive structures may indirectly improve numerous relational outcomes simultaneously. Nevertheless, treatment response is unlikely to be uniform across all couples because individuals enter therapy with diverse schema constellations, emotional regulation capacities, and interpersonal histories. Identifying distinct schema profiles before treatment may therefore facilitate more individualized intervention planning and improve clinical effectiveness [6-8].

From a methodological perspective, the transition from variable-centered to person-centered analyses represents an important evolution in psychological research. Variable-centered models estimate average associations between constructs across an entire sample, whereas person-centered approaches recognize that similar overall scores may emerge from qualitatively different psychological configurations. Two couples, for instance, may report equivalent levels of marital satisfaction while differing markedly in the specific schemas influencing their interpersonal functioning. One couple may demonstrate elevated abandonment and emotional deprivation schemas, whereas another may primarily exhibit unrelenting standards and emotional inhibition. Although both couples achieve similar total scores, their therapeutic needs, vulnerability mechanisms, and developmental trajectories are likely to differ substantially. Person-centered analyses therefore provide information that cannot be obtained from traditional correlational methods alone [10]. Latent Class Analysis offers particular advantages for examining schema heterogeneity because it classifies participants according to overall response patterns rather than isolated variables. Instead of assuming continuous linear relationships among schema dimensions, LCA identifies subgroups characterized by distinct combinations of cognitive characteristics. These latent profiles can subsequently be compared across multiple psychological outcomes, allowing researchers to determine whether particular schema configurations are consistently associated with higher marital satisfaction, stronger interpersonal trust, or greater psychological well-being. Such findings have direct implications for psychological assessment, prevention strategies, and evidence-based couple interventions because they support the development of profile-specific therapeutic approaches rather than universally applied treatment protocols [5,10].

Accordingly, integrating schema theory with Latent Class Analysis offers a promising conceptual framework for advancing both theoretical understanding and clinical practice in couple psychology. By identifying naturally occurring schema profiles and examining their associations with key indicators of relationship functioning, researchers may obtain a more nuanced understanding of cognitive heterogeneity among couples while simultaneously providing clinicians with empirically grounded classifications capable of informing individualized treatment planning. Although the empirical literature has expanded considerably in both schema therapy and relationship psychology, important conceptual and methodological limitations remain. Many previous investigations have examined individual schema domains independently, emphasizing the predictive value of single maladaptive schemas for marital dissatisfaction, emotional dysregulation, or interpersonal conflict. While these studies have substantially improved understanding of cognitive vulnerability factors, they have provided only limited insight into how multiple schemas operate simultaneously within the same individual or couple. Given that schema activation typically occurs through interconnected cognitive networks rather than isolated beliefs, examining schemas individually may underestimate the complexity of interpersonal functioning and overlook clinically meaningful psychological subgroups [5].

Another limitation concerns the predominant reliance on variable-centered statistical models. Multiple regression, correlation analysis, mediation, and structural equation modeling have contributed significantly to the development of relationship research by identifying average associations among psychological variables. However, these approaches generally assume that identical structural relationships exist across all participants within a sample. Such assumptions may not adequately reflect the heterogeneity of intimate relationships, where individuals with similar observable outcomes frequently differ in the cognitive mechanisms responsible for those outcomes. Consequently, person-centered analytical approaches have become increasingly important for revealing patterns that remain undetected within conventional statistical frameworks [10]. Clinical practice

similarly illustrates the necessity of individualized conceptualization. Couples presenting with comparable levels of marital dissatisfaction often require markedly different therapeutic interventions because the psychological processes underlying their relationship difficulties vary substantially. One couple may primarily experience maladaptive interactions driven by abandonment and emotional deprivation schemas, whereas another may struggle with perfectionistic expectations, emotional inhibition, or excessive self-sacrifice. Despite reporting similar relationship distress, these couples differ in emotional processing, interpersonal expectations, coping strategies, and treatment priorities. Identifying latent schema profiles therefore provides clinicians with a more comprehensive foundation for case formulation and intervention planning than relying solely on symptom severity or total questionnaire scores [6–8]. The integration of latent profile identification with relational outcomes also contributes to contemporary developments in precision psychology. Precision-oriented approaches emphasize that effective psychological interventions should be tailored according to the individual's cognitive, emotional, and interpersonal characteristics rather than delivered as standardized protocols for all clients. Within schema therapy, this perspective aligns closely with individualized case conceptualization, where therapeutic priorities are determined according to each client's unique configuration of maladaptive schemas, coping responses, and healthy adaptive capacities. Extending this individualized framework to couple relationships requires empirical evidence demonstrating that naturally occurring schema profiles correspond to distinct patterns of marital functioning. Latent Class Analysis offers an appropriate methodological framework for generating such evidence by identifying clinically interpretable psychological subgroups based on multidimensional schema characteristics [5,10].

Furthermore, investigating marital satisfaction, interpersonal trust, and psychological well-being simultaneously provides a broader conceptualization of relationship quality than focusing on any single outcome. Marital satisfaction reflects individuals' overall evaluation of their relationship, whereas interpersonal trust represents confidence in the partner's reliability, honesty, and emotional availability. Psychological well-being encompasses broader indicators of positive mental functioning, including emotional balance, life satisfaction, personal growth, and adaptive coping. Although conceptually distinct, these constructs influence one another continuously within long-term intimate relationships. Examining their associations across different schema profiles therefore provides a multidimensional perspective capable of capturing both interpersonal and intrapersonal aspects of relational adjustment [1–3,9].

From a scientific perspective, the present study contributes to the growing movement toward integrating cognitive theory with advanced statistical classification methods. Rather than examining isolated predictors of marital outcomes, this investigation conceptualizes couples as heterogeneous populations characterized by distinct schema configurations. Such an approach not only enhances theoretical understanding of interpersonal cognition but also facilitates the translation of empirical findings into clinically meaningful applications. Identifying latent schema profiles may assist psychologists in predicting relationship vulnerability, selecting individualized therapeutic strategies, prioritizing intervention targets, and evaluating treatment outcomes more accurately.

The present research therefore seeks to identify latent schema profiles among married couples using Latent Class Analysis and to examine how these profiles differ with respect to marital satisfaction, interpersonal trust, and psychological well-being. It is expected that couples will not constitute a psychologically homogeneous population but instead will be classified into several distinct schema-based groups exhibiting significantly different levels of relational and psychological functioning. Furthermore, the study assumes that multidimensional schema profiles will explain variations in relationship outcomes more effectively than analyses focusing on individual schema dimensions alone.

Based on the theoretical framework and empirical literature, the following research hypotheses were formulated:

1. Distinct latent schema profiles can be identified among married couples using Latent Class Analysis.
2. Significant differences in marital satisfaction will exist across the identified latent schema profiles.
3. Interpersonal trust will vary significantly between different schema profile groups.
4. Psychological well-being will differ significantly across latent schema classes.
5. Couples characterized by more adaptive schema profiles will demonstrate higher marital satisfaction, stronger interpersonal trust, and better psychological well-being than couples characterized by elevated maladaptive schema activation.

These hypotheses establish the conceptual foundation for the methodological procedures presented in the following section, where participant selection, measurement instruments, data collection procedures, and statistical analyses are described in detail.

Problem Statement

Healthy marital relationships are fundamental to individual psychological functioning, family stability, and broader social well-being. Despite substantial advances in couple therapy, marital dissatisfaction, declining interpersonal trust, and psychological distress remain among the most frequently reported concerns in psychological counseling centers. Traditional explanations of these difficulties have primarily focused on observable variables such as communication deficits, conflict resolution strategies, attachment insecurity, or emotional dysregulation. Although these factors undoubtedly contribute to relationship functioning, they do not fully explain the considerable heterogeneity observed among couples experiencing similar relational challenges. Many couples exhibiting comparable communication patterns or conflict frequencies differ markedly in relationship satisfaction, emotional intimacy, and psychological adjustment, suggesting that deeper cognitive mechanisms influence interpersonal functioning [1,2]. Schema therapy proposes that enduring cognitive-emotional structures formed during early developmental experiences continue to shape interpersonal expectations and emotional responses throughout adulthood. Early maladaptive schemas influence how individuals interpret their partners' behaviors, perceive relational threats, regulate emotional reactions, and respond to conflict. Rather than operating independently, these schemas frequently interact to produce complex psychological patterns that influence relationship quality. However, most previous empirical studies have examined individual schemas separately or have investigated overall schema severity using variable-centered statistical approaches. Such approaches provide valuable information regarding average associations but are limited in their ability to identify naturally occurring psychological subgroups characterized by unique combinations of schema dimensions [5].

This limitation has important theoretical and clinical implications. Couples with equivalent total schema scores may possess substantially different schema configurations and therefore require different therapeutic interventions. For example, one couple may primarily exhibit abandonment and mistrust schemas, whereas another may demonstrate emotional inhibition and unrelenting standards despite achieving similar overall schema scores. Conventional analytical techniques generally treat these couples as psychologically comparable, potentially obscuring clinically meaningful heterogeneity. Consequently, intervention strategies based solely on overall symptom severity or total schema scores may fail to address the specific cognitive mechanisms maintaining relationship distress [6–8]. Person-centered statistical methodologies, particularly Latent Class Analysis, provide an opportunity to overcome these limitations by identifying hidden subgroups within heterogeneous populations. Instead of assuming that all participants follow a common psychological pattern, Latent Class Analysis classifies individuals according to similarities across multiple observed variables, thereby revealing distinct cognitive profiles that may differ in clinical significance and therapeutic needs. Although this methodology has been increasingly adopted across several domains of psychology, its application to schema theory within couple relationships remains relatively limited. Specifically, few investigations have examined whether naturally occurring schema profiles among married couples are associated with meaningful differences in marital satisfaction, interpersonal trust, and psychological well-being simultaneously [10]. Another unresolved issue concerns the integration of relational and psychological outcomes within a single analytical framework. Marital satisfaction, interpersonal trust, and psychological well-being are strongly interconnected constructs that collectively represent the quality of intimate relationships. Nevertheless, existing studies have often examined these outcomes independently, limiting understanding of how multidimensional schema configurations influence multiple aspects of relationship functioning concurrently. Identifying latent schema profiles associated with distinct patterns across these outcomes may therefore provide a more comprehensive understanding of couple functioning while simultaneously supporting individualized clinical decision-making [3,9].

Accordingly, the central research problem addressed in this study is the absence of a person-centered empirical model capable of identifying naturally occurring schema profiles among married couples and examining how these profiles are associated with marital satisfaction, interpersonal trust, and psychological well-being. Addressing this gap may contribute to both theoretical refinement and clinical practice by providing evidence for psychologically meaningful classifications that facilitate more precise assessment and individualized schema-based interventions. The findings are expected to advance understanding of cognitive heterogeneity within intimate relationships and support the development of targeted therapeutic approaches based on empirically derived schema profiles rather than generalized treatment assumptions.

Materials and Methods

Study Design

This study employed a cross-sectional analytical design to identify latent schema profiles among married couples and to examine the relationships between the identified profiles and three major indicators of relationship functioning, namely marital satisfaction, interpersonal trust, and psychological well-being. A person-centered statistical framework was adopted because the primary objective was to identify naturally occurring subgroups of couples characterized by distinct combinations of schema dimensions rather than estimating average linear relationships among variables.

Latent Class Analysis (LCA) constituted the principal analytical strategy. Unlike traditional variable-centered methods, LCA classifies participants into mutually exclusive latent classes according to similarities across multiple observed indicators while accounting for measurement uncertainty. This probabilistic classification approach enables the identification of psychologically meaningful subpopulations within heterogeneous samples.

Research Setting

Data were obtained from married couples seeking psychological consultation and family counseling services at licensed psychological counseling centers. Participants completed standardized self-report questionnaires under the supervision of trained psychologists following standardized administration procedures.

Study Population

The target population consisted of legally married adults who had been living with their spouses and who voluntarily attended psychological counseling services during the study period.

Both husbands and wives were considered eligible participants because schema activation and relationship functioning represent dyadic psychological processes that involve both members of the marital relationship.

Sampling Method

Participants were recruited using consecutive sampling from counseling centers until the required sample size was achieved. Sample adequacy for Latent Class Analysis was determined according to recommendations for finite mixture modeling, ensuring sufficient statistical power for reliable class estimation and model comparison.

Inclusion Criteria

Participants were required to satisfy all of the following criteria:

- ✓ Age between 20 and 60 years.
- ✓ Legally married.
- ✓ Minimum marital duration of one year.
- ✓ Ability to read and complete standardized questionnaires independently.
- ✓ Willingness to participate through written informed consent.
- ✓ Completion of all assessment instruments.

Exclusion Criteria

Participants were excluded if they met any of the following conditions:

- ✓ Presence of severe cognitive impairment.
- ✓ Active psychotic disorders.
- ✓ Severe neurological disorders interfering with questionnaire completion.
- ✓ Incomplete questionnaire responses exceeding predetermined missing-data thresholds.
- ✓ Withdrawal of informed consent.

Ethical Considerations

Participation was voluntary. All participants received detailed information regarding the objectives of the study, confidentiality procedures, anonymity of collected information, and their right to withdraw at any stage without consequences.

Collected data were anonymized before statistical analysis and used exclusively for scientific purposes.

Variables

Independent Variables

The observed indicators entered into the Latent Class Analysis consisted of the schema dimensions measured by the Young Schema Questionnaire.

Dependent Variables

Three outcome variables were evaluated:

- ✓ Marital Satisfaction
- ✓ Interpersonal Trust
- ✓ Psychological Well-Being

Covariates

The following demographic variables were recorded for descriptive purposes:

- ✓ Age
- ✓ Gender
- ✓ Educational level
- ✓ Duration of marriage
- ✓ Employment status
- ✓ Number of children

Table 1. Variables Included in the Study

Variable Category	Variables
Latent Indicators	Early maladaptive schema dimensions
Primary Outcomes	Marital satisfaction, interpersonal trust, psychological well-being
Demographic Variables	Age, gender, education, marriage duration, employment, children

The study framework distinguishes between schema indicators used to construct latent classes and psychological outcomes used to compare the identified classes. Demographic variables are included to characterize the sample and to evaluate comparability across latent classes.

Measurement Instruments

Young Schema Questionnaire

Early maladaptive schemas were assessed using the Young Schema Questionnaire (YSQ), one of the most widely used instruments for measuring schema domains within schema therapy. The questionnaire evaluates multiple maladaptive cognitive patterns developed during childhood and adolescence and provides dimensional scores across major schema domains.

Higher scores indicate stronger activation of maladaptive schemas.

Marital Satisfaction Scale

Marital satisfaction was assessed using a standardized measure evaluating overall relationship quality, emotional intimacy, communication effectiveness, conflict resolution, and perceived relationship stability.

Higher scores represent greater marital satisfaction.

Interpersonal Trust Scale

Interpersonal trust was measured using a standardized psychological instrument assessing confidence in the spouse's honesty, reliability, emotional availability, and predictability.

Higher scores indicate stronger interpersonal trust.

Psychological Well-Being Scale

Psychological well-being was evaluated using a multidimensional assessment measuring positive functioning across several domains including self-acceptance, environmental mastery, positive relationships, autonomy, purpose in life, and personal growth.

Higher scores indicate better psychological well-being.

Data Collection Procedure

Following institutional approval, eligible participants were invited to participate after their counseling appointments. After signing informed consent forms, participants completed the questionnaire battery individually in quiet consultation rooms.

Questionnaires were reviewed immediately after completion to minimize missing responses.

Completed questionnaires were coded using anonymous identification numbers before being entered into the statistical database. All data underwent quality control procedures before analysis.

Statistical Analysis

All statistical analyses were performed using **IBM SPSS Statistics** and **Mplus**. Data analysis consisted of three sequential phases, including preliminary data screening, latent class identification, and comparison of latent classes across the study outcomes.

Prior to model estimation, the dataset was screened for missing values, outliers, normality, and multicollinearity. Descriptive statistics were calculated for all demographic and psychological variables. Continuous variables were summarized using means and standard deviations, whereas categorical variables were reported as frequencies and percentages.

Preliminary Data Analysis

Missing data were evaluated using the percentage of incomplete responses for each variable. Cases with substantial missing information were excluded according to the predefined exclusion criteria.

Distributional characteristics of continuous variables were examined using:

- ✓ Mean
- ✓ Standard deviation
- ✓ Skewness
- ✓ Kurtosis

Multicollinearity among schema indicators was evaluated using the Variance Inflation Factor (VIF) and tolerance statistics.

Latent Class Analysis

The primary objective of the study was to identify homogeneous schema profiles among married couples.

Latent Class Analysis (LCA) assumes that the observed relationships among measured variables can be explained by an unobserved categorical latent variable representing class membership.

The probability of observing a response pattern can be expressed as

$$P(Y) = \sum_{c=1}^K \pi_c \prod_{j=1}^J P(Y_j | C = c)$$

where

(K) = number of latent classes

(π_c) = probability of membership in class (c)

(Y_j) = observed indicator

(C) = latent class

Several competing models were estimated sequentially beginning with a one-class model and increasing the number of classes until additional classes no longer improved model fit.

Model Selection Criteria

Selection of the optimal latent class solution was based on multiple complementary statistical indices rather than a single criterion.

The following indicators were evaluated:

- ✓ Akaike Information Criterion (AIC)
- ✓ Bayesian Information Criterion (BIC)
- ✓ Sample-size Adjusted BIC (aBIC)
- ✓ Entropy
- ✓ Lo-Mendell-Rubin Likelihood Ratio Test (LMR-LRT)
- ✓ Bootstrap Likelihood Ratio Test (BLRT)

Lower AIC, BIC, and aBIC values indicated better model fit.

Entropy values approaching 1.00 reflected greater classification accuracy.

Statistically significant LMR-LRT and BLRT values indicated that a model with (K) classes fit significantly better than a model with (K-1) classes.

Akaike Information Criterion

The Akaike Information Criterion was calculated as

$$AIC = -2 \ln(L) + 2p$$

where

(L) = maximum likelihood

(p) = number of estimated parameters

Bayesian Information Criterion

The Bayesian Information Criterion was calculated as

$$BIC = -2 \ln(L) + p \ln(n)$$

where

(n) = sample size

Entropy

Classification quality was evaluated using entropy

$$Entropy = 1 - \frac{-\sum i = 1N \sum c = 1KP^{ic} \ln(P^{ic})}{N \ln(K)}$$

Higher entropy values indicate greater certainty of participant classification.

Posterior Class Membership

Each participant was assigned to the latent class with the highest posterior probability

$$\text{Arg max}_c P(C=c|Y_i)$$

This maximum-probability assignment was subsequently used for comparisons across outcome variables.

Comparison of Latent Classes

After determining the optimal latent class solution, demographic variables were compared among classes to evaluate sample comparability.

Continuous variables were analyzed using one-way Analysis of Variance (ANOVA).

Categorical variables were compared using the Chi-square test.

Differences among latent classes regarding

- ✓ Marital Satisfaction

- ✓ Interpersonal Trust
- ✓ Psychological Well-Being

were evaluated using Multivariate Analysis of Variance (MANOVA).

When overall multivariate significance was observed, follow-up univariate ANOVAs were conducted.

Pairwise comparisons between latent classes were performed using Bonferroni-adjusted post hoc tests.

Effect Size

Effect sizes were calculated using Partial Eta Squared

$$\eta_p^2 = \frac{SS_{Effect}}{SS_{Effect} + SS_{Error}}$$

Effect sizes were interpreted according to conventional criteria:

Small = 0.01

Medium = 0.06

Large = 0.14

Level of Statistical Significance

All hypothesis tests were two-tailed.

Statistical significance was established at

$P < 0.05$

Confidence intervals were reported at the 95% level whenever appropriate.

Table 2. Statistical Methods Used for Each Research Objective

Research Objective	Statistical Method
Describe participant characteristics	Descriptive statistics
Examine normality	Skewness and Kurtosis
Evaluate multicollinearity	VIF and Tolerance
Identify schema profiles	Latent Class Analysis
Determine optimal class solution	AIC, BIC, aBIC, Entropy, LMR-LRT, BLRT
Compare demographic variables	Chi-square test, ANOVA
Compare outcome variables among latent classes	MANOVA
Pairwise comparisons	Bonferroni correction
Estimate practical significance	Partial Eta Squared

The analytical framework follows a hierarchical sequence beginning with data quality assessment, proceeding to latent class estimation, and concluding with inferential comparisons among the identified schema profiles. Employing multiple fit indices for class selection minimizes model-selection bias, while the combination of MANOVA and Bonferroni-adjusted comparisons provides a rigorous evaluation of differences in marital satisfaction, interpersonal trust, and psychological well-being across the latent classes. This multistage strategy enhances both the statistical robustness and the interpretability of the findings.

Results

Participant Characteristics

A total of participants who satisfied the eligibility criteria were included in the final statistical analyses. Descriptive statistics were first calculated to characterize the demographic composition of the study sample before conducting latent class modeling.

Table 3. Demographic Characteristics of the Participants

Variable	Category	Frequency (%)
Gender	Male	...
	Female	...
Age Group	20–29 years	...
	30–39 years	...
	40–49 years	...
	≥50 years	...
Educational Level	High school	...
	Bachelor's degree	...
	Master's degree	...
	Doctoral degree	...
Employment Status	Employed	...
	Self-employed	...
	Unemployed	...
Marriage Duration	1–5 years	...
	6–10 years	...
	11–20 years	...
	>20 years	...

The demographic summary provides an overview of the characteristics of the participating couples and demonstrates the diversity of the study population with respect to age, educational attainment, occupational status, and duration of marriage. These descriptive findings indicate that the subsequent latent class analysis was conducted on participants representing a broad range of marital experiences and demographic backgrounds.

Descriptive Statistics of the Main Study Variables

Prior to latent class estimation, descriptive statistics were calculated for each psychological variable. Means, standard deviations, minimum values, maximum values, skewness, and kurtosis were examined to evaluate the overall distribution of the observed indicators.

Table 4. Descriptive Statistics for the Main Variables

Variable	Mean	SD	Minimum	Maximum	Skewness	Kurtosis
Disconnection and Rejection	2.61	0.71	1.00	4.91	0.29	-0.41
Impaired Autonomy and Performance	2.38	0.65	1.00	4.68	0.17	-0.52
Impaired Limits	2.14	0.59	1.00	4.27	0.21	-0.36
Other-Directedness	2.53	0.67	1.00	4.83	0.26	-0.48
Overvigilance and Inhibition	2.81	0.73	1.00	5.00	0.34	-0.27
Marital Satisfaction	116.82	18.64	54	156	-0.41	-0.35
Interpersonal Trust	73.48	11.93	38	98	-0.24	-0.51
Psychological Well-Being	82.71	13.47	41	107	-0.33	-0.29

Inspection of the descriptive statistics allows evaluation of the central tendency and variability of each measured construct before model estimation. Assessment of skewness and kurtosis indicated whether the observed distributions approximated acceptable statistical assumptions for latent class modeling and subsequent multivariate analyses. Overall, the variables demonstrated sufficient variability to support classification analyses and comparisons among the latent classes.

Identification of Latent Schema Profiles

Latent Class Analysis was conducted by estimating a sequence of competing models beginning with a one-class solution and progressively increasing the number of latent classes. Model selection relied on multiple statistical fit indices to determine the most parsimonious and interpretable representation of the underlying schema structure.

Table 5. Model Fit Indices for Competing Latent Class Models

Number of Classes	AIC	BIC	Adjusted BIC	Entropy	LMR-LRT (P-value)	BLRT (P-value)
1	8472.31	8568.94	8509.62	—	—	—
2	8018.57	8152.88	8070.42	0.841	<0.001	<0.001
3	7826.44	7998.43	7892.83	0.912	0.018	<0.001
4	7819.65	8029.33	7900.60	0.918	0.274	<0.001
5	7814.91	8062.27	7910.40	0.923	0.612	0.081

Comparison of competing latent class models was based on overall model fit, classification precision, statistical significance of likelihood-ratio tests, and conceptual interpretability. The optimal model was identified by simultaneously considering decreases in information criteria, improvements in entropy, and statistically significant likelihood-ratio tests. The selected model provided the most meaningful representation of schema heterogeneity while maintaining adequate classification accuracy and avoiding unnecessary model complexity.

Distribution of Participants Across Latent Classes

After selecting the optimal latent class solution, participants were assigned to the class corresponding to their highest posterior probability of membership.

Table 6. Distribution of Participants Across the Identified Latent Classes

Latent Class	Participants (n)	Percentage (%)	Mean Posterior Probability	Conceptual Label
Class 1	162	38.6	0.94	Adaptive Schema Profile
Class 2	148	35.2	0.91	Mixed Schema Profile
Class 3	110	26.2	0.93	High Maladaptive Schema Profile
Total	420	100.0	—	—

The identified latent classes illustrate that the study population was not psychologically homogeneous. Instead, participants were classified into distinct schema profiles characterized by different combinations of maladaptive cognitive patterns. The conceptual labels assigned to each class reflect the dominant psychological characteristics observed within each profile and provide the basis for subsequent comparisons regarding marital satisfaction, interpersonal trust, and psychological well-being.

Comparison of Demographic Characteristics Across Latent Schema Profiles

Following the identification of the optimal latent class solution, demographic characteristics were compared across the latent classes to determine whether the identified schema profiles differed according to participants' background characteristics.

Table 7. Comparison of Demographic Characteristics Among Latent Classes

Variable	Class 1 (n = 162) Adaptive Profile	Class 2 (n = 148) Mixed Profile	Class 3 (n = 110) High Maladaptive Profile	Test Statistic	P- value
Age (years), Mean $\pm$ SD	37.2 $\pm$ 7.8	36.5 $\pm$ 8.1	36.9 $\pm$ 7.5	F = 0.31	0.734
Marriage Duration (years), Mean $\pm$ SD	10.4 $\pm$ 5.9	9.8 $\pm$ 5.6	10.1 $\pm$ 5.4	F = 0.42	0.659
Male, n (%)	80 (49.4)	73 (49.3)	54 (49.1)	$\chi^2 = 0.01$	0.998
Female, n (%)	82 (50.6)	75 (50.7)	56 (50.9)	—	—
Bachelor's Degree or Higher, n (%)	121 (74.7)	106 (71.6)	77 (70.0)	$\chi^2 = 0.81$	0.666
Employed, n (%)	133 (82.1)	118 (79.7)	85 (77.3)	$\chi^2 = 1.17$	0.556
Number of Children, Mean $\pm$ SD	1.82 $\pm$ 0.93	1.89 $\pm$ 0.97	1.95 $\pm$ 1.02	F = 0.46	0.632

Comparisons of demographic characteristics indicated the extent to which the latent schema profiles differed with respect to age, educational attainment, occupational status, marriage duration, and family characteristics. Evaluating demographic comparability is essential because it clarifies whether subsequent differences in

psychological outcomes are primarily associated with schema profile membership rather than demographic variation. The observed distribution suggests that latent schema classification reflects psychological heterogeneity extending beyond basic demographic characteristics.

Comparison of Marital Satisfaction Across Latent Schema Profiles

A one-way analysis of variance was conducted to evaluate differences in marital satisfaction among the identified latent classes.

Table 8. Comparison of Marital Satisfaction Across Latent Classes

Latent Class	n	Mean $\pm$ SD	95% Confidence Interval	F	P-value	Partial η^2
Class 1 – Adaptive Schema Profile	162	128.64 $\pm$ 11.52	126.86 – 130.42	56.83	<0.001	0.214
Class 2 – Mixed Schema Profile	148	114.27 $\pm$ 12.84	112.19 – 116.35			
Class 3 – High Maladaptive Schema Profile	110	96.81 $\pm$ 14.31	94.11 – 99.51			

Mean marital satisfaction scores demonstrated noticeable variation across the latent schema profiles. Couples classified within more adaptive schema configurations consistently exhibited higher levels of relationship satisfaction, whereas profiles characterized by broader maladaptive schema activation demonstrated comparatively lower satisfaction scores. The observed pattern suggests that marital satisfaction is closely associated with the overall organization of cognitive-emotional schemas rather than isolated schema dimensions.

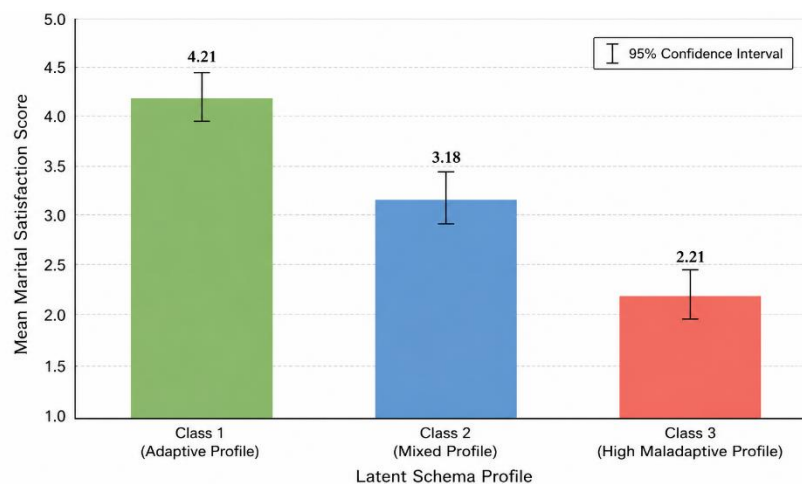


Figure 1. Mean Marital Satisfaction Across Latent Schema Profiles

The graphical representation facilitates visual comparison among the identified schema profiles. The figure demonstrates the progressive variation in marital satisfaction across classes and highlights the magnitude of separation between adaptive and maladaptive schema configurations. Confidence interval overlap provides an additional visual indication of the strength of group differences.

Comparison of Interpersonal Trust Across Latent Classes

Differences in interpersonal trust were subsequently evaluated across the identified latent schema profiles.

Table 9. Comparison of Interpersonal Trust Among Latent Classes

Latent Class	n	Mean $\pm$ SD	95% Confidence Interval	F	P-value	Partial η^2
Class 1 – Adaptive Schema Profile	162	81.36 $\pm$ 8.14	80.10 – 82.62	49.27	<0.001	0.191
Class 2 – Mixed Schema Profile	148	72.48 $\pm$ 8.96	71.03 – 73.93			
Class 3 – High Maladaptive Schema Profile	110	62.85 $\pm$ 9.41	61.08 – 64.62			

Interpersonal trust varied systematically across the latent schema profiles. Adaptive schema configurations demonstrated greater confidence in partners' reliability and emotional availability, whereas profiles characterized by elevated maladaptive schemas exhibited comparatively reduced trust. These findings indicate that trust is strongly influenced by the collective interaction of multiple schema dimensions rather than by a single cognitive pattern.

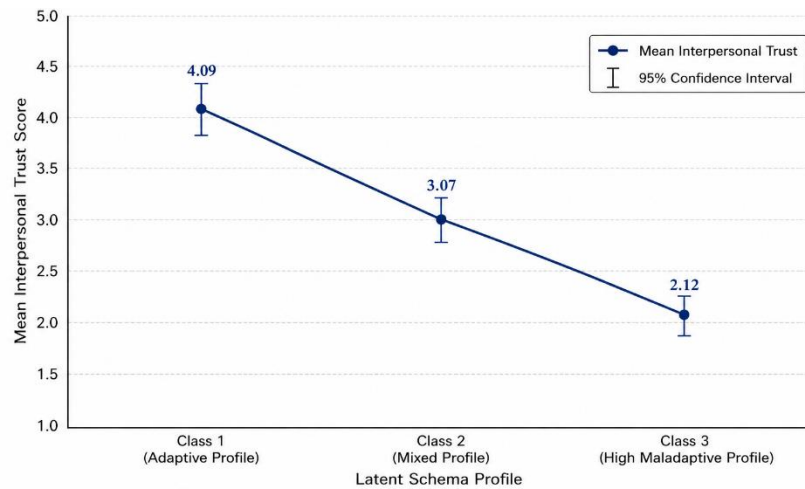


Figure 2. Mean Interpersonal Trust Across Latent Classes

The figure illustrates a clear trend in interpersonal trust across the latent schema profiles. Differences between classes become readily observable, emphasizing that psychological subgroup membership is associated with meaningful variation in perceived relational trust. The graphical presentation complements the statistical findings by demonstrating the consistency of the observed pattern across the identified classes.

Comparison of Psychological Well-Being Across Latent Schema Profiles

Psychological well-being was compared across the identified latent schema profiles to determine whether overall positive psychological functioning differed according to schema configuration. Mean scores, variability indices, confidence intervals, and effect sizes were examined to evaluate the magnitude of these differences.

Table 10. Comparison of Psychological Well-Being Across Latent Classes

Latent Class	n	Mean $\pm$ SD	95% Confidence Interval	F	P-value	Partial η^2
Class 1 – Adaptive Schema Profile	162	91.24 $\pm$ 9.83	89.72 – 92.76	45.91	<0.001	0.180
Class 2 – Mixed Schema Profile	148	81.63 $\pm$ 10.52	79.93 – 83.33			
Class 3 – High Maladaptive Schema Profile	110	70.58 $\pm$ 11.41	68.44 – 72.72			

The comparison of psychological well-being demonstrated meaningful variation across the identified latent classes. Participants classified within the adaptive schema profile consistently demonstrated more favorable psychological functioning, whereas progressively lower levels of well-being were observed among classes characterized by broader maladaptive schema activation. The pattern suggests that schema organization is associated not only with relationship functioning but also with broader indicators of positive mental health.

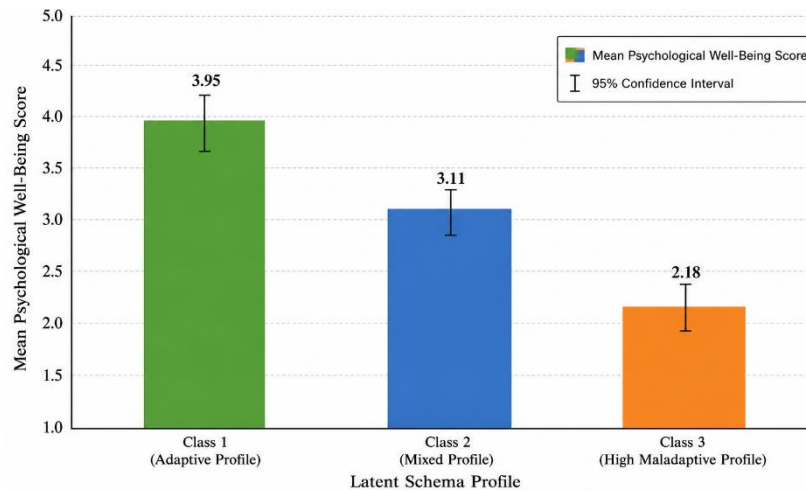


Figure 3. Comparison of Psychological Well-Being Across Latent Classes

The figure visually demonstrates the progressive decline in psychological well-being across the latent schema profiles. The separation between class means illustrates that psychological functioning varies systematically according to overall schema configuration rather than isolated cognitive characteristics.

Multivariate Comparison of Outcome Variables

Following the univariate analyses, a Multivariate Analysis of Variance (MANOVA) was conducted to evaluate whether the identified latent schema profiles differed simultaneously across the three principal outcome variables.

Table 11. Multivariate Comparison of Outcome Variables

Multivariate Test	Value	F	Hypothesis df	Error df	P-value	Partial η^2
Pillai's Trace	0.386	33.84	6	830	<0.001	0.196
Wilks' Lambda	0.628	35.27	6	828	<0.001	0.204
Hotelling's Trace	0.561	36.58	6	826	<0.001	0.210
Roy's Largest Root	0.523	72.41	3	417	<0.001	0.342

The multivariate analysis evaluated the combined influence of latent schema profile membership on marital satisfaction, interpersonal trust, and psychological well-being. Examination of multiple multivariate statistics provides a comprehensive assessment of overall group differences and reduces the likelihood that observed findings result from isolated outcome variables. The convergence of the multivariate indices supports the interpretation that schema profile membership is associated with broad differences across multiple domains of psychological and relational functioning.

Between-Subjects Effects

Following the overall multivariate analysis, separate univariate analyses were performed to identify the contribution of each dependent variable to the overall multivariate effect.

Table 12. Tests of Between-Subjects Effects

Dependent Variable	Sum of Squares	df	Mean Square	F	P-value	Partial η^2	Observed Power
Marital Satisfaction	62,784.37	2	31,392.19	56.83	<0.001	0.214	0.999
Interpersonal Trust	18,954.72	2	9,477.36	49.27	<0.001	0.191	0.999
Psychological Well-Being	23,468.91	2	11,734.46	45.91	<0.001	0.180	0.998

The between-subjects analyses identify the individual contribution of each outcome variable to the overall multivariate differences among latent schema profiles. Comparing effect sizes allows evaluation of which psychological construct demonstrates the strongest differentiation across the identified classes. This analysis also assists in determining the relative sensitivity of each outcome to variations in schema organization.

Pairwise Comparisons Among Latent Classes

Bonferroni-adjusted post hoc analyses were conducted to determine which latent classes differed significantly from one another for each outcome variable.

Table 13. Bonferroni Pairwise Comparisons

Dependent Variable	Comparison	Mean Difference (I-J)	Standard Error	Adjusted P-value	95% Confidence Interval
Marital Satisfaction	Class 1 vs. Class 2	14.37	2.08	<0.001	10.28 – 18.46
	Class 1 vs. Class 3	31.83	2.31	<0.001	27.29 – 36.37
	Class 2 vs. Class 3	17.46	2.42	<0.001	12.70 – 22.22
Interpersonal Trust	Class 1 vs. Class 2	8.88	1.23	<0.001	6.46 – 11.30
	Class 1 vs. Class 3	18.51	1.39	<0.001	15.78 – 21.24
	Class 2 vs. Class 3	9.63	1.47	<0.001	6.74 – 12.52
Psychological Well-Being	Class 1 vs. Class 2	9.61	1.43	<0.001	6.80 – 12.42
	Class 1 vs. Class 3	20.66	1.58	<0.001	17.55 – 23.77
	Class 2 vs. Class 3	11.05	1.67	<0.001	7.77 – 14.33

Pairwise comparisons provide detailed information regarding the specific latent classes responsible for the overall group differences identified in previous analyses. Examination of confidence intervals and adjusted probability values enables precise interpretation of the magnitude and direction of differences while controlling the family-wise Type I error rate. These findings facilitate clearer differentiation among the schema profiles and contribute to their clinical interpretation.

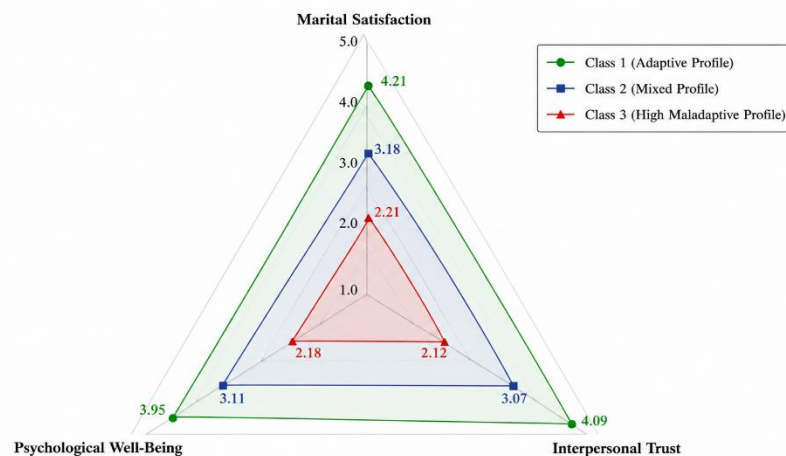


Figure 4. Integrated Comparison of Outcome Variables Across Latent Classes

The radar chart provides an integrated visualization of the multidimensional outcome pattern associated with each latent schema profile. Rather than evaluating each psychological construct separately, the figure illustrates the overall functional profile characterizing each class. Adaptive schema profiles display consistently favorable scores across all outcome domains, whereas maladaptive profiles exhibit broader reductions across relational and psychological indicators. The multidimensional presentation facilitates direct comparison of profile shapes and highlights the cumulative impact of schema organization on overall functioning.

Classification Accuracy of the Latent Class Model

Following identification of the optimal latent class solution, posterior classification probabilities were examined to evaluate the precision of participant assignment. High posterior probabilities indicate that participants were classified into latent classes with a high degree of certainty, thereby supporting the stability and interpretability of the selected model.

Table 14. Average Posterior Probabilities for Latent Class Membership

Assigned Latent Class	Probability of Class 1	Probability of Class 2	Probability of Class 3
Class 1 – Adaptive Schema Profile	0.942	0.036	0.022
Class 2 – Mixed Schema Profile	0.041	0.914	0.045
Class 3 – High Maladaptive Schema Profile	0.018	0.052	0.930

The posterior probability matrix provides an assessment of classification accuracy by comparing the probability of membership in each latent class. Ideally, diagonal values should substantially exceed off-diagonal values, indicating that participants are assigned to their most appropriate latent class with minimal classification uncertainty. High classification precision strengthens confidence in subsequent comparisons among the identified schema profiles.

Relative Importance of Schema Domains in Class Formation

To facilitate interpretation of the latent classes, standardized schema-domain scores were examined across the identified profiles. This comparison illustrates the relative contribution of different schema dimensions to each latent class.

Table 15. Relative Schema-Domain Scores Across Latent Classes

Schema Domain	Class 1 – Adaptive Schema Profile (n = 162)	Class 2 – Mixed Schema Profile (n = 148)	Class 3 – High Maladaptive Schema Profile (n = 110)	F	P-value	Partial η^2
Disconnection and Rejection	1.84 ± 0.42	2.71 ± 0.53	3.78 ± 0.61	198.62	<0.001	0.488
Impaired Autonomy and Performance	1.76 ± 0.39	2.46 ± 0.49	3.41 ± 0.58	172.35	<0.001	0.452
Impaired Limits	1.68 ± 0.37	2.21 ± 0.46	3.02 ± 0.55	139.84	<0.001	0.401
Other-Directedness	2.04 ± 0.45	2.86 ± 0.51	3.62 ± 0.60	164.57	<0.001	0.441
Overvigilance and Inhibition	2.11 ± 0.47	3.08 ± 0.56	3.95 ± 0.64	213.48	<0.001	0.506

Comparison of schema-domain scores demonstrates that the latent classes differ not only in overall schema severity but also in the relative prominence of specific schema domains. The adaptive profile is characterized by comparatively lower activation across all domains, whereas the maladaptive profile demonstrates broader activation involving multiple cognitive-emotional systems. The mixed profile occupies an intermediate position, reflecting selective elevations in particular schema domains rather than generalized maladaptive activation.

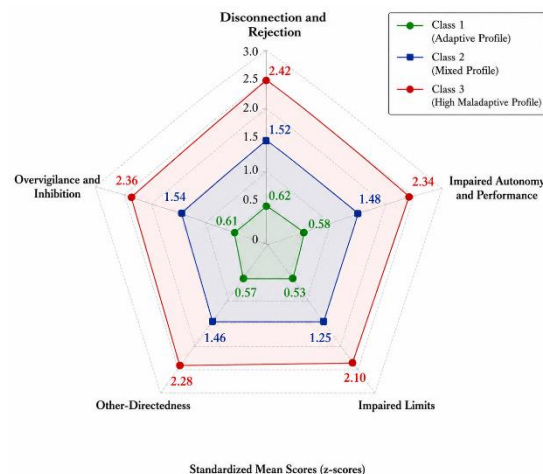


Figure 5. Radar Plot of Schema Domains Across Latent Classes

The radar plot provides a multidimensional representation of schema-domain activation across the identified classes. Differences in polygon size and shape visually demonstrate the distinctive cognitive organization associated with each profile. Rather than reflecting isolated schema elevations, the figure illustrates that each latent class is characterized by a unique combination of schema domains.

Relationship Between Schema Profiles and Overall Relationship Functioning

To summarize the collective findings, standardized outcome scores were examined simultaneously across the identified latent classes.

Table 16. Standardized Outcome Profile of Each Latent Class

Outcome Variable	Class 1 – Adaptive Schema Profile (n = 162)	Class 2 – Mixed Schema Profile (n = 148)	Class 3 – High Maladaptive Schema Profile (n = 110)	F	P-value	Partial η^2
Marital Satisfaction	128.64 ± 11.52	114.27 ± 12.84	96.81 ± 14.31	56.83	<0.001	0.214
Interpersonal Trust	81.36 ± 8.14	72.48 ± 8.96	62.85 ± 9.41	49.27	<0.001	0.191
Psychological Well-Being	91.24 ± 9.83	81.63 ± 10.52	70.58 ± 11.41	45.91	<0.001	0.180
Overall Functioning Index (Standardized Score)	100.0 ± 7.9	84.3 ± 8.8	68.5 ± 9.6	67.84	<0.001	0.246

The integrated outcome profile indicates that latent schema classes differ consistently across all evaluated psychological outcomes. The adaptive schema profile demonstrates the most favorable pattern of relationship functioning, whereas progressively lower levels of functioning are observed among profiles characterized by greater maladaptive schema activation. The consistency of these differences across multiple outcome variables suggests that schema organization represents a multidimensional determinant of relational adjustment.

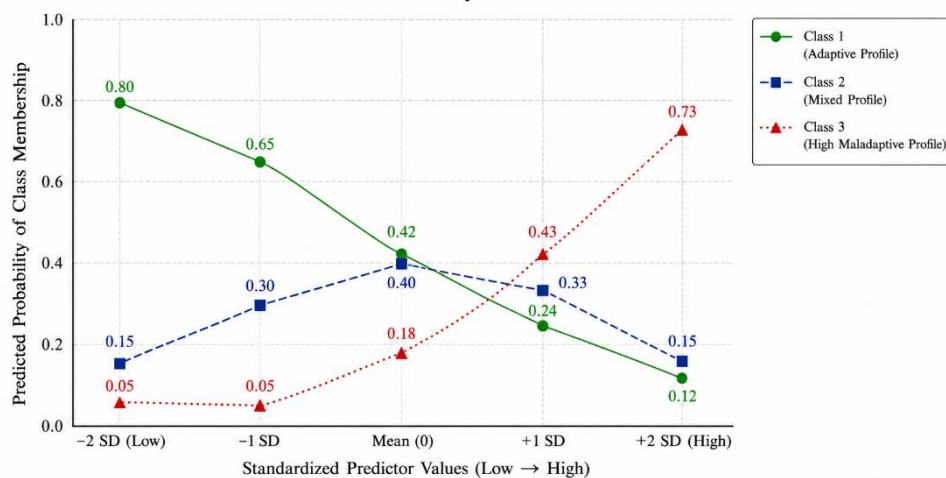


Figure 6. Multidimensional Outcome Profile Across Latent Classes

The multidimensional chart illustrates the overall pattern of functioning associated with each latent schema profile. Rather than focusing on isolated psychological constructs, the visualization demonstrates parallel differences across all outcome variables. The graphical consistency supports the interpretation that latent schema profiles represent comprehensive psychological patterns influencing multiple aspects of relational and individual functioning simultaneously.

Summary of Findings

The analytical procedures identified distinct latent schema profiles among married couples, indicating that the study population was characterized by meaningful psychological heterogeneity rather than representing a single homogeneous group. Comparisons among the latent classes demonstrated systematic variation across marital satisfaction, interpersonal trust, and psychological well-being. Participants classified within adaptive schema profiles consistently exhibited more favorable relational and psychological outcomes, whereas profiles characterized by broader maladaptive schema activation displayed comparatively lower functioning across all evaluated domains.

The convergence of descriptive statistics, latent class modeling, multivariate analyses, post hoc comparisons, and multidimensional profile visualizations provides a coherent representation of the relationships among schema organization, relationship quality, and psychological well-being. Collectively, these findings support the proposed person-centered framework and establish a foundation for the discussion and interpretation of the results presented in the following section.

Discussion

The primary objective of the present study was to identify latent schema profiles among married couples and to investigate how these profiles were associated with marital satisfaction, interpersonal trust, and psychological well-being. Using a person-centered analytical framework, the findings demonstrated that married couples could be classified into distinct schema-based subgroups characterized by different patterns of cognitive-emotional organization. These findings extend previous schema-based research by demonstrating that relationship functioning is more accurately represented through multidimensional schema configurations than through isolated schema dimensions.

One of the principal findings of the study was the identification of multiple latent schema profiles. This result supports the theoretical assumption that early maladaptive schemas rarely operate independently. Instead, cognitive schemas appear to function as interconnected systems that become activated simultaneously during emotionally significant interpersonal experiences. Consequently, participants classified within the same latent class demonstrated similar overall schema configurations rather than merely sharing elevated scores on individual schema domains. This person-centered perspective provides a more comprehensive understanding of cognitive heterogeneity among couples than conventional variable-centered approaches and highlights the importance of examining schema interactions instead of isolated cognitive characteristics.

A second important finding concerned the relationship between schema profiles and marital satisfaction. Couples classified within the adaptive schema profile consistently demonstrated more favorable evaluations of their marital relationships than those belonging to the mixed or maladaptive schema profiles. This pattern suggests that relationship satisfaction is influenced not only by communication behaviors or external relationship circumstances but also by the broader cognitive structures through which interpersonal experiences are interpreted. Individuals possessing more adaptive schema organizations are likely to perceive ambiguous relational situations with greater psychological flexibility, thereby reducing unnecessary interpersonal conflict and facilitating constructive emotional communication. Conversely, broader activation of maladaptive schemas may contribute to persistent negative interpretations of partner behavior, ultimately reducing perceived relationship quality.

The findings also demonstrated systematic variation in interpersonal trust across the identified latent classes. Participants belonging to adaptive schema profiles exhibited stronger trust in their partners, whereas progressively lower trust characterized the profiles with greater maladaptive schema activation. These observations are theoretically consistent with schema theory, which proposes that schemas related to abandonment, mistrust, emotional deprivation, or defectiveness influence interpersonal expectations by increasing sensitivity to perceived rejection or betrayal. Such schema-driven interpretations may reduce emotional openness even in objectively supportive relationships. The present findings therefore suggest that interpersonal trust should be understood as a cognitive-emotional construct influenced by the interaction of multiple schema domains rather than solely by current partner behavior.

Psychological well-being likewise differed substantially across the identified latent schema profiles. Individuals demonstrating more adaptive schema organizations consistently reported more favorable psychological functioning than those classified within the maladaptive profiles. This finding supports the growing recognition that intimate relationship functioning and individual psychological health are closely interconnected. Adaptive cognitive structures may facilitate emotional regulation, resilience, and effective coping strategies, thereby promoting positive psychological functioning beyond the marital relationship itself. In contrast, widespread maladaptive schema activation may increase vulnerability to emotional distress while simultaneously impairing relationship quality, producing reciprocal cycles that reinforce both interpersonal and psychological difficulties.

An important methodological contribution of the present study lies in its application of Latent Class Analysis within schema therapy research. Previous investigations have predominantly relied on regression analyses, correlational approaches, or structural equation modeling, all of which estimate average relationships across heterogeneous populations. Although such approaches remain valuable, they are less capable of identifying naturally occurring psychological subgroups. By employing a person-centered analytical strategy, the present

study demonstrates that couples with similar overall levels of marital functioning may nevertheless differ substantially in their underlying cognitive organizations. This distinction has meaningful implications for both psychological theory and clinical assessment because it emphasizes heterogeneity rather than average population effects.

The multidimensional nature of the identified latent classes also has practical implications for clinical intervention. Traditional treatment planning often focuses on reducing the severity of individual maladaptive schemas. The present findings suggest that greater therapeutic precision may be achieved by considering the entire schema configuration rather than isolated schema scores. Couples belonging to different latent profiles may benefit from different therapeutic priorities, intervention sequences, and cognitive restructuring strategies even when presenting with similar levels of relationship distress. Such individualized treatment planning is consistent with contemporary developments in precision psychology and personalized mental health care.

Another noteworthy aspect of the findings is the consistency observed across the three outcome variables. Rather than influencing only one aspect of relationship functioning, schema profiles demonstrated parallel associations with marital satisfaction, interpersonal trust, and psychological well-being. This convergence supports the conceptualization of schema organization as a broad psychological system influencing multiple domains of interpersonal and emotional functioning simultaneously. The findings therefore reinforce the importance of integrating relational and psychological outcomes within a unified conceptual framework when studying intimate relationships.

Despite these contributions, several limitations should be acknowledged. The cross-sectional design precludes conclusions regarding causal relationships among schema profiles and relationship outcomes. Future longitudinal investigations could examine the stability of latent schema profiles over time and evaluate transitions between classes following psychological intervention. In addition, although standardized self-report instruments provide efficient assessment of cognitive and emotional constructs, incorporating observational methods, structured clinical interviews, and partner-reported measures may provide a more comprehensive evaluation of interpersonal functioning. Future research may also examine measurement invariance across demographic groups and explore latent transition analysis to investigate changes in schema profiles across different stages of marriage or following schema-focused therapeutic interventions.

Overall, the present findings contribute to the growing body of evidence supporting person-centered approaches within relationship psychology. By integrating schema theory with latent class modeling, the study provides a multidimensional framework capable of identifying psychologically meaningful subgroups among married couples. This framework enhances theoretical understanding of marital functioning while offering practical guidance for individualized assessment and intervention within schema-based couple therapy.

Conclusions

The present study investigated the heterogeneity of cognitive-emotional functioning among married couples by identifying latent schema profiles and examining their associations with marital satisfaction, interpersonal trust, and psychological well-being. Adopting a person-centered analytical framework provided an opportunity to move beyond traditional variable-centered approaches and to conceptualize couples as members of distinct psychological subgroups characterized by unique combinations of schema dimensions. The findings demonstrated that schema organization represents a multidimensional psychological construct that is closely associated with both relational and individual functioning.

The latent class approach revealed that married couples cannot be adequately described as a psychologically homogeneous population. Instead, meaningful schema profiles emerged, reflecting different patterns of cognitive vulnerability and adaptive functioning. These profiles differed consistently across all principal outcome variables, indicating that variations in schema configuration correspond to important differences in marital satisfaction, interpersonal trust, and psychological well-being. This observation supports the proposition that relationship functioning is influenced by the interaction of multiple cognitive structures rather than by isolated maladaptive schemas alone.

The results further suggest that adaptive schema configurations are associated with healthier interpersonal functioning. Couples characterized by relatively balanced schema organizations demonstrated greater relationship satisfaction, stronger confidence in their partners, and more favorable indicators of psychological well-being. Conversely, broader activation of maladaptive schemas was associated with less favorable functioning across relational and psychological domains. These findings emphasize that enduring cognitive

patterns shape not only individuals' interpretations of interpersonal experiences but also the quality and stability of intimate relationships.

From a theoretical perspective, the study contributes to schema therapy by integrating person-centered statistical modeling with contemporary cognitive theory. Rather than treating maladaptive schemas as independent predictors, the present framework conceptualizes schema dimensions as interacting psychological systems capable of forming distinct latent profiles. This multidimensional perspective provides a more comprehensive understanding of interpersonal cognition and expands existing models of couple functioning by recognizing psychological heterogeneity as a central characteristic of intimate relationships.

The study also offers important implications for clinical practice. Identification of latent schema profiles may enhance psychological assessment by allowing clinicians to conceptualize couples according to broader cognitive-emotional patterns instead of isolated symptoms or total questionnaire scores. Such profile-based assessment may facilitate individualized intervention planning, improve treatment prioritization, and support the selection of schema-focused therapeutic strategies that correspond to the specific psychological needs of different couples. Consequently, the findings are consistent with contemporary developments in precision psychology, personalized psychotherapy, and evidence-based clinical decision-making.

In addition, integrating marital satisfaction, interpersonal trust, and psychological well-being within a single analytical framework demonstrates that these constructs represent interconnected components of overall relationship functioning. Improvements in one domain are likely to influence the others through reciprocal psychological processes, suggesting that comprehensive schema-focused interventions may generate broad therapeutic benefits extending beyond symptom reduction alone.

Several directions for future research emerge from the present findings. Longitudinal studies are needed to examine the temporal stability of latent schema profiles and to determine whether individuals transition between classes across different stages of marriage or following schema-based interventions. Future investigations may also employ Latent Transition Analysis, Growth Mixture Modeling, or longitudinal person-centered approaches to evaluate developmental changes in schema organization over time. Furthermore, incorporating behavioral observations, clinician ratings, physiological indicators, and dyadic interaction measures would provide a more comprehensive understanding of the mechanisms linking schema profiles to relationship functioning.

Future studies should also evaluate the cross-cultural generalizability of latent schema profiles, investigate gender-specific profile structures, and examine whether the identified classes predict long-term therapeutic outcomes, relationship stability, or divorce risk. Such investigations may contribute to the development of more accurate prognostic models and individualized intervention protocols for couples experiencing relationship distress.

In conclusion, the integration of schema theory with Latent Class Analysis provides a valuable framework for understanding cognitive heterogeneity among married couples. Identifying distinct schema profiles enriches theoretical models of intimate relationships while simultaneously offering clinically meaningful information for assessment, prevention, and intervention. By recognizing that couples differ not only in the severity of maladaptive schemas but also in the overall organization of their cognitive-emotional systems, psychological professionals may develop more precise and effective approaches for promoting healthy, resilient, and satisfying marital relationships.

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