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Research Paper: The Role of Resilience and Personality Traits in Nurses' Job Performance

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Abstract

Objective: This study aimed to investigate the role of resilience and personality traits in the job performance of nurses working in hospitals in Astara city.

Methods: This descriptive-analytical study adopted a correlational approach. The statistical population included all nurses employed in the medical centers of Astara city in 2024. Simple random sampling was used, with 179 nurses participating as the study sample. Data were collected using standard questionnaires and analyzed using Pearson correlation and multiple linear regression in SPSS version 26. The research instruments included the Nurse Team Resilience Scale, Big Five Inventory-2, and Individual Work Performance Questionnaire.

Results: Resilience, situational awareness, adaptive capacity, and conscientiousness showed positive and significant correlations with job performance ($p < 0.001$), whereas key vulnerabilities exhibited a significant negative correlation ($p < 0.001$). Multiple linear regression indicated that the predictor variables significantly predicted job performance ($p < 0.001$). Situational awareness, environmental adaptation, and resilience were the strongest positive predictors, while key vulnerabilities had a significant negative effect ($p < 0.001$).

Conclusion: The findings underscore the importance of psychological factors such as resilience, situational awareness, and psychological flexibility in enhancing nurses' job performance. Concurrently, the adverse impact of vulnerabilities highlights that reducing stressors and improving environmental conditions can play a key role in performance improvement.

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1. Introduction

Job performance in nursing is a multidimensional construct encompassing not only technical task execution but also behavioral, emotional, and interpersonal effectiveness (Ma'arof et al., 2024). It reflects the efficiency, quality, and effectiveness of fulfilling role demands and is shaped by individual psychological resources, workplace conditions, and organizational support (Bhatti et al., 2018; Ma'arof et al., 2024). According to human capital theory and motivation frameworks, performance arises from a dynamic interplay between individual capacities, intrinsic motivation, and the quality of workplace support systems (Alkubati et al., 2025). Nurses often face high workloads, emotional labor, ethical challenges, and time pressure — conditions that undermine performance if not buffered by personal and environmental resources (Cho et al., 2022; Cho & Steege, 2021). Consequently, researchers emphasize psychological factors such as resilience and personality as key determinants of job performance (Yakusheva et al., 2024). Among psychological strengths, resilience has emerged as a central variable in occupational health research. Resilience refers to an individual's capacity to cope with stress, maintain emotional equilibrium, and adapt positively to adversity (Connor & Davidson, 2003; Cooper et al., 2020). In nursing, resilience supports mental well-being, job satisfaction, and clinical effectiveness, particularly under high stress (Cusack et al., 2016; Delgado et al., 2017). Studies show that resilient nurses report lower burnout, stronger coping strategies, and better psychological adjustment, even in extreme contexts such as the COVID-19 pandemic (Boyden & Brisbois, 2025; Labrague, 2021; Shen et al., 2024). Resilience can be nurtured through emotion regulation training, social support integration, conflict management skills, and organizational initiatives that endorse psychological safety (Cuartero & Tur, 2021; Føllesdal & Soto, 2022). While resilience captures adaptive capacity in adversity, personality traits portray relatively stable individual characteristics that influence how nurses engage with their work and respond to stressors. The Five-Factor Model (FFM) — including extraversion, agreeableness, conscientiousness, neuroticism (emotional stability), and openness — is widely used to predict workplace outcomes (Bhatti et al., 2018; Føllesdal & Soto, 2022). In nursing, conscientiousness and emotional stability are consistently associated with higher job performance, better teamwork, and enhanced patient care (Bhatti et al., 2018). Recent evidence further suggests that personality traits shape stress appraisal, coping preferences, and resilience mobilization, linking individual differences with clinical competence and adaptive behavior in complex care environments (Wang et al., 2025; Yakusheva et al., 2024). Despite extensive research, significant gaps remain in understanding how resilience and personality traits jointly predict job performance in specific healthcare contexts. Most studies to date have examined these factors separately or in broad international samples, with limited focus on resource-constrained regions where workload pressures and organizational challenges are acute (Shen et al., 2024). Furthermore, many studies rely on cross-sectional designs that cannot untangle the relative contributions of psychological resources versus dispositional variables. There is also insufficient empirical evidence on how resilience interacts with personality traits to shape performance within real-world hospital settings, particularly in diverse cultural environments such as northern Iran.

In Astara city, nurses encounter substantial work stress due to limited medical resources, high patient volumes, and specific demographic pressures, underscoring the need to clarify how psychological strengths translate into effective job performance. Identification of key predictors can inform targeted interventions — for example, resilience training or personality-aligned support programs — that improve both nurses well-being and patient care quality. Therefore, this study aims to address the following research question:

To what extent do resilience and personality traits (along with related psychological and situational variables) simultaneously predict job performance among nurses working in Astara city hospitals?

2. Methods

2.1. Statistical Population, Sample, and Sampling Method

This study was descriptive-analytical and conducted using the correlation method. The statistical population included all nurses working in health centers in Astara city in 2024 (approximately 250 nurses). Sampling was performed using simple random sampling. A complete list of all nurses from the four main hospitals and health centers in Astara city (Shahid Beheshti Hospital, Al-Zahra Hospital, Astara County Health Center, and Social Security Clinic) was obtained from the nursing administration offices. Using a random number table, 179 nurses were finally selected (72 from Shahid Beheshti Hospital, 54 from Al-Zahra Hospital, 31 from the County Health Center, and 22 from the Social Security Clinic). Sample size was calculated using Cochran's formula.

2.2. Instruments

Nurse Team Resilience Scale (NTRS): developed by Su et al. (2023). This 17-item scale uses a 5-point Likert response format (1 = strongly disagree to 5 = strongly agree) and measures team resilience through four dimensions: team support, coordination, coping, and learning. Validity and reliability (original version): Construct validity was established through exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), with good model fit (RMSEA = 0.06, CFI = 0.95). Content validity index (CVI) > 0.80 via expert panels. Cronbach's alpha was 0.95 for the total scale and 0.85–0.92 for subscales (Su et al., 2023). In the present study: Cronbach's alpha was 0.92 for the total scale (subscales: Team support = 0.89, Coordination = 0.87, Coping = 0.90, Learning = 0.88), indicating excellent internal consistency. Content validity was confirmed by 10 experts (CVR > 0.79, CVI = 0.91).

Big Five Inventory-2 (BFI-2): (Norwegian adaptation by Føllesdal & Soto, 2022; Persian version used in this study). The questionnaire consists of 60 items on a 5-point Likert scale and assesses the five major personality domains: Extraversion, Agreeableness, Conscientiousness, Negative Emotionality, and Open-Mindedness. Validity and reliability (original version): Construct validity supported by CFA (RMSEA < 0.08, CFI > 0.90) and convergent correlations with other Big Five measures. Cronbach's alpha ranged from 0.84–0.91 across domains (Soto & John, 2017). In the present study: Cronbach's alpha was 0.89 overall (domains: Extraversion = 0.86, Agreeableness = 0.84, Conscientiousness = 0.90, Negative Emotionality = 0.87, Open-Mindedness = 0.85), showing good to excellent internal

consistency. Content validity confirmed by experts (CVR > 0.79, CVI = 0.90).

Individual Work Performance Questionnaire (IWPQ): developed by Koopmans et al. (2014). This 18-item instrument measures three dimensions of individual work performance (task performance, contextual performance, and counterproductive work behavior) using 5-point frequency and agreement scales. Validity and reliability (original version): Construct validity via CFA (RMSEA < 0.08, CFI > 0.90), convergent/discriminant validity, and Rasch analysis. Cronbach's alpha ranged from 0.78–0.85 across subscales (Koopmans et al., 2014). In the present study: Cronbach's alpha was 0.86 overall (subscales: Task performance = 0.84, Contextual performance = 0.88, Counterproductive work behavior = 0.81), indicating good internal consistency. Content validity confirmed by 10 experts (CVR > 0.79, CVI = 0.92).

Content validity of all questionnaires was confirmed by 10 nursing faculty members and clinical experts (CVR > 0.79, average CVI = 0.91). Internal consistency was verified in a pilot study with 30 nurses (overall Cronbach's alpha = 0.89).

Data were analyzed using SPSS 26 software. After describing the execution method of the research, the data analysis was performed as follows: Descriptive statistics (mean, standard deviation, frequency, and percentage) were used to describe the data. Inferential statistics, including Pearson correlation, simultaneous multiple regression, and related analyses, were employed to test hypotheses and examine relationships. The significance level was set at 0.05.

2.3. Procedure

The data were collected through anonymous self-administered questionnaires distributed to the participants during their work shifts (in-person) or via secure online links, based on their preference. Participation was entirely voluntary, with no incentives provided. Each respondent received a clear explanation of the study purpose, procedures, potential risks (minimal, as the survey was anonymous and non-sensitive), benefits, and their right to withdraw at any time without any consequences. Informed consent was obtained verbally or in writing (via a consent form attached to the questionnaire) before completion. All responses were collected and stored anonymously, with no personal identifiers recorded, ensuring full confidentiality and data protection in line with general ethical principles for survey research involving healthcare professionals.

3. Results

The final sample consisted of 179 nurses. Demographic characteristics showed that the majority were female (n = 165, 92.2%), married (n = 161, 89.9%), aged 39–49 years (n = 94, 52.5%), held a bachelor's degree (n = 121, 67.6%), had 11–15 years of work experience (n = 86, 48.0%), were officially employed (n = 71, 39.7%), and worked as clinical nurses (n = 175, 97.8%).

Descriptive statistics revealed that most study variables were at moderate levels. Data distribution was approximately normal, as skewness and kurtosis values for all variables fell within the acceptable range of ±2, supporting the use of parametric tests. As shown in Table 1, mean scores ranged from 2.83 to 3.65 on the 5-point Likert scale, indicating moderate endorsement across the measured constructs among the respondents.

Before conducting the multiple linear regression analysis, the key assumptions were examined to ensure the validity of the model. Normality of residuals was assessed using the Kolmogorov–Smirnov test, which indicated that the distribution of residuals did not significantly deviate from normality ($p > 0.05$ for all variables). Linearity between predictors and the outcome variable (job performance) was confirmed through scatterplots of each predictor against the dependent variable, showing no substantial curvature. Homoscedasticity (constant variance of residuals) was verified by examining residual plots (residuals vs. fitted values), which displayed a random scatter with no funnel shape or patterns. Multicollinearity was checked using Variance Inflation Factors (VIF); all VIF values were below 2.5 (ranging from 1.12 to 2.08), indicating no problematic multicollinearity. Independence of errors was assumed based on the study design (simple random sampling and anonymous cross-sectional data collection with no repeated measures or clustering). Therefore, all assumptions for multiple linear regression were met.

To further examine the simultaneous effects of the variables on job performance, multiple linear regression analysis was performed using the Enter method, with job performance as the dependent variable.

Table 1

Descriptive Statistics of Research Variables (N = 179)

Variable	M	SD
Situational awareness	3.16	1.20
Key vulnerabilities	3.05	1.28
Adaptive capacity	2.96	1.28
Resilience	2.95	1.29
Locus of control	3.56	1.08
Openness	3.59	1.04
Adaptation to environmental factors	3.65	1.08
Personality traits	2.83	1.10
Conscientiousness	3.58	1.15
Performance (dependent)	3.36	1.20

According to Table 1, the dependent variable, performance, had a mean of 3.36 and a standard deviation of 1.20. The key independent variable, resilience, had a mean of 2.95 and a standard deviation of 1.29.

Table 2

Pearson Correlation Matrix of Research Variables with Job Performance

Variable	r	p
Situational awareness	0.776	<0.001
Resilience	0.702	<0.001
Adaptation to environmental factors	0.685	<0.001
Conscientiousness	0.674	<0.001
Openness	0.591	<0.001
Locus of control	0.568	<0.001
Adaptive capacity	0.554	<0.001
Personality traits	0.523	<0.001
Key vulnerabilities	–0.724	<0.001

According to Table 2, the dependent variable, job performance, showed significant positive correlations with situational awareness ($r = 0.776$, $p < 0.001$), resilience ($r = 0.702$, $p < 0.001$), adaptation to environmental factors ($r = 0.685$, $p < 0.001$), conscientiousness ($r = 0.674$, $p < 0.001$), openness ($r = 0.591$, $p < 0.001$), locus of control ($r = 0.568$, $p < 0.001$), adaptive capacity ($r = 0.554$, $p < 0.001$), and overall personality traits ($r = 0.523$, $p < 0.001$). A significant negative correlation was observed with key vulnerabilities ($r = –0.724$, $p < 0.001$).

Table 3

Multiple Linear Regression Results for Predicting Job Performance

Predictor	β	SE	t	p	VIF
Situational awareness	0.346	0.058	5.97	<0.001	1.89
Adaptation to environmental factors	0.207	0.061	3.39	<0.001	2.08
Resilience	0.182	0.064	2.84	0.005	1.96
Conscientiousness	0.151	0.059	2.56	0.011	1.77
Key vulnerabilities	–0.231	0.055	–4.20	<0.001	1.92
(Constant)	1.124	0.211	5.33	<0.001	

According to Table 3, multiple linear regression analysis revealed that situational awareness ($\beta = 0.346$, $p < 0.001$), adaptation to environmental factors ($\beta = 0.207$, $p < 0.001$), resilience ($\beta = 0.182$, $p = 0.005$), and conscientiousness ($\beta = 0.151$, $p = 0.011$) were significant positive predictors of job performance. Key vulnerabilities emerged as a significant negative predictor ($\beta = –0.231$, $p < 0.001$). All VIF values were below 2.1, indicating no multicollinearity issues.

4. Discussion

The present study aimed to examine the simultaneous effects of resilience, personality traits (specifically openness and conscientiousness), situational awareness, adaptive capacity, key vulnerabilities, locus of control, and adaptation to environmental factors on the job performance of nurses working in Astara city hospitals.

The results showed that all hypothesized relationships were significant ($p < 0.001$).

Situational awareness and resilience had the strongest positive effects on job performance, followed by adaptation to environmental factors and adaptive capacity. In contrast, key vulnerabilities exhibited the strongest negative relationship.

Situational awareness enhances job performance by enabling nurses to perceive environmental cues accurately, anticipate potential issues, and make informed decisions in real-time, thereby reducing errors and improving patient safety outcomes. This occurs through heightened vigilance and cognitive processing, which facilitates quicker adaptations to changing clinical demands, consistent with the role of psychological resources in high-stress nursing environments; (Cusack et al., 2016; Delgado et al., 2017). Resilience contributes to improved performance by helping nurses recover from stressful events, maintain emotional stability, and sustain motivation, preventing burnout and allowing continued focus on high-quality care delivery despite adversities. This mechanism involves emotional regulation and positive reframing, transforming challenges into opportunities for growth(Connor & Davidson, 2003; Cooper et al., 2020; Cusack et al., 2016; Delgado et al., 2017; Labrague, 2021; Shen et al., 2024). Adaptation to environmental factors and adaptive capacity improve performance by allowing nurses to adjust behaviors and strategies in response to workplace conditions (e.g., resource shortages or high workloads), promoting flexible problem-solving, optimized workflow, and team collaboration (Cusack et al., 2016; Delgado et al., 2017). Conversely, key vulnerabilities reduce performance by exacerbating stress responses, leading to cognitive overload, emotional exhaustion, and impaired judgment, which increase error rates and decrease efficiency (Cho et al., 2022; Cho & Steege, 2021). Personality traits, including conscientiousness and openness, support performance indirectly by influencing diligence, empathy, openness to new approaches, and better stress appraisal and coping, which amplify resilience and situational responses in dynamic healthcare settings (Bhatti et al., 2018; Wang et al., 2025; Yakusheva et al., 2024). These findings are fully consistent with previous research, without any contradictory evidence. The prominent role of resilience aligns with studies showing it mediates stress, enhances psychological well-being, job satisfaction, and performance, while reducing burnout—even in extreme contexts like the COVID-19 pandemic (Boyden & Brisbois, 2025; Labrague, 2021; Shen et al., 2024). The strong effects of situational awareness, adaptation, and adaptive capacity support evidence on psychological flexibility and coping in high-stress nursing environments (Cusack et al., 2016; Delgado et al., 2017). Personality dimensions, particularly conscientiousness and openness (as part of the Five-Factor Model), positively affect performance and clinical competence through their links to adaptive behaviors and resilience mobilization (Bhatti et al., 2018; Wang et al., 2025; Yakusheva et al., 2024). The negative impact of key vulnerabilities corresponds to the documented effects of chronic stress, emotional labor, and workload pressures on undermining performance and well-being (Cho et al., 2022; Cho & Steege, 2021; Ma'arof et al., 2024). From a practical perspective, the results emphasize that interventions targeting situational awareness, resilience, and adaptive capacity—modifiable psychological resources—may yield greater improvements in job performance than approaches focused

solely on stable personality traits. In resource-constrained settings like Astara, strengthening these factors through resilience training, emotion regulation programs, social support integration, and organizational initiatives promoting psychological safety could enhance nurses' ability to cope with complexity, maintain clinical accuracy, and sustain engagement (Connor & Davidson, 2003; Cooper et al., 2020; Cuartero & Tur, 2021; Føllesdal & Soto, 2022).

This study has several limitations. First, its cross-sectional design limits the ability to establish causality or examine temporal relationships among variables; longitudinal designs are recommended for future research. Second, reliance on self-report measures may introduce common method bias or social desirability effects. Third, the sample was restricted to nurses in Astara city hospitals, potentially limiting generalizability to other Iranian regions, hospital types, or international contexts. Fourth, although key psychological and situational variables were included, other unmeasured factors (e.g., specific organizational support, leadership, or detailed workload metrics) may influence the results (Alkubati et al., 2025; Bhatti et al., 2018). Future studies should incorporate objective performance indicators, multi-source data, and diverse samples to address these gaps.

5. Conclusions

This study concludes that nurses' job performance is primarily influenced by dynamic psychological and situational factors rather than by stable personality characteristics alone. Enhancing situational awareness, resilience, and adaptive capacity, while simultaneously reducing key vulnerabilities, represents an effective strategy for improving performance in challenging clinical environments. These findings support the integration of psychological skill development and supportive organizational practices into nursing management and workforce development programs.

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Conflict of interest

The authors declare that there is no conflict of interest.

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Research Paper: The Mediating Role of We-ness in the Relationship between Primary Object Relations and Ego Strength with Marital Stability

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Abstract

Objective: The present study aimed to investigate the factors influencing marital stability, considering the mediating role of we-ness.

Methods: The research method was a descriptive-correlational study employing structural equation modeling (SEM); the population was all married individuals residing in Varamin and Pishva cities in 2025. Using a purposive sampling method, 388 participants were selected. Data were collected using the following standardized questionnaires: the Marital Instability Index (MII), the Bell Object Relations Inventory (BORI), the Ego Strength Scale (ESS), and the We-ness Questionnaire (WQ). Data analysis was performed using structural equation modeling and correlation tests.

Results: The final model demonstrated an acceptable fit to the data, with indices such as RMSEA = 0.076 and CFI = 0.899. All observed variables loaded significantly onto their respective latent constructs, with factor loadings exceeding 0.3 ($p < .05$). In addition, the mediating role of we-ness in the indirect relationship between primary object relations and ego strength with marital stability was confirmed.

Conclusion: The results highlighted the importance of primary object relations and ego strength, as well as the key role of we-ness as an influential mechanism on marital stability. Consequently, designing educational interventions for parents (particularly mothers) focusing on primary object relations and fostering a sense of we-ness could contribute to enhanced marital durability.

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1. Introduction

Marital stability is a critical consideration in any marriage, as identifying its contributing factors can lead to reduced divorce rates and increased marital durability and longevity (Piao et al., 2020).

Object relations theories predominantly focus on the primary child-mother relationship and its influence on the formation of the child's internal world and subsequent adult relationships. These theories are fundamentally developmental, positing that the core issue of development is the child's progression from a state of merger and dependence on the mother toward greater autonomy and differentiation. In a study entitled "The Roles of Object Relations, Paranoid Thoughts, and Interdependence In The Stability of Married Women's Life in Mashhad City", Mortazavi Karimabad and Karam (2025) find that the results of data analysis show that there is a significant negative relationship between object relations, paranoid thoughts, and interdependence with marital stability. In another study entitled "The Relationship between Object Relations and Relationship Satisfaction, Marital Adjustment, and Sexual Satisfaction, The Mediating Role of Narcissistic and Borderline Personality Traits", Kahraman and Aktan (2024) find that object relations significantly predict relationship satisfaction, sexual satisfaction, and marital adjustment; borderline and narcissistic personality traits partially mediate this relationship.

Findings from a study by Abbasi et al, (2021) examine the relationship between the dimensions of object relations and marital satisfaction. The results of correlation analysis show that there is a significant negative relationship between marital satisfaction and the dimensions of object relations (egocentricity, alienation, insecure attachment, and social inadequacy.

Building upon the foundational role of early relationships outlined by object relations theory, the internal psychological structure that develops from these experiences—referred to as ego strength—emerges as another critical determinant of marital outcomes .In Javadi Koma et al's, (2024) research working on developing a causal model for predicting marital instability based on dark personality, the results show that the total path coefficient was only between narcissistic personality and marital instability, and ego strength with the mediation of empathy in married women. Characteristics of a competent self comprise adequate judgment and reality testing, a sense of the reality of the world and the self, frustration tolerance, impulse control, the capacity for conceptualization and abstract thinking, appropriate use of defenses, stress tolerance, and the pursuit of engaging and pleasurable interests. Ego Strength is a fundamental element in personality formation, which, through proper development and enhanced ability to manage and confront challenges, affects the quality of marital life and dyadic relationships (Bayani et al., 2023).

While a strong internal ego structure is essential, the quality of a marital relationship is ultimately co-created in the interpersonal space between partners. This brings us to the concept of the I-You relationship and its mature form, We-ness .The I-You relationship was first introduced in Kant's philosophy and

later evolved into the concept of the We-relationship. Describing the We-ness, the emotional connection between two individuals, upon encounter, unfolds as follows: *I* approach *your* state, experience, and comprehend *your* feelings, reflect this understanding to *you* as clearly as possible, and this reflection alleviates *your* pain and suffering. The bond then strengthens, satisfaction returns from *you* to *me*, and an exchange occurs. When *I* receive this satisfaction, pain and suffering diminish, and this cycle continues, ultimately leading to the We-ness (Jalovaara & Kulu, 2018). A study by Cruwys et al. (2023), measuring *we-ness* in couple relationships: A social identity approach, concludes that couple research can fruitfully draw upon social identity theorizing in conceptualizing we-ness. In another study, entitled " We Are Together, but How Much Are We Truly 'We'? A Dyadic Approach with Turkish Emerging Adults", Özgülük Üçok et al. (2025) highlight that women's and men's relationship satisfaction strongly predict their commitment and we-ness.

Despite the recognition of both intrapsychic and dyadic factors in marital outcomes, a critical theoretical and empirical gap persists in understanding their integrated causal pathways. The existing literature often compartmentalizes these domains, examining object relations and ego strength as individual predictors (e.g., Kahraman & Aktan, 2024; Javadi Koma et al., 2024) or studying we-ness as a relational outcome (Cruwys et al., 2023), without sufficiently illuminating how these internal schemas and resources manifest within the dyadic space of marriage to promote stability. This represents a *conceptual blind spot* in marital psychology: while the importance of both individual psychology and the couple's shared identity is acknowledged, the precise mechanism that translates the former into the latter to foster durability remains underexplored (Fincham & Beach, 2021). Specifically, there is a scarcity of research that positions the dyadic construct of we-ness not merely as an outcome, but as the key mediating mechanism through which foundational intrapsychic variables exert their influence on marital stability. (Karney and Bradbury's, 1995) vulnerability-stress-adaptation model underscores the necessity of examining such adaptive processes within marriage, yet few studies have empirically modeled we-ness in this crucial mediating role. Consequently, no comprehensive model has been found that simultaneously tests primary object relations and ego strength as antecedents, we-ness as the mediator, and marital stability as the outcome, creating a significant gap in designing interventions that effectively bridge individual predispositions and relational health. Therefore, this study aims to address this gap by proposing and testing an integrated structural model to elucidate this mediating pathway.

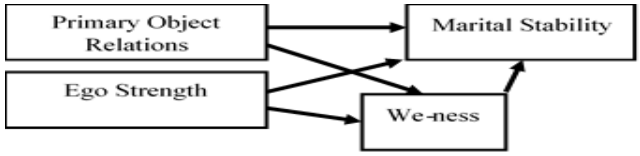

Figure 1

Relational Model of the Mediating Role of We-Ness in the Relationship between Primary Object Relations, Self-Differentiation, and Marital Stability

2. Methods

The present research was carried out using descriptive-correlation and structural equation modeling methods. The population of this research includes married individuals living in Varamin and Pishva cities in 1404 whose marriage length was 7 years or more (The 7-year criterion was established based on research by Karney and Bradbury (1995), which identified the first seven years of marriage as a critical period for establishing interactional patterns that predict long-term marital outcomes). 388 individuals were selected through a purposive sampling method. To determine the sample size, the common rule of thumb for structural equation modeling (SEM) based on the ratio of sample size to the number of free parameters (N:q) was employed (Kline, 2010). Given the complexity of the research model, which included one criterion variable, three predictor variables (measured by 13 subscales/indicators), and one mediating variable (measured by 6 subscales/indicators), a sample of 388 participants was selected to obtain stable and reliable parameter estimates. This sample size provides an adequate ratio (exceeding 10:1) relative to the estimated free parameters in the model and is sufficient for SEM analyses (Westland, 2010). Inclusion required individuals to be currently married and cohabiting, permanent residents of Varamin and Pishva cities, and to have a marital duration of at least 7 years. Eligible participants were also required to provide voluntary informed consent. Conversely, exclusion criteria were applied to individuals unwilling or unable to complete the study questionnaire, and singles and divorced individuals were also excluded.

2.1. Instruments

Marital Instability Index (MII): This 14-item questionnaire, developed by Booth, Johnson et al. (1983), measures Marital stability. Each item is rated on a 4-point Likert scale, ranging from 1 (never) to 4 (very often). Scores were interpreted based on the following ranges: A score between 14 and 28 indicates low marital instability, A score between 28 and 42 indicates moderate marital instability, and A score between 42 and 56 indicates high marital instability. Consequently, a higher total score reflects a greater propensity for separation or divorce-related thoughts. Regarding discriminant validity, the instrument developers reported in 1983 that only 3% of participants with low scores had ended their marriage permanently, whereas 27% of those with high scores had divorced (Jafari, 2009). The original scale has demonstrated strong reliability and validity. Cronbach's alpha coefficients for internal

consistency have been reported as high (e.g., 0.90 for the full scale and 0.80 for the 4-item version). Test-retest reliability is also established (Booth et al., 1983). The scale has shown strong construct validity, correlating as expected with measures of marital happiness, conflict, and external pressures (Amato & Rogers, 1997). It has strong predictive validity for later divorce (Booth et al., 1985). The MII has been validated for use in Iranian samples. Studies have confirmed its acceptable psychometric properties. For instance, in the study by Yaripour (2011), the split-half reliability method was used to calculate the instrument's reliability coefficient, resulting in coefficients of 0.82 for the experimental group, 0.61 for the control group, and 0.70 for the total sample. In the present study, Cronbach's alpha for this instrument was calculated to be 0.892.

Bell Object Relations Inventory (BORI): Primary object relations were assessed using the Bell Object Relations Inventory, developed by Bell et al. (1995). This questionnaire is part of the 90-item Bell Object Relations and Reality Testing Inventory (BORRTI). Respondents answer each item as either true or false (scored as 1 or 0), according to the provided key. The sum of scores for items corresponding to each subscale determines the individual's score on that dimension. The inventory comprises four subscales: Alienation, reflecting the individual's capacity for trust and maintaining intimate relationships. High scores indicate a lack of trust and an inability to sustain stable, satisfying relationships. (Items 1, 15, 20, 21, 22, 29, 30, 33, 37, 41, 42). Insecure Attachment, indicating sensitivity to rejection and hurt in relationships. High scores suggest a pathological worry about being loved/rejected and hypersensitivity to others' actions. (Items 2, 7, 12, 13, 16, 20, 23, 28, 33, 34, 36). Egocentricity, characterizing pessimism about others' motives, viewing others as serving one's own needs, and a tendency to exploit them. High scores indicate a preoccupation with one's own goals/needs, an inability to empathize or invest emotionally, and demandingness in relationships. (Items 4, 5, 6, 9, 10, 11, 19, 22, 24, 27, 29, 31, 35, 39, 40, 41, 44). Social Incompetence describes the individual's perceived ability to engage in social activities. High scores reflect difficulty making friends and anxiety in relationships, particularly with the opposite sex. (Items 6, 14, 18, 27, 28, 31, 32, 37, 38, 43). (Bell, 1995). In Iran, Hadinejad et al. (2014) reported Cronbach's alpha coefficients of 0.68, 0.74, 0.74, and 0.85 for Social Incompetence, Egocentricity, Insecure Attachment, and Alienation, respectively. Correlations between the 90-item BORRTI symptom scales and these subscales ranged from 0.31 to 0.68. In the present study, Cronbach's alpha for this instrument was 0.803.

Ego Strength Scale (ESS): This is a 25-item self-report instrument designed and standardized by Besharat (2017) to measure an individual's perceived ability to control and manage difficult life situations. The scale assesses reactions to challenging life circumstances on a 6-point scale from 0 (very little) to 5 (very much), across five subscales: Self-Control (Items 3, 10, 13, 18, 24), Self-Resilience (Items 5, 11, 16, 23, 25), Developed Defense Mechanisms (Items 1, 4,

7, 19, 22), Problem-Focused Coping Strategies (Items 2, 8, 14, 17, 20), and Positive Emotion-Focused Coping Strategies (Items 6, 9, 12, 15, 21). The minimum and maximum scores for each subscale are 5 and 25, respectively. The total Ego Strength score, ranging from 25 to 125, is the sum of all five subscale scores. The psychometric properties of the ESS have been examined and confirmed in several studies conducted between 2005 and 2014 on clinical (n=372) and normal (n=1275) samples (Besharat, 2017). In the present study, Cronbach's alpha for this scale was 0.917.

We-ness Questionnaire (WQ): Developed by Vedes et al. (2015), this 17-item questionnaire assesses several domains of couple functioning based on the concept of *We-ness* (we, us, our-ness) in managing shared life. It evaluates the degree of We-ness between spouses in areas such as feeling secure (Items 3, 7, 8, 14), empathy (Items 2, 6, 10,), commitment (Items 5, 13), mutual respect and understanding (Items 11, 16, 17), intimacy and enjoyment in the relationship (Items 4, 9, 15), and shared meaning/vision in life (Items 1, 12). Items are rated on a 5-point Likert scale. Scoring is reversed for items 7, 10, 15, 16, and 17. The total score is the sum of all item scores, with a cut-off point of 43. Scores above this threshold indicate a higher degree of We-ness and marital unity. The questionnaire has six subscales, with scores for each item derived from the sum of its respective items. Regarding validity, Vedes et al. (2015) confirmed the factorial validity of the WQ through confirmatory factor analysis. Reported Cronbach's alpha coefficients for internal consistency were $\alpha = 0.89$ for the total scale, $\alpha = 0.75$ for women, and $\alpha = 0.82$ for men. Subscale reliabilities were: Feeling Secure (0.79), Empathy (0.78), Commitment (0.81), Mutual Respect and Understanding (0.83), Intimacy in the Relationship (0.80), and Shared Meaning/Vision in Life (0.82). In Iran, Cheraghi et al. (2017) confirmed the face and content validity through expert review and verified the six-factor structure via factor analysis, reporting a Cronbach's alpha of 0.95. Rahmati et al. (2020) also reported satisfactory validity and reliability for the WEQ. In the present study, Cronbach's alpha for this instrument was 0.953.

This cross-sectional study received ethical approval from the Research Ethics Committee of Islamic Azad University, Qom Branch (Approval Code: IR.IAU.QOM.REC.1403.238). Data were collected over six months, from December 2024 to May 2025.

All study questionnaires were consolidated into a single electronic survey using Google Forms. The survey link was distributed through targeted messaging groups on popular social media and messenger applications (e.g., Telegram, WhatsApp, Eitaa, …) in the cities of Varamin and Pishva, Iran.

The first page of the online survey contained a detailed participant information sheet. This sheet outlined the research objectives, assured participants of the confidentiality and anonymity of their responses, emphasized the voluntary nature of participation, and stated their right to withdraw at any time without consequence.

The survey included a demographic section followed by the standardized scales measuring

the study's main constructs (e.g., primary object relations, ego strength, we-ness, marital stability). No personally identifiable information was collected, preserving participant anonymity throughout the process. Data collection concluded after approximately six months, once an adequate sample size was reached.

3. Results

The study sample comprised 388 participants. The majority were female (n = 323, 83.20%), with male participants constituting 16.80% (n = 65). In terms of marital duration, the largest proportion of participants (36.90%, n = 143) reported being married for 13 to 20 years, followed by equal percentages for the 7-12 year and 21–30-year brackets (each 29.40%, n = 114). A smaller segment (4.40%, n = 17) had been married for 31 to 40 years. Regarding age distribution, the largest group was aged 41-50 years (42.80%, n = 166), followed by those aged 31-40 years (37.60%, n = 146). Participants aged 20-30 years and 50-70 years accounted for 8.20% (n = 32) and 11.30% (n = 44) of the sample, respectively. Most of the studied people were women, 323 individuals (83.20%), and the rest were men, 65 individuals (16.80%). Correspondingly, Most of the studied people were in the age range of 41-50 years (42.80 %), and the fewest of them were in the age range of 20-30 years (8.20%). The longest length of marriage was the category of 13-20 years (36.90%), and the shortest length of marriage was the category of 31-40 years (4.4 %).

Table 1

Descriptive Indices of Research Variables

Variables	Mean	Std. Deviation	Skewness	Kurtosis
Egocentrism	4.89	3.80	0.97	0.46
Alienation	3.5	2.81	0.88	0.18
Insecure Attachment	6.72	3.60	0.39	-0.39
Social Incompetence	3.04	3.08	0.88	-0.22
Impulse Control	18.1	3.85	-0.86	0.72
Ego Resilience	17.98	4.19	-0.61	0.35
Mature Defense Mechanisms	16.51	3.83	-0.50	0.36
Problem Focused Coping Strategies	18.45	3.60	-0.84	1.02
Emotion Focused Coping Strategies	17.87	3.60	-0.63	0.59
Sense of Security	10.65	4.02	-0.66	-0.14
Empathy	8.5	3.20	-0.87	0.04
Commitment	5.48	2.31	-0.85	-0.12
Mutual Respect	8.32	2.98	-0.65	-0.32
Intimacy	7.99	3.00	-0.59	-0.40
Shared Vision in Life	5.23	2.13	-0.59	-0.40
Marriage Stability	21.51	7.06	1.25	0.95
Primary Object Relations	15.73	8.58	0.65	-0.21
Ego Strength	88.90	16.17	-0.86	1.22
We-ness	46.17	15.77	-0.75	0.02

Table 1 showed the descriptive information (mean, standard deviation, skewness, and kurtosis) related to the research variables. Preliminary Analyses and Assessment of SEM Assumptions: Before conducting the primary structural equation modeling (SEM) analyses, the underlying assumptions for using maximum likelihood estimation in AMOS version [e.g., 28] were rigorously examined. First, the pattern of missing data was assessed. Less than 5% of the data points were missing completely at random (MCAR), as indicated by Little's MCAR test (χ^2 = 2.3, *p<0.05. These missing values were imputed using the series mean method to preserve the sample size and statistical power. Second, the univariate normality of all observed variables was evaluated using skewness and kurtosis statistics (see Table 1 for descriptive indices). The absolute values of skewness for all variables ranged from 0.39 to 1.26, and the absolute values of kurtosis ranged from 0.04 to 1.22. Following the conservative guidelines by Kline (2010)—where skewness < |3| and kurtosis < |10| indicated no severe departure from univariate normality—the data were deemed acceptable for proceeding with SEM.

Table 2

The Model Fit Indices

Fit Indices	Model Value	Acceptable Criteria
Normed Chi-Square (χ^2/df)	2.9	<3
Root Mean Square Error of Approximation (RMSEA)	0.076	<0.08
Standardized Root Mean Square Residual (SRMR)	0.640	<0.08
Comparative Fit Index (CFI)	0.899	>0.90
Goodness of Fit Index (GFI)	0.835	>0.90
Adjusted Goodness of Fit Index (AGFI)	0.779	>0.90

As in Table 2., the model fit indices were as follows: Normed Chi-square (χ^2/df) = 2.90; Root Mean Square Error of Approximation (RMSEA) = 0.076; Standardized Root Mean Square Residual (SRMR) = 0.640; Comparative Fit Index (CFI) = 0.899; Goodness of Fit Index (GFI) = 0.835; Adjusted Goodness of Fit Index (AGFI) = 0.779. While the Normed Chi-square (χ^2/df = 2.90) and RMSEA (0.076) values fall within their acceptable thresholds (<3 and <0.08, respectively), the values for SRMR (0.640), CFI (0.899), GFI (0.835), and AGFI (0.779) did not meet the conventional criteria for good fit (i.e., SRMR < 0.08, CFI > 0.90, GFI > 0.90, AGFI > 0.90). Therefore, the overall pattern of fit indices provides partial and limited support for the hypothesized model, suggesting potential areas for model misspecification.

Table 3 shows the information related to Pearson's correlation between moral identity, self-defeating behavior and cognition, and emotional self-awareness.

Table 3

Correlation Matrix of Research Variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Egocentrism	1																		
2	Alienation	.50**	1																	
3	Insecure Attachment	.50**	.30**	1																
4	Social Incompetence	.53**	.42**	.45**	1															
5	Impulse Control	-.27**	-.20**	-.21**	-.29**	1														
6	Ego Resilience	-.26**	-.22**	-.20**	-.31**	.76**	1													
7	Mature Defense Mechanisms	-.12*	-.15**	-0.07	-.17**	.67**	.66**	1												
8	Problem Focused Coping Strat	-.27**	-.20**	-.13**	-.25**	.73**	.63**	.55**	1											
9	Emotion Focused Coping Strat	-.18**	-.22**	0.00	-.18**	.59**	.66**	.55**	.61**	1										
10	Sense of Security	-.15**	-.44**	-.13**	-.13**	.12*	.10*	0.05	0.07	-0.00	1									
11	Empathy	-.16**	-.53**	-.11*	-.19**	.17**	.11*	.10*	.14**	0.03	.78**	1								
12	Commitment	-.16**	-.56**	-.10*	-.18**	.12*	0.09	.10*	0.09	0.03	.77**	.82**	1							
13	Mutual Respect	-.19**	-.49**	-.14**	-.19**	.163**	0.03	0.06	.13**	0.05	.75**	.75**	.74**	1						
14	Intimacy	-.14**	-.43**	-.16**	-.16**	.173**	.120*	.142**	.15**	0.04	.69**	.78**	.74**	.70**	1					
15	Shared Vision in Life	-0.05	-.44**	-0.02	-0.094	.122*	.104*	.114*	.115*	0.05	.77**	.76**	.82**	.71**	.69**	1				
16	Marriage Stability	.27**	.50**	.18**	.16**	-.13**	-0.05	-.12*	-.12*	-.10*	-.59**	-.64**	-.64**	-.66**	-.59**	-.54**	1			
17	Primary Object Relations	.82**	.67**	.78**	.75**	-.32**	-.32**	-.17**	-.27*	-.16**	-.27**	-.32**	-.32**	-.33**	-.29**	-.20**	.36**	1		
18	Ego Strength	-.26**	-.23**	-.15**	-.28**	.89**	.88**	.81**	.82**	.80**	0.05	.13**	.10*	.10*	.15**	.12*	-.12*	-.30**	1	
19	We-ness	-.17**	-.54**	-.13**	-.18**	.16**	.10*	.10*	.13**	0.03	.90**	.91**	.90**	.87**	.86**	.87**	-.69**	-.32**	.13**	1

According to the results of the correlation matrix, there is a negative and significant relationship between all subscales of Ego Strength and We-ness and Marital stability (Instability). Also, a positive and significant relationship is observed between Primary object relations and Marital stability (Instability). Path coefficients are presented in Figure 2.

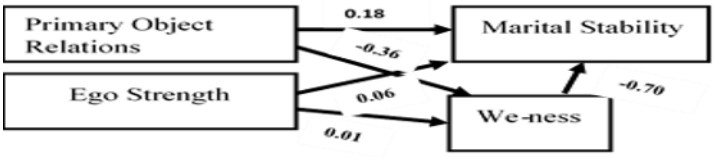

Figure 2

Path Coefficients of The Relational Model of the Mediating Role of We-Ness in the Relationship between Primary Object Relations and Ego Strength and Marital Stability.

In Table 4, you can see the standard coefficients of all paths and critical values in the proposed model.

Table 4

Standard Coefficients of the Paths of the Proposed Model

Path	Standardized estimates	Unstandardized estimates	T	P
Primary object relations→ Marital	0.23	0. 52	4.07	0.001
Ego strength→ Marital stability	0.42	0.89	3.5	0.0005
We-ness→ Marital stability	0.5	1.1	4.2	0.0001

Direct effect of Primary object relations on Marital stability: The path from Primary object relations to marital stability indicated a direct and positive influence of Primary object relations on marital stability ($\beta = 0.23$, $p < .001$). For each unit increase in Primary Object Relations, marital stability increases by 0.23 units. This statistically significant coefficient reflects a positive and notable effect. The results of the structural equation analysis showed that the Direct effect of Primary Object Relations on marital stability (marital instability) was 0.23. This positive coefficient indicated a direct and significant relationship between these two variables. This finding is theoretically and empirically logical, as Primary object relations (e.g., egocentricity, alienation, insecure attachment, and social incompetence) can influence the quality of a couple's relationship. For instance, insecure attachment may reduce trust and intimacy within the relationship, directly impacting marital stability (instability). Direct effect of Ego Strength on Marital stability. The results of the structural equation analysis showed that the Direct effect of ego strength (equated with the self-regulation variable) on marital stability was 0.42 and statistically significant ($\beta = 0.42$, $p = .0005$). This positive coefficient indicated a direct and strong relationship between these two variables. The bootstrap results for the intermediate paths of the proposed model of the current research can be seen in Table 5.

Table 5

Bootstrap Results for the Indirect Path of the Proposed Model

Path	Data	Boot	Bias	Error	Lower limit	Upper limit	P
Object Relations→ We-ness→ Marital	0.077	0.077	0	0.0529	-0.0267	0.180	>
Ego Strength→ We-ness→ Marital	-	-	0	0.0399	-0.1523	0.004	>

4. Discussion

The present study proposed and tested an integrated model to elucidate the pathways through which intrapsychic factors (primary object relations and ego strength) influence marital stability, with a specific focus on the mediating role of the dyadic construct of We-ness. The findings offered a nuanced understanding that bridges individual psychology with relational dynamics in the context of marriage. The Central Role of We-ness. The most robust finding of this study was the strong, direct effect of We-ness on marital stability (β = 0.50). This result powerfully confirms the theoretical proposition that the quality of the marital relationship itself, encapsulated by the shared identity, intimacy, empathy, and emotional security of *We-ness,* is a paramount determinant of its endurance (Jalovaara & Kulu, 2018). This aligns with the social identity perspective on couples, which posits that a strong sense of us is foundational to relationship functioning (Cruwys et al., 2023). The finding underscores that marital stability is not merely the absence of conflict or the sum of two individuals' health, but is actively co-created in the interpersonal space between partners. Direct Effects: Intrapsychic Foundations. The model also revealed significant direct effects of both primary object relations and ego strength on marital stability. The positive direct effect of primary object relations (β = 0.23) supports the core tenet of object relations theory, which asserts that internalized models of early relationships profoundly shape adult relational patterns (Graziano & Trogal, 2017). Individuals with more problematic primary object relations (e.g., higher egocentricity, alienation, insecure attachment) likely import these schemas into their marriage, creating friction and instability, as evidenced in prior correlational studies (Abbasi et al., 2021; Kahraman & Aktan, 2024).

Conversely, the direct effect of ego strength (β = 0.42) highlights the protective role of individual psychological resources. As theorized by Frederick (2013) and Bayani et al. (2023), ego strength equips individuals with the capacity for reality testing, impulse control, and stress tolerance. These competencies enable partners to navigate marital challenges adaptively, manage conflicts constructively, and maintain relational equilibrium, thereby directly bolstering stability.

The Mediating Pathway: Bridging the Intrapsychic and the Interpersonal While the direct effects are significant, the proposed mediating pathway provides the most compelling contribution of this study.

The results indicated that a portion of the influence of both intrapsychic variables operates *through* the enhancement or diminishment of We-ness. This mediation effect, though the specific indirect path for ego strength was not statistically significant in the bootstrap analysis, is supported by strong theoretical logic and correlational patterns. It suggests that early relational templates (object relations) and internal regulatory resources (ego strength) may affect marital stability not only directly but also by facilitating or hindering the development of a strong, unified *We*. For instance, secure internal working models and strong ego functioning likely enable the reciprocal empathy and vulnerability required for the *I-You* encounter described by (Jalovaara & Kulu, 2018), which is the engine of we-ness. This dyadic quality, in turn, becomes the most immediate and potent source of marital stability. This finding addressed the conceptual gap identified by Fincham and Beach (2021), demonstrating a mechanism that translates individual predispositions into relational outcomes. It empirically supports the call to move beyond compartmentalized research by integrating these domains within a single framework (Karney & Bradbury, 1995).

Limitations and Theoretical Integration: It is important to note that the model's fit indices suggested room for improvement, indicating potential misspecification. This may point to the existence of other unmeasured mediating variables (e.g., communication patterns, specific attachment behaviors) or more complex interactions between the constructs. Furthermore, the non-significant bootstrap result for the indirect effect of ego strength invites further investigation with larger samples or refined measures. Nonetheless, the integrated model provides a valuable framework. It moves the field beyond simply listing risk and protective factors for marital stability (Mohsenikabir et al., 2021; Piao et al., 2020) toward explaining *how* these factors are organized and exert their influence. It validates the necessity of focusing on the relationship itself, not just the individuals within it.

In conclusion, this study demonstrated that marital stability was best understood as an outcome woven from both the threads of individual psychology and the fabric of the shared relational identity. The construct of We-ness emerges not merely as a correlate, but as a crucial conduit and active ingredient in this process, offering a clear target for clinical interventions aimed at strengthening marriages and reducing divorce rates.

5. Conclusion

In summary, this study provided empirical support for a model in which marital stability was influenced by a chain of psychological and relational factors. The findings demonstrated that while robust intrapersonal resources, such as ego strength, are important, their impact is substantially channeled through the dyadic construct of We-ness. Similarly, the lingering effects of early object relations on adult marriage are mediated by the quality of the shared identity formed by the couple. This highlighted a crucial clinical insight: interventions aimed at enhancing marital stability should move beyond focusing solely on individual

pathologies or skills. Instead, they should prioritize fostering the couple's shared sense of *We*—their intimacy, empathy, and emotional connection—as this interpersonal bond serves as the primary pathway through which both individual psychological health and early relational experiences ultimately promote a lasting and stable marriage.

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Conflict of interest

The Authors declare that there is no conflict of interest with any organization. Also, this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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Research Paper: The Prevalence of Nomophobia among Students and Its Association with Social Media Engagement and Demographic Factors

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Abstract

Objective: The aim of the present research was to investigate the prevalence of nomophobia among students and examine its relationship with social media engagement and demographic factors.

Methods: The methodology of the present study was descriptive and correlational in nature. The study's population included all students at Midlands State University in the academic year (2024-2025). Out of this population, 176 students were selected using a convenience sampling method. The Digital Social Network Engagement Questionnaire and the Nomophobia Questionnaire (NMP-Q) were then administered to them. Data were analyzed using descriptive statistics, Pearson's correlation and Chi-square tests. The significance level was set at $p < 0.05$. All analyses were performed using SPSS27 software.

Results: The overall prevalence of nomophobia was 98.9%. 51% of participants reported symptoms of severe nomophobia, 29% moderate symptoms, 19% mild symptoms and 1% no symptoms. There was no significant relationship between nomophobia and age or gender. However, a significant relationship was found between nomophobia and students' academic year ($p = .007$). In addition, there was a significant relationship between nomophobia and social media engagement ($p < .001$).

Conclusion: Nomophobia is a prevalent concern among Zimbabwean university students and is strongly linked to higher levels of social media engagement and academic year. The study highlights the need for interventions to promote healthier digital habits and adaptive coping strategies among students.

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1. Introduction

The integration of digital technology in modern-day society's daily life has changed the way in which people interact, consume information and function psychologically. Devices such as smartphones have become essential extensions of the self and offer continual access to social networks, entertainment and information (Sadeghi et al., 2025). Novel psychological environments where modern cognitive, social and emotional processes unfold have emerged because of this technological saturation which mainly affects young adults with higher immersion in digital platforms (Naser et al., 2023). This creates more questions than answers on how these environments shape human behaviour, traditional theoretical frameworks and diagnosis of psychological disorders. One of the major concerns is nomophobia, which is the anxiety or distress that an individual experiences when they cannot access or use their mobile phone (Srivastava et al., 2025). Nomophobia is a behavioural addiction, and several terms have been used to describe this condition. The terms include mobile phone abuse, mobile phone addiction, mobile phone problematic use and mobile phone dependence (Lopez-Fernandez et al., 2014).

Studies have consistently reported high prevalence of nomophobia in student populations. For example, the prevalence was found to be 100% among Iranian nursing students and of these, 19% reported severe symptoms (Sadeghi et al., 2025) while Cain and Malcom (2019) reported 99.5% prevalence in American pharmacy students. Similarly, university students in five Arab countries reported high mobile phone dependence and 55.6% experienced impaired control (Naser et al., 2023). Wontamo et al. (2025) discovered nomophobia prevalence rates of 78.72% and 69.76% among female and male Ethiopian students. Among Omani university students, Qutishat et al. (2020) found nomophobia prevalence rates of 99.33%. In a systematic review and meta-analysis of 28 cross-sectional studies of participants from eight countries, Tuco et al. (2023) reported 24% mild, 56% moderate and 17% severe nomophobia. These figures support nomophobia's position as "the phobia of the 21st century" (Gonçalves et al., 2020; Gurbuz et al., 2020).

Scholars have drawn parallels between bahavioural addictions and substance dependence as well as obsessive-compulsive disorders (Aggarwal et al., 2012; Fontenelle et al., 2011; Grant et al., 2010). Nomophobia has similar clinical features to anxiety disorders although it is not yet formally recognized in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Some scholars have argued for the inclusion of smartphone dependence in diagnosis (Aggarwal et al., 2012). Meanwhile, research has shown that the condition predisposes individuals to serious mental health conditions (Sharma et al., 2019; Srivastava et al., 2025). Anxiety associated with nomophobia has four dimensions: fear of inability to communicate with others, of losing connectedness, of losing access to information and of losing convenience provided by smartphones (Srivastava et al., 2025). This multifaceted nature demonstrates that the construct is complex and represents a

psychological response to disconnection. It also shows that the construct is an indicator of dependence on digital technology for the maintenance of identity, social validation and emotional regulation (Canatar & Bilge, 2023; Gul & Sheikh, 2025).

Nomophobia manifests in ways similar to anxiety attacks. Researchers note increased arousal, cognitive preoccupation, avoidance behaviours, increased heart rate, trembling, respiratory alterations, perspiration, disorientation, agitation and tachycardia during the experience of nomophobia (Bhattacharya et al., 2019). In those situations, individuals experience intense fear and may become psychologically abnormal (Bhattacharya et al., 2019). For students, nomophobia has been linked to reduced concentration, procrastination, drowsiness during lessons and, consequently, poor academic performance (Tárrega-Piquer et al., 2023). Meanwhile, nomophobic individuals turn to maladaptive coping strategies, such as smartphone use for distraction and emotional support, when they are stressed (Bragazzi et al., 2019). This creates a bi-directional cycle of stress and nomophobia.

The link between social media engagement and nomophobia constitutes an important intersection in the comprehension of this modern phobia. Since social media platforms are accessed through the internet, extensive social media engagement is related to internet addiction. Research by Peyghan (2025) reported significant levels of internet addiction among students. Social media platforms can be accessed through smartphones which are the objects of anxiety associated with nomophobia. According to Amirthalingam and Khera (2024), these platforms have design elements which create addiction-inducing reward systems. Likes, shares and comments embedded in these platforms exploit and activate the dopamine-driven feedback loop. As a result, addiction to social media and excessive usage increase smartphone dependence and separation anxiety. Zhang et al. (2026) posit that the extensive use of social media creates a state of "connected readiness" which causes individuals to become nervous when access to it is disturbed. Research shows that social media addiction has predictive effects on nomophobia behaviours (Ayaz-Alkaya & Kulakcı-Altıntas, 2025; Kara, 2021; Karademir Coskun & Kaya, 2020; Tung et al., 2025; Vagka, 2024). The triadic link between social media addiction, social anxiety and nomophobia demonstrates the complex interplay of technological, psychological and social factors in the emergence and sustenance of smartphone dependence in young adults.

Beyond social media engagement, demographic variables are also important correlate of nomophobia. The development of nomophobia is a result of behavioural, social, demographic and technological factors. These include the duration of smartphone usage, dependence on digital platforms, obsessive and compulsive behaviours, social connections, mental well-being, mindfulness, gender employment status and educational factors (Srivastava et al., 2025). Also, cultural values guiding social interaction and technology use also influence the experience and expression of

nomophobia (Nguyen et al., 2022; Sadeghi et al., 2025). Research evidence shows that nomophobia is associated with academic year (Ozdemir et al., 2018) with younger students experiencing higher levels (Alodhialah et al., 2025). However, Kaur et al. (2021) found no significant relationship between academic year and nomophobia. In terms of gender, female students experience higher levels of nomophobia as compared to male counterparts (Arpaci, 2022; Chen et al., 2025; Ferreira et al., 2025; Naser et al., 2023; Naz et al., 2025; Wontamo et al., 2025). However, gender differences are less pronounced in larger and more representative samples (Avci, 2022). Age has also been reported to play a role in how nomophobia is expressed and young people are more vulnerable (Amiri & Taghinejad, 2022; Chen et al., 2025; León-Mejía et al., 2021; Washburn et al., 2024). Furthermore, employment status and level of income influence the dependence on smartphones for social and emotional support (Naser et al., 2023; Wontamo et al., 2025). These studies highlight the significant role played by demographic factors in technology-related anxieties.

Although interest in scholarly attention to nomophobia has risen, notable gaps in literature remain. Most studies have adopted variable-centered approaches which assume homogeneity of populations thus overlooking subgroup variations in nomophobia (Bresin & Mekawi, 2022; Chen et al., 2025; Shen et al., 2024). Person-centred approaches which account for age, gender and academic level differences remain scarce. In addition, the Zimbabwean context, characterized by increased smartphone adoption, developing digital literacy and poor mental health resources, has been largely left out in nomophobia research. University administrators, mental health practitioners and policymakers cannot identify student subgroups which are most vulnerable, neither can they design appropriate interventions for nomophobia in the absence of local empirical evidence. Nomophobia has been linked to poor concentration, procrastination, drowsiness during lessons and reduced academic performance (Tárrega-Piquer et al., 2023). Hence, a limited understanding of its prevalence and correlates in Zimbabwean universities may allow a preventable source of student stress and underachievement to persist unaddressed. Therefore, considering these issues, this study seeks to answer the following question: What is the prevalence of nomophobia among Zimbabwean university students and how is it associated with social media engagement and demographic factors?

2. Methods

2.1. Research Design, Statistical Population, Sample and Sampling Method

The present study employed a descriptive correlational design. The study's population comprised all students at the Midlands State University in Zimbabwe. A convenience sample of 176 participants took part in the study after incomplete questionnaires were excluded. This sample size was considered sufficient based on Bujang's (2024) assertion that a minimum of 149 participants is sufficient for both parametric and non-parametric correlations.

2.2. Instruments

Demographic Questionnaire

This was developed by the researchers and collected data about participants' age, gender and academic year.

Digital Social Network Engagement Questionnaire

The scale was developed by Przybylski et al. (2013) to measure an individual's social media use engagement. It is a unidimensional scale containing five items rated on an 8-point Likert scale (0 = "not one day) to 7 = "every day"). On each item, participants indicate their use of social media in the past week yielding total scores that range from 0 to 35. Higher scores indicate high levels of social media engagement. Przybylski et al.'s (2013) study reported a high internal consistency for the scale as measured by Cronbach's alpha (α = .82 to .89). In the present study, it demonstrated high internal consistency (Cronbach's α = .90).

Nomophobia Questionnaire (NMP-Q)

NMP-Q is a self-report scale originally developed by Yildirim and Correia (2015) to determine an individual's nomophobia levels. It has 20 items rated on a 7-point Likert scale ranging from 1 = "strongly disagree" to 7 = "strongly agree". The total scores from individual items show the level of nomophobia an individual has. These range from 20 to 140. A score of 20 means nomophobia is absent, 21 ≤ NMP-Q score < 60 indicates mild nomophobia, 60 ≤ NMP-Q score < 100 moderate nomophobia while 100 ≤ NMP-Q score < 140 shows severe nomophobia. In the original study (Yildirim & Correia, 2015), the scale showed an excellent overall internal consistency as measured by Cronbach's alpha (α =.945). A recent systematic review (Jahrami et al., 2023) also reported the scale's excellent pooled internal consistency (Cronbach's α =.93, range = .91 to .95). In this correlational study, the scale demonstrated excellent internal consistency (Cronbach's α =.97).

2.3. Data Collection and Analysis

All the necessary permissions were obtained prior to conducting this study. Following these permissions, information about the study was communicated to students in Psychology classes who then conveyed it to their contacts. Students were also invited to take part in the study on social media platforms. Data were collected online through Google forms platform via a link shared on social media platforms. The link contained a participant information sheet which provided full details about the study including information about confidentiality, informed consent and the voluntary nature of participation. Participants provided digital informed consent before taking part in the study. They then completed a structured questionnaire consisting of demographic questionnaire, Digital Social Network Engagement Questionnaire and Nomophobia Questionnaire (NMP-Q). Collected data were analyzed using SPSS version 27. Descriptive statistics (frequencies and percentages) were used to assess the prevalence of nomophobia. Chi-square analysis tested the association of nomophobia severity with gender and academic year. On the other hand, Pearson's correlation analysis examined the relationships among age, social media engagement scores and nomophobia scores.

3. Results

Participants' sociodemographic characteristics are presented in Table 1. Of the 176 students who took part in the study, 104 were female (59.1%) and 72 were male (40.9%). As shown in Table 1, 30 (17%) students were in their first year of study, 33 (18.8%) were in second year, 36 (20.5%) were in third year while 77 (43.8%) were in their fourth year of study. Participants' ages ranged from 18 to 26 years (M = 22.09, SD = 1.776).

Table 1

Participants' Sociodemographic Characteristics (N = 176)

Variable	N	(%)
Gender		
Male	72	40.9
Female	104	59.1
Year of Study		
First Year	30	17
Second Year	33	18.8
Third Year	36	20.5
Fourth Year	77	43.8
Age (M ± SD)	22.09 ± 1.78	

Descriptive statistics for the study variables are shown in Table 2. On average, participants reported moderate levels of both social media engagement (M = 23.57, SD = 11.14) and nomophobia (M = 94.45, SD = 35.56).

Table 2

Descriptive Statistics for Study Variables (N = 176)

Variable	M	SD
Social Media Engagement	23.57	11.14
Nomophobia	94.45	35.56

The prevalence of nomophobia is shown in Table 3. As presented in the table, the overall prevalence of nomophobia was 98.9%. In terms of severity levels, 2 participants (1.1%) did not have symptoms of nomophobia, 33 (18.8%) reported mild nomophobia, 51 (29%) reported moderate nomophobia and 90 (51.1%) reported severe nomophobia.

Table 3

Prevalence of Nomophobia Severity

Severity Level	N	(%)
Absent	2	1.1
Mild	33	18.8
Moderate	51	29
Severe	90	51.1

Table 4 shows the correlations among age, social media engagement and nomophobia. Age was not significantly correlated with social media engagement. and nomophobia (*p*s > .05). However, data shows that there was a significant positive relationship between social media engagement and nomophobia (r = .38, p < .001). This indicates that an increase in social media engagement was associated with a corresponding increase in nomophobia.

Table 4

Correlations Among Age, Social Media Engagement and Nomophobia

Variable	1	2	3
1. Age	-		
2. Social Media Engagement	.06	-	
3. Nomophobia	-.04	.38**	-

Note. ** p < .001

Chi-squared results showed that gender was not significantly associated with the severity of nomophobia, $\chi^2(3) = .235$, $p = .972$. However, the association between year of study and nomophobia severity was significant, $\chi^2(9) = 22.5$, $p = .007$.

4. Discussion

The current study investigated the prevalence of nomophobia and its associations with social media engagement as well as demographic factors (age, gender and year of study). This context is underrepresented in extant literature. The study found that nomophobia was highly prevalent and its overall level among students was moderate although the majority reported severe levels. Age and gender were not significantly associated with nomophobia whereas year of study and social media engagement were significantly associated with it.

The high overall prevalence (98.9%) of nomophobia found in this study is consistent with previous studies which reported at least 99% prevalence rates (Kaur et al., 2021; Qutishat et al., 2020; Tuco et al., 2023). However, 51% of participants in the current study were classified within the severe category of nomophobia which exceeds global estimates for severe symptoms (Jahrami et al., 2023; Tuco et al., 2023). This suggests that a greater proportion of Zimbabwean students may be experiencing more intense levels of nomophobia. The discrepancy could be due to contextual

factors related to the study setting. Smartphones, among Zimbabwean students, are used for social connection, important academic information, news and economic opportunities which may all create multifunctional dependency on mobile phones. This can also add towards separation anxiety and turn the device into lifeline rather than a luxury. Thus, the observed severity may be reflective of the interaction between global trends and local socio-technological infrastructure.

The positive association between social media engagement and nomophobia supports the views of contemporary digital psychology (Kara, 2021; Vagka, 2024). Consistent with our findings, previous studies have found that social media addiction is associated with high nomophobia (Karademir Coskun & Kaya, 2020). Many students primarily rely on social media platforms for affordable news consumption, social connection and academic collaboration. In addition, nomophobic individuals may compulsively use social media when they experience anxiety. They use smartphones for self-distraction and emotional support instead of addressing their anxiety (Bragazzi et al., 2019). This creates a paradox in which stress triggers maladaptive social media usage which heightens nomophobia and generates more stress (Bragazzi et al., 2019). In the current context, most students use social media as a source of interaction, study cooperation and access to information, which can enhance the habitual use. This relationship is bidirectional and mutually reinforcing. On one hand, the high frequency of use of social media can create a state of constant connected readiness, where individuals are constantly anxious when they cannot use it (Zhang et al., 2026). Conversely, some people with nomophobia might resort to compulsive use of social media as a maladaptive coping mechanism because they prefer to be distracted and regulate their emotions online instead of treating the underlying anxiety (Bragazzi et al., 2019). This forms a vicious cycle where stress encourages the use of social media more, which then leads to the perpetuation of or even heightened nomophobia. The design characteristics of social media, such as unpredictable reward schedules supporting repetitive checking behaviour and supporting psychological dependence, may also partially explain this relationship. These mechanisms can be a source of increased sensitivity to disconnection and anxiety as access is limited. In general, the combination of these interacting behavioural and technological processes can be used to explain the positive relationship between social media use and nomophobia.

Contrary to most studies which reported significant associations between gender and nomophobia severity wherein female students had higher nomophobia than their male counterparts (Arpaci, 2022; Chen et al., 2025; Ferreira et al., 2025; Naser et al., 2023; Naz et al., 2025; Wontamo et al., 2025), the current study found no significant gender association. This divergence may be explained by contextual and usage pattern convergence. Zimbabwe's cultural and technological landscapes differ from settings in previous studies. Academic requirements, social media access and mobile-based

learning platforms have universalized smartphone ownership and daily usage among Zimbabwean university students which may have attenuated gender differences in technology dependence. When smartphone use shifts from discretionary to instrumental and necessity-driven use, gender differences in patterns of use and nomophobia are likely to be diminished. This interpretation is consistent with findings that gender disparities in technology-related behaviours decrease in situations where access and use are both ubiquitous and functionally equal across groups (Avci, 2022).

The lack of significant association between age and nomophobia within our student sample may be due to the narrow age range therein. The present result does not support broader lifespan studies which noted younger age's predictive potential in increased nomophobia (Amiri & Taghinejad, 2022; Chen et al., 2025; Washburn et al., 2024). This effect, nonetheless, is muted by the limited age variance in the present student population which is somewhat homogeneous (León-Mejía et al., 2021) In the context of university students in our study, technology use is compulsory and not voluntary which could make age related differences in adoption and dependence less salient. In addition, the association our study found between academic year and nomophobia severity suggests that academic year could be a more precise environmental indicator than chronological age. Same age students of different academic years may face varying degrees of academic pressure, transition stresses and social role expectations. These environmental triggers may be accounted for more accurately by academic year than age. Our finding suggests that environmental and psychosocial factors outweigh chronological age in influencing nomophobia in a developmentally plateaued and technologically saturated university settings.

Research findings on the relationship between academic year and nomophobia are mixed. Some studies, contrary to the current study, found no relationship (Kaur et al., 2021; Qutishat et al., 2020). However, consistent with our finding, other studies reported progression of nomophobia with academic year (Ozdemir et al., 2018). Senior students usually face increased academic pressures, career anxiety and transitioning social network as peers graduate. Consequently, they may resort to smartphones to cope with stress, maintain eroding social ties and seek job-related information. This may deepen their dependence on smartphones thereby intensifying nomophobia (Tung et al., 2025). This position contradicts Alodhialah et al. (2025) who noted low nomophobia in higher academic years than lower ones. This highlights the varying influence of academic culture, support systems and demands of different degree programs on this relationship.

5. Conclusion

The study shows that nomophobia is highly prevalent among university students with many experiencing moderate to severe levels. The study also demonstrates that gender and age are not significantly associated with nomophobia while academic year and social

media engagement are significantly associated with it. The significant association between social media engagement and nomophobia demonstrates the importance of connectivity and fear of disconnection within students' digital lives. Our findings show that psychoeducational and institutional interventions to facilitate healthy digital interaction and adaptive coping mechanisms among students are needed.

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Conflict of interest

Authors declare that there is no conflict of interest.

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Research Paper: Emotional Relationships with Opposite Sex: Two Studies on the Mental Health of Adolescent Girls

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Abstract

Objective: This research was conducted in two studies with the aim of investigating the mental health of adolescent girls who have relationships with opposite sex.

Methods: The first study used a qualitative approach and a phenomenological method, and the second study used a quantitative approach and a causal-comparative method. In the first study, 12 adolescent girls aged 12 to 18 years old from Amlash city in 2025 who had a regular, daily, and at least one-year emotional relationship with the opposite sex were selected through purposive sampling and subjected to semi-structured interviews. In the second study, 30 adolescent girls who were in a romantic relationship with the opposite sex were selected and compared with 30 girls who were not in such a relationship. The research instruments in the second study were the Ryff Scale Psychological Wellbeing–Short Form (RSPWB-SF) and the Mental Health Questionnaire (GHQ-12).

Finding: The coding of the interviews in the first study revealed 3 main themes and 27 sub-themes. In the second study, the findings showed that girls who have an emotional relationship with a opposite sex partner experience a significantly lower level of mental health and psychological well-being than girls who do not have such a relationship ($P < 0.05$).

Conclusion: According to the findings, it can be concluded that adolescent girls have their own concerns, fantasies, and worries about emotional relationships with an opposite sex partner, which requires the attention of families, schools, and culture-building in society to prevent psychological harm and reduce their mental health.

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1. Introduction

Adolescence is a period of transition and profound transformation in various biological, psychological, and social dimensions of the individual. This period, which usually begins in early puberty and continues until the end of adolescence, is accompanied by rapid hormonal and physical changes that in turn affect the individual's psychological and behavioral state. At this critical juncture, identity formation, which is considered one of the most important developmental tasks of adolescence, takes place by exploring various roles, values, and beliefs (Luyckx et al., 2025). Romantic relationships with the opposite sex, as one of the most prominent manifestations of these explorations, play an important role in this process. In fact, these are the first steps on the path to knowing oneself and others in an emotional format that can form the foundations of the individual's future relationships (Shabani Shahreza et al., 2024). Research and social studies indicate the significant prevalence of these relationships among adolescents. For example, statistics indicate that about 60 to 70 percent of 18-year-old girls have experienced a romantic relationship (Jing et al., 2023; Navaneetham et al., 2025). In Iran, Naghizadeh et al. (2024), by surveying 700 girls born in the 1970s, 1980s, and 1990s, showed that same-sex relationships were common among young girls, and only about one-third (35.2 percent) of single girls considered maintaining virginity as an important issue for girls before marriage in the current era. About 27 percent were not sure, and about 38 percent believed that this issue was unimportant. Mehrolhassani et al. (2020) also concluded, based on their findings, that Iranian adolescents are at risk of contracting sexually transmitted diseases. This initial experience often begins with romantic dates, which usually begins around the ages of 14 to 15. These ages, coinciding with the onset of sexual maturation and emotional development, are considered an appropriate time to explore romantic relationships, although the level of psychological and social readiness to manage these relationships is not the same among all adolescents (Emami et al., 2024). The impact of these relationships on the mental health of adolescents is a dual and complex phenomenon. On the one hand, healthy and supportive romantic relationships can have positive effects on individuals' mental health, and a sense of security in establishing an emotional connection with another person can lead to enhanced self-confidence and a sense of empowerment in facing social challenges (Berli et al., 2021; Trimble et al., 2025; McIntyre et al., 2023). However, on the other hand, romantic relationships during adolescence, due to emotional immaturity and insufficient experience, also have the potential to cause numerous psychological disorders and problems, and when these relationships are accompanied by conflict, insecurity, uncertainty, or even an unfortunate ending, they can impose a heavy cost on the adolescent's mental health (Emami et al., 2024).

Statistical evidence in this area is worrying and shows that adolescents who are in conflicted and tense relationships are more likely to show clinical symptoms of

depression and anxiety (Bajoghli et al., 2014; Kansky & Allen, 2018). This means that unpleasant experience in this emotional area significantly increases the risk of developing mood and anxiety disorders. In this context, Fathi et al. (2019) showed in a qualitative study on 30 girls aged 18 to 31 that, in addition to gaining experience and increasing knowledge about the opposite sex, having a relationship with the opposite sex has brought about pessimism towards the opposite sex, fear of establishing a relationship, and physical and mental problems for girls. Worse still, the consequences of deep problems in teenage romantic relationships can progress to the point of serious crises; so much so that many teenage girls who attempt suicide have experienced a serious crisis in their emotional relationships before this horrific act (Fallahi-Khoshknab et al., 2023; Vergara et al., 2023). These statistics clearly show the depth of the impact of teenage romantic relationships on the most vital aspects of mental health. In addition to mental health, other aspects of adolescent well-being are also affected by these relationships. Psychological well-being, which includes a sense of life satisfaction, purpose, personal growth, positive relationships with others, self-acceptance, and autonomy (Ryff et al., 1995), can be altered by the quality of adolescents' romantic relationships. In this regard, Gómez-López et al. (2019) studied 747 Spanish adolescents between the ages of 13 and 17 and showed that romantic relationships can predict psychological well-being, and although they are positively related to the dimensions of positive relationships with others and personal growth, they are negatively related to autonomy and self-acceptance. Camirand and Poulin (2022) also showed that the presence of conflict in romantic relationships is associated with a lower level of well-being. Sometimes, focusing an adolescent's emotional and intellectual energy on a romantic relationship, even at the beginning of its formation, leads to a decrease in purpose in life and a decrease in attention to other aspects of personal development such as education, personal interests, or family and friendship relationships. This exclusive focus can lead to an unhealthy emotional dependency that ultimately undermines the individual's psychological well-being (Trimble et al., 2025).

Finally, it can be concluded that romantic relationships among adolescent girls are a multifaceted and complex phenomenon that is influenced by several factors, including puberty and family relationships. The impact of these relationships on the mental health and psychological well-being of adolescents can be both positive and negative, and in many cases, there is a delicate balance between these two aspects. Given the sensitivity of this period and the potential consequences of early relationships, local and culturally appropriate research is essential to better understand this phenomenon and provide supportive and preventive solutions. Therefore, the present study was conducted to investigate the mental health of adolescent girls who have an emotional relationship with a person of the opposite sex.

2. Methods

2.1. Statistical Population, Sample, and Sampling Method

This research was conducted in the form of two studies. The first study was qualitative and phenomenological, and the second study was quantitative and causal-comparative. In the first study, 12 teenage girls aged 12 to 18 years old from Amlash city who had a regular, daily, and in-person emotional relationship with a heterosexual partner for at least one year were selected through purposive sampling and were subjected to semi-structured interviews until theoretical data saturation. The duration of the interviews was between 45 and 83 minutes. The text of the interviews was analyzed manually using the seven-step Colaizzi's method. The initial interview questions were: 1) How long have you been in an emotional relationship? 2) How many times have you had a continuous emotional relationship with a boy? 3) How long has your emotional relationship or relationships lasted? 4) What is it like to be in an emotional relationship with a heterosexual partner? 5) What feelings does an emotional relationship with a boy bring? 6) What are the reasons for forming a romantic relationship with a person of the opposite sex? 7) Is a romantic relationship with a person of the opposite sex beneficial? 8) What are the benefits of a romantic relationship with a person of the opposite sex? 9) What harm has a romantic relationship with a person of the opposite sex caused to you? 10) Is a romantic relationship with a person of the opposite sex harmful? 11) What effects has a romantic relationship with a person of the opposite sex had on you? 12) What are the strategies for improving a romantic relationship with a person of the opposite sex? 13) How can girls protect themselves from unhealthy romantic relationships with a person of the opposite sex? 14) How can girls have healthy romantic relationships with a person of the opposite sex?

Demographic information of the participants in the first study is presented in Table 1.

Table 1

Demographic information of the research participants

Rank	Age	Educational level	Duration of relationship with opposite sex
1	14	8th grade	2 years
2	18	12th grade	3 years
3	13	7th grade	1 years
4	16	10th grade	1 years
5	18	11th grade	2 years
6	15	9th grade	2 years
7	17	11th grade	3 years
8	15	10th grade	2 years
9	18	12th grade	2 years
10	18	12th grade	2 years
11	17	11th grade	2 years
12	18	12th grade	3 years

In the second study, 30 teenage girls who had a regular, daily, and at least one-year emotional relationship with a opposite sex were selected and compared using purposive sampling. Data analysis was performed using multivariate analysis of variance and SPSS-26 software.

2.2. Instrument

General Health Questionnaire-12 (GHQ-12;): This questionnaire was developed by Goldberg and Williams (1988) and consists of 12 items and consists of two subscales: positive mental health symptoms (items 2, 3, 4, 6, 10, 12) and symptoms of mental problems (items 1, 5, 7, 8, 9, 12). This questionnaire is scored on a 4-point Likert scale from not at all (0) to much more than usual (3), with higher scores indicating higher mental health. Goldberg and Williams (1988) reported sensitivity, specificity, and overall classification error as 6.80, 3.93, and 9.10, respectively. In the study by Yaghoubi et al. (2012), the sensitivity, specificity, and overall classification error for the best cutoff point of the questionnaire, which was 9, were 81.5 percent, 77.1 percent, and 17.8 percent, respectively. The cutoff point was also obtained by considering the maximum sensitivity (95.5 percent) of a score of 5 and the maximum specificity (95.8 percent) of a score of 15. The construct validity of the questionnaire was calculated by examining the correlation between the subscales with each other and with the total score, all of which had a significant correlation with strong intensity. Also, the Cronbach's alpha coefficient of the questionnaire was 0.92 and the reliability coefficient of the scale and the Spearman-Brown was 0.91.

Ryff Scale Psychological Wellbeing–Short Form (RSPWB-SF): This scale was developed by Ryff (1995) and has 18 items and is scored on a 6-point Likert scale from strongly disagree (1) to strongly agree (6). The total score of the questionnaire is obtained from the sum of the items, and a higher score indicates higher psychological well-being. This scale has 6 subscales: mastery of the environment (items 1, 4, 6), self-acceptance (items 2, 8, 10), positive relationships with others (items 3, 11, 13), having a purpose in life (items 5, 14, 16), personal growth (items 7, 15, 17), and autonomy (items 9, 12, 18). The internal consistency of the total score and subscales has been reported to be between 0.75 and 0.88, and its convergent validity has been confirmed through the correlation of this scale with the Life Satisfaction Scale (R = 0.47), the Oxford Happiness Questionnaire (R = 0.58), and the Rosenberg Self-Esteem Scale (R = 0.46) (Bayani et al., 2008).

3. Results

Findings from the coding of interviews in the first study indicated 3 main themes and 27 subthemes (Table 2).

Table 2.

Main and sub-themes extracted from interviews with participants

Main themes	Sub-themes											
Daydreaming	Curiosity	Experience of love	Desire to be understood	Sense of care	Fantasizing	Emotional attraction	Sense of purpose	Idealization	Physical attractiveness	Hope	Sense of motherhood	Gaining independence
Worry	betrayal	fear of loneliness	Worry about the future	Economic instability	Relationship conflicts	Worry about the durability of the relationship	Love failure	Social stigma	Rumination	Unsuccessful marriage		
Support	Family support	Education	Counseling	Culture building	Consulting with friends							

It is observed that the lived experience of adolescent girls of relationships with the opposite sex, in addition to including fantasizing and motivational and emotional conflicts, also includes some concerns, obsessions, and ruminations, and obtaining support from the family and other areas that promote values can act as a psychological refuge and be their support for a healthy passage through this period.

In the second study, the mean and standard deviation of the age of girls in a heterosexual relationship were 17.24 and 2.65, and girls without a heterosexual relationship were 17.76 and 3.60. The mean and standard deviation of the research variables are presented in Table 3.

Table 3

Mean and standard deviation of meaning of the research variable

Variable	Girls in a heterosexual relationship Mean± Standard deviation	Girls without a heterosexual relationship Mean± Standard deviation
Mental health	17.60±0.81	47.25±0.93
Psychological well-being	78.58±1.42	103.08±72.1

As can be seen in Table 3, the mean mental health and psychological well-being of girls in a heterosexual relationship are lower than that of girls without a heterosexual relationship. The significance level of the Kolmogorov-Smirnov test for all indicators was greater than 0.05, and as a result, the data distribution was normal. The Levene's test statistic was not significant to examine the homogeneity of error variances of mental

health (F = 0.49, P = 0.15) and psychological well-being (F = 0.67, P = 0.09) in the study groups, and as a result, the error variances of these variables in the groups were homogeneous. Multivariate analysis of variance was used to examine the difference in mental health and psychological well-being between the two groups. The value of the Wilks lambda statistic (F = 0.38, P = 0.00, eta squared = 0.69) showed that there was a significant difference between the groups in at least one of the variables. A summary of the results of the multivariate analysis of variance is reported in Table 4.

Table 4

Summary of the results of the multivariate analysis of variance test

Component	Sum of squares	d.f	Mean of squares	F	P	Effect size
Mental health	938.20	1	938.20	2.41	0.00	0.21
Psychological well-being	1264.08	1	1264.08		0.00	0.32

As shown in Table 4, the significance level of the test is significant for mental health and psychological well-being. Therefore, it can be said that the level of mental health and psychological well-being in girls who have an emotional relationship with a heterosexual is significantly lower than that of girls who do not have such a relationship.

4. Discussion

This research was conducted in two studies with the aim of investigating the mental health of adolescent girls who have heterosexual relationships. In the first study, which was conducted with a qualitative approach and phenomenological method, the findings indicated 3 main themes and 27 sub-themes. The main theme of daydreaming included 12 sub-themes: curiosity, experiencing love, desire to be understood, sense of care, fantasizing, emotional attraction, sense of purpose, idealization, physical attractiveness, hope, sense of motherhood, and gaining independence. The main theme of worry included 10 sub-themes: betrayal, fear of loneliness, worry about the future, economic instability, communication conflicts, worry about the durability of the relationship, love failure, social stigma, rumination, and unsuccessful marriage. The main theme of support included 5 sub-themes: family support, education, counseling, culture building, and consulting with friends. In the second study, it was also observed that girls in romantic relationships with opposite-sex partners experienced significantly lower levels of mental health and psychological well-being than girls who did not have such relationships. These findings are in line with the research of Khalajabadi-Farahani (2025), Naghizadeh et al. (2024), Shabani Shahreza et al. (2024), Atefifar et al. (2023), Emami et al. (2024), Fathi et al. (2019), Amiri et al. (2021), Alimoradi et al. (2019), Bahrami et al. (2018), and Motamedi et al. (2016). The results of this bimodal study (qualitative and quantitative) provide an in-depth picture of the lived experience of adolescent girls involved in romantic relationships and shed

light on the main reason for the significant decrease in mental health and psychological well-being in this group. In fact, these relationships are a double-edged sword, on the one hand responding to developmental and idealistic needs (the main theme of daydreaming) and on the other hand, due to their unstable nature and social contexts, they are a source of chronic stress (worry). The qualitative study identified three main themes in the lived experience of adolescent girls that indicate the ongoing tension between positive motivations and negative risks at this developmental stage. The main theme of daydreaming, which includes idealism and the fulfillment of developmental needs, with 12 subthemes, explains the core of girls' motivation and emotional attraction towards these relationships. These themes indicate that emotional relationships in adolescence are often not a purely emotional goal, but a means to fulfill important developmental tasks. Themes such as "gaining independence," "desire to be understood," "a sense of purpose," and "experiencing love" show that through this relationship, the teenage girl tries to define her identity outside the family framework, feel valuable, and fill the emotional void caused by the changes of puberty. Themes such as "fantasizing" and "idealization" indicate the introduction of the element of imagination into the emotional relationship. The teenager sees her emotional partner beyond reality and, relying on "hope" and "emotional attraction," seeks a perfect and eternal bond. This idealism, although beautiful, creates a deep distance from the reality of human relationships that lays the groundwork for future failures. The themes of "feeling of care" and "feeling of motherhood" also indicate the emergence of feminine and instinctive dimensions in the behavior of the teenager, which find an opportunity to express themselves in the emotional bond. In this context, Amiri et al. (2021) conducted a qualitative study on 18 students to investigate the reasons for the tendency to have relationships with the opposite sex, and found eight main themes: emotional-educational vacuum, inevitable socio-cultural changes, mass media, atheism, response to internal needs, personality traits, environmental pressures and friends, and an ineffective educational system. Bahrami et al. (2018) found in a qualitative study on 20 teenage girls that a poor understanding of the risks and processes of identity formation can be a prerequisite for entering into a relationship with the opposite sex. Mousavi et al. (2012) showed in a qualitative study and by interviewing 19 female students that various factors such as the individual's attitude, feelings of loneliness, and the social atmosphere, including the university environment, family, friends, religious beliefs, and media that promote Western culture, can be effective in emotional relationships with the opposite sex before marriage. Motamedi et al. (2016) also showed that being male, younger, single, and less religious or secular are important determinants of a positive attitude towards premarital sex.

The main theme of worry, with 10 subthemes, directly refers to a decline in mental health. These worries are factors that cause anxiety and rumination, which are divided into two main categories. 1)

Relationship-related pressures: Themes such as “betrayal,” “communication conflicts,” “love failure,” and “worry about the durability of the relationship” reflect instability, lack of communication skills, and uncertainty in adolescent relationships. For an adolescent who has defined a large part of his or her value in the relationship, the threat of failure or betrayal is equivalent to an identity catastrophe. 2) Future-oriented and social pressures: Themes such as “worry about the future,” “failed marriage,” and “economic instability” indicate that adolescent anxiety is not limited to the present, but also encompasses an uncertain future and future responsibilities. In addition, “social stigma” indicates a conflict between individual behavior and social or cultural norms, leading to “rumination” and concealment, and thus weakening social supports.

The main theme of support, with 5 sub-themes, refers to factors that can play a moderating role against stress caused by emotional relationships. “Family support” is the most important protective factor; in the presence of safe support, an adolescent girl can manage the risks of an emotional relationship. “Counseling” and “education” are also tools that provide adolescents with coping and conflict resolution skills and reduce the severity of psychological trauma. In this regard, Khalajabadi-Farahani (2025) showed, by studying 1,055 female students in Tehran, that factors such as higher social perspectives on marriage, new marital attitudes, low respect for parental values, and liberal sexual norms of peers are significant predictors of premarital sexual behaviors. Shabani Shahreza et al. (2024) systematically reviewed 17 articles and showed that the lack of sexual knowledge among parents and teachers, as well as the lack of comprehensive sexual programs for girls in this age group and the lack of appropriate sexual awareness are among the main causes of sexual problems in adolescent girls, and examining and focusing on sexual issues in this crucial stage of girls' lives can help achieve a healthy sexual life and prevent serious problems. Atefifar et al. (2023) showed in a study on junior high school girls that with increasing assertiveness in the family, relationships with the opposite sex also decrease. Alimoradi et al. (2019) also showed in another qualitative study on 18 adolescent girls aged 13 to 19 that the existence of conflict arising from families, schools, and peers makes it necessary to establish and strengthen communication between parents and adolescents on sexual issues.

The finding of the second study that girls in romantic relationships experience significantly lower levels of mental health and psychological well-being is fully explained by the qualitative findings and the main theme of “worry.” Adolescent romantic relationships lack the structural stability and long-term commitment of adults. This instability, along with social and future-oriented fears (the theme of worry), causes chronic psychological stress. Psychological well-being also includes dimensions such as autonomy, mastery of the environment, personal growth, and purpose in life. However, when a major part of the adolescent’s mental energy is spent “ruminating” about infidelity or the

continuation of the relationship, his sense of mastery over his life and environment decreases. Anxiety caused by social anxiety and fear of judgment prevents the adolescent from living openly and is forced to hide, which in turn harms his mental health. Furthermore, from the perspective of attachment theory, adolescent relationships often reflect a form of insecure attachment (anxious or avoidant). The need to be "understood" and "experience love" is very strong, but repeated experiences of "love failure" or "betrayal" reinforce negative cognitive schemas (I am not lovable or the world is unsafe) that directly lead to reduced self-esteem and increased symptoms of depression and anxiety. In this regard, Emami et al. (2024) found that many adolescents enter into unhealthy relationships due to their tendency to have relationships with the opposite sex. However, due to their strong attachment, they do not accept the problems and do not accept that this relationship is harmful to them. These researchers believe that the family plays a key role in many aspects of life, especially in the way adolescents relate to the opposite sex.

Overall, it is observed that teenage girls have their own concerns and reasons for having relationships with the opposite sex, and the presence of support resources from family, schools, friends, and, on a more general level, the culture that governs society can protect them from establishing unhealthy relationships and, as a result, reducing their mental health and psychological well-being.

5. Conclusion

According to the findings, it can be concluded that adolescent girls have their own concerns, fantasies, and worries about emotional relationships with an opposite sex partner, which requires the attention of families, schools, and culture-building in society to prevent psychological harm and reduce their mental health

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Conflicts of Interest

No conflict of interest has been reported.

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Research Paper: Comparison of Parenting Styles and Psychological Distress in Patients with Obsessive-Compulsive Disorder and Bipolar Disorder

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Abstract

Objective: Among psychological problems, mood disorders and obsessive-compulsive disorders impose huge costs on the society every year due to their recurring nature. In this regard, the present study was conducted with the aim of comparing parenting styles and psychological distress in patients with obsessive-compulsive and bipolar disorders.

Methods: The present study was applied in terms of its purpose and employed a causal-comparative (ex-post facto) design for data collection. The statistical population consisted of all patients diagnosed with Bipolar Disorder and Obsessive-Compulsive Disorder (OCD) who referred to psychiatric clinics in Ardabil during the second half of 2024. Participants were selected based on clinical interviews conducted by specialists according to DSM-5 criteria and their confirmed medical records. A total of 100 individuals (50 with Bipolar Disorder and 50 with OCD) were selected through purposive sampling based on the inclusion criteria. Data were collected using the Parenting Practices Questionnaire (PPQ) and the Depression Anxiety Stress Scales (DASS-21). The collected data were analyzed using Multivariate Analysis of Variance (MANOVA).

Results: The findings indicated that although the OCD group reported higher mean scores in psychological distress and the bipolar group reported higher levels of authoritative parenting, multivariate analysis (MANOVA) did not reveal any statistically significant differences between the two groups (Wilks' Lambda = .921, $F(12, 284) = 1.00$, $p = .44$). Similarly, univariate analyses (ANOVA) showed no significant differences in individual variables, including Depression ($p = .35$), Anxiety ($p = .69$), Stress ($p = .42$), Authoritative ($p = .15$), Authoritarian ($p = .62$), and Permissive parenting ($p = .57$). These results suggest that overall patterns of psychological distress and perceived parenting styles are largely similar across these two disorders, and the type of disorder alone does not account for substantial differences in these variables.

Conclusion: Therefore, the current research emphasizes the importance of paying attention to parenting styles and psychological distress of the system in obsessive-compulsive and bipolar disorders.

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1. Introduction

Mental disorders or mental illnesses are among the major health issues that concern governments, psychologists, and psychiatrists worldwid. These days, due to all kinds of problems and stresses that the residents of industrial cities suffer, there is a need to increase medical and psychological care in the field of mental disorders (Steuber & McGuire, 2023). One of the important factors in the formation and occurrence of mental illness is the education that a person has received during his life through family, friends, school, and work environment, and it also plays a great role in the formation of his mental disorders. Today, the residents of metropolitan cities are much more prone to suffering from various mental illnesses than those living in peripheral cities and villages (Brock et al., 2024). One of the chronic psychological disorders that cause serious harm to the mental, emotional and communication health of affected people is obsessive-compulsive disorder or thought-practical disorder (Malehmir et al., 2021).

Obsessive-compulsive disorder (OCD) is a chronic and disabling psychiatric condition characterized by the presence of obsessions, compulsions, or both (American Psychiatric Association [APA], 2022). Obsessions are recurrent and persistent thoughts, urges, or images that are experienced as intrusive and unwanted, usually causing marked anxiety or distress. Individuals often attempt to ignore or suppress these thoughts, or to neutralize them with other thoughts or actions. Compulsions are repetitive behaviors such as washing, checking, ordering, hoarding, or mental acts such as praying, counting, or repeating words, which individuals feel compelled to perform in response to an obsession or according to rigid rules. These behaviors are intended to reduce distress or prevent a feared event, but they are excessive or not realistically connected to what they are meant to prevent (APA, 2022). According to DSM-5-TR diagnostic criteria, the presence of obsessions and/or compulsions must be time-consuming (taking more than one hour per day) or cause clinically significant distress or impairment in social, occupational, or other important areas of functioning. The symptoms should not be attributable to the physiological effects of a substance or another medical condition, and the disturbance should not be better explained by another mental disorder such as generalized anxiety disorder or body dysmorphic disorder (APA, 2022). Common symptoms of OCD include contamination fears and washing rituals, checking behaviors, ordering and symmetry obsessions, hoarding, and mental rituals such as repeating or neutralizing thoughts (Lee et al., 2020). OCD is among the most common psychiatric disorders worldwide, with a lifetime prevalence of approximately 2–3% in the general population (Reis et al, 2024). Due to its debilitating nature, OCD can seriously impair personal growth, emotional regulation, communication, and overall functioning (Stroch et al., 2019). Also, the results of Malehmir et al.'s studies (2021) showed that the prevalence of obsession in singles, people with low education and unemployed people is higher than other groups. Furthermore, the findings of Rezazadeh and Zarani (2022) indicated that

the prevalence rate of obsessive-compulsive disorder in the Iranian population falls within the range of 1.9–2.5%.

Among the common mental disorders in society, we can mention bipolar disorder (Malehmir et al., 2021). Bipolar disorder is a severe and recurrent psychiatric condition characterized by distinct episodes of mania, hypomania, and major depression (American Psychiatric Association, 2022). A manic episode is defined as a distinct period of abnormally and persistently elevated, expansive, or irritable mood, accompanied by increased activity or energy, lasting at least one week and present most of the day, nearly every day. During this period, at least three symptoms (or four if the mood is only irritable) must be present, including inflated self-esteem or grandiosity, decreased need for sleep, pressured speech, flight of ideas or racing thoughts, distractibility, increased goal-directed activity or psychomotor agitation, and excessive involvement in risky activities. The disturbance is sufficiently severe to cause marked impairment in social or occupational functioning, to necessitate hospitalization, or to present with psychotic features (American Psychiatric Association, 2022). A hypomanic episode involves similar symptoms but lasts at least four consecutive days and is observable by others, though it is not severe enough to cause marked impairment or require hospitalization. In contrast, a major depressive episode is characterized by a period of at least two weeks with depressed mood or loss of interest/pleasure, accompanied by at least five symptoms such as significant weight or appetite change, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue, feelings of worthlessness or guilt, diminished concentration, and recurrent thoughts of death or suicide (American Psychiatric Association, 2022). According to DSM-5-TR, the diagnosis of bipolar disorder requires the occurrence of at least one manic episode. The disorder is associated with substantial impairment in functioning, high rates of recurrence, and increased risk of suicide. (Strom, 2024). Its recurrent nature and alternating mood states significantly affect emotional regulation, interpersonal relationships, and occupational functioning (Koender, 2020). In different studies, the prevalence of bipolar disorder type 1 is between 0 and 2.4%, bipolar disorder type 2 is between 0.3 and 4.8%, and the whole spectrum of bipolar disorder is between 2.6 and 7.8% (Kaplan and Sadock, 2017). The frequency of bipolar disorder in the Iranian population is reported as 7.9% (Jolfaei et al., 2019). Also, the results of Malemir et al.'s study (2020) showed that the prevalence of bipolar disorder in single people is more than married people and unemployment plays an important role in bipolar disorder. Therefore, it can be said that the prevalence of bipolar disorder in singles, people with low education and people without specific jobs is more than other groups. The results of studies show that environmental factors, especially parenting styles, have a significant impact on the formation and spread of obsessive-compulsive and bipolar disorder (DaryayeLaal et al., 2019; Kochar et al ,2023). Also, parenting styles can be mentioned as effective factors in the mental health of family members (Sudhir et al.,

2021). The methods that parents choose to raise their children or the opinions that parents have about their children are called parenting styles, and it can also include the standards and rules that parents create for their children (Dorri Mashhadi et al., 2022). Child rearing methods include two main and important criteria: parental affection and control, based on these two criteria, parenting styles can be divided into three main and important categories: authoritative, negligent and domineering style (Kuppens & Ceulemans (2019). Bastani and Safakish (2022) observed in their research that there is no positive and significant correlation between parenting methods and obsessive-compulsive disorder. Also, Arman et al. (2019) concluded in their research that there is a significant difference between two groups of children and adolescents with manic-sad disorder in terms of parenting styles. The parenting style framework is designed for parents or primary caregivers to describe and analyze their child-rearing practices (Yaffe, 2023). This model illustrates how parental behaviors and attitudes influence children's development and psychological outcomes. Authoritative style: Characterized by high responsiveness combined with reasonable control. Parents establish clear rules while showing warmth and support, fostering independence and responsibility in children. Authoritarian style: Defined by high control and low responsiveness. Parents emphasize obedience and strict discipline, often with limited emotional warmth. Permissive style: Marked by high responsiveness and low control. Parents are nurturing and flexible but impose few rules or boundaries, which may lead to difficulties in children's self-regulation. Neglectful (uninvolved) style: Characterized by low responsiveness and minimal control. Parents show little involvement or guidance, which can negatively affect children's emotional and social development (Bahmani, et al ,2023). Studies have demonstrated that parenting styles play a significant role in the emergence and persistence of obsessive-compulsive symptoms. For instance, Rezazadeh and Zarani (2022) reported that the prevalence of obsessive-compulsive disorder in the Iranian population is considerable. Moreover, findings from international research indicate that negative parenting styles, through the reinforcement of maladaptive perfectionism, can exacerbate obsessive-compulsive symptoms (Hu et al, 2023). In line with these results, a study conducted among Iranian adolescents revealed that authoritarian and permissive parenting styles are positively associated with increased obsessive-compulsive symptoms (Tamrchi et al, 2024).

One of the effective factors in the formation and persistence of obsessive-compulsive disorder and bipolar disorder is psychological distress (Keyvanlo et al., 2022; Adams et al., 2018). Psychological disturbance is a non-medical term that is an introduction to acute periods and psychological disturbance, which first manifests with short-term depression symptoms of specific distress, anxiety and stress (Keles et al., 2022). Psychological distress refers to a set of negative emotional reactions such as anxiety, depression, stress, and cognitive difficulties, which can disrupt

individual and social functioning (Scandurra et al., 2024). This condition not only threatens mental health but also has serious consequences for academic performance, social relationships, and overall quality of life (Roy, et al, 2025). Also, this state is sometimes called collapse in special situations after a person experiences physical and mental pressure (Lee et al., 2020). Davoudian et al. (2022) concluded in their research that there is a positive and significant correlation between psychological flexibility, difficulty in emotion regulation, and intolerance of ambiguity with psychological distress and obsessive-compulsive disorder in patients with type 2 diabetes. Also, in the study of Wasley & Eden (2021), it was found that more than 60% of the variance in psychological distress can be predicted by adaptive and maladaptive coping styles and the quantity and perceived satisfaction of social support.

Due to the fact that obsessive-compulsive and bipolar disorder has many effects on the personal, family, professional and social life of affected people and affects all aspects of life and leads to a decrease in the quality of life of these people (American Psychiatric Association, 2022). Also, considering that most of the researches conducted in the field of parenting styles and obsessive-compulsive disorder have been conducted on teenagers (Thiyagarajan et al., 2023) and very little researches have been conducted on other stages of life, we are trying to fill this empty space in the research that has remained empty. cover the Based on this, getting to know these patients and examining the status of their parenting styles, mental distress and brain-behavioral system is necessary for the progress of their life. Also, due to the fact that the studies in this field are limited and that currently no research has been conducted on the variables of parenting styles, mental distress and brain-behavioral system in patients with obsessive-compulsive disorder, bipolar and normal. The researcher is trying to find out the role of these three variables and compare it with these three groups in the society in order to open another perspective about these disorders for therapists. Based on this, the current research seeks to answer this question, is there a difference between parenting styles and distress in obsessive-compulsive disorder, bipolar?

2. Methods

2.1. Research Design and Participants

The present study was applied in nature and employed a causal-comparative design. The statistical population consisted of all individuals who referred to psychological clinics and psychiatric offices in Ardabil city during the second half of 2024. Sampling was conducted using a purposive method. Based on clinical interviews by a psychologist and the diagnostic criteria of the DSM-5, as well as confirmation from psychiatrists through medical records, two groups of patients were selected: those with bipolar disorder and those with obsessive-compulsive disorder (OCD). In total, 100 participants were included, with 50 patients diagnosed with bipolar disorder and 50 patients diagnosed with OCD. The two groups were matched in terms of age and gender to control for these variables. Inclusion criteria were: willingness to participate in the study, age between 20

and 50 years, having a confirmed diagnosis of bipolar disorder or OCD according to DSM-5 criteria. Exclusion criteria were: lack of cooperation or motivation, substance abuse, presence of other comorbid psychiatric disorders alongside bipolar disorder or OCD. To control for comorbidity, detailed clinical interviews and medical record reviews were conducted, and only individuals with a single diagnosis of either bipolar disorder or OCD were included.

2.2. Instruments

Parenting Practices Questionnaire (PPQ): This questionnaire was originally developed by Baumrind (1971) and consists of 30 items divided into three subscales: authoritative style (10 items), authoritarian style (10 items), and permissive style (10 items). Each item is rated on a 5-point Likert scale (from "strongly agree" to "strongly disagree"), scored from 0 to 5. The validity of the original questionnaire was confirmed through factor analysis, and its reliability was reported using Cronbach's alpha: 0.82 for the authoritative style, 0.86 for the authoritarian style, and 0.75 for the permissive style. In Iran, the questionnaire was translated and validated by Minaei and Nikzad (2017), and subsequent studies (e.g., Hosseini, 2017) confirmed acceptable reliability coefficients for the adapted version.

Depression Anxiety Stress Scales (DASS): The present scale was designed by Lovibond & Lovibond (1995) to assess psychological distress. The Depression Anxiety Stress Scales (DASS-21) is a self-report instrument that measures symptoms of depression, anxiety, and stress. The short form consists of 21 items, divided into three subscales: Depression (7 items): items 3, 5, 10, 13, 16, 17, 21& Anxiety (7 items): items 2, 4, 7, 9, 15, 19, 20 &Stress (7 items): items 1, 6, 8, 11, 12, 14, 18. Each item is rated on a 4-point Likert scale (from "not at all" to "very much"), scored from 0 to 3. Higher scores indicate greater severity of depression, anxiety, and stress. Validity and reliability of the original version: Lovibond & Lovibond (1995) reported satisfactory construct validity through factor analysis. Cronbach's alpha coefficients were 0.91 for depression, 0.84 for anxiety, and 0.90 for stress, with the total scale reliability estimated at 0.93. Other studies: Henry and Crawford (2005) reported Cronbach's alpha of 0.88 (depression), 0.82 (anxiety), and 0.90 (stress). Anthony (2006) found alpha coefficients of 0.97 (depression), 0.92 (anxiety), and 0.95 (stress), with correlations between depression and stress (0.48), anxiety and stress (0.53), and anxiety and depression (0.28). Iranian version: Samani and Jokar (2007) examined the psychometric properties of the DASS-21 in Iran. Test-retest reliability was estimated at 0.80 (depression), 0.76 (anxiety), and 0.77 (stress). Cronbach's alpha was 0.81 (depression), 0.74 (anxiety), and 0.78 (stress) (Amiri et al., 2016). After administration, the results were analyzed using SPSS-26 software and the multivariate analysis of variance (MANOVA) statistical test.

2.3. Method of Implementation

To conduct the present study, after obtaining the necessary permissions and completing the initial coordination with the administrators of clinics across Ardabil city, the researcher visited these centers for sampling. Following

preliminary agreements and securing their consent to collaborate, the inclusion criteria and characteristics of the required participants were explained to the clinic staff. Subsequently, the researcher interviewed each referred patient after reviewing their medical records. Upon obtaining their informed consent to participate, the researcher conducted a clinical interview based on DSM-V criteria. After the interview and confirmation of diagnosis by a psychiatrist, the researcher provided the Parenting Questionnaire and the Psychological Distress Scale to patients diagnosed with obsessive-compulsive disorder and bipolar disorder, accompanied by thorough explanations, for them to complete.

3. Results

According to the demographic findings of the present study, out of 150 respondents, 75 were men (50%) and 75 were women (50%). Among the men, 25 were diagnosed with obsessive-compulsive disorder (33.3%), 25 with bipolar disorder (33.3%), and 25 were healthy controls (33.3%). Similarly, among the women, 25 were obsessive (33.3%), 25 were bipolar (33.3%), and 25 were normal (33.3%). Regarding age distribution, in the group aged 20–30 years (n = 50), 15 were obsessive (30%), 17 were bipolar (34%), and 18 were normal (36%). In the 30–40 age group (n = 35), 13 were obsessive (37.1%), 9 were bipolar (25.7%), and 13 were normal (37.1%). In the 40–50 age group (n = 45), 14 were obsessive (31.1%), 14 were bipolar (31.1%), and 17 were normal (37.8%). In participants over 50 years (n = 20), 6 were obsessive (30%), 6 were bipolar (30%), and 8 were normal (40%). With respect to educational level, at the undergraduate level (n = 30), 8 were obsessive (26.7%), 12 were bipolar (40%), and 10 were normal (33.3%). At the diploma level (n = 36), 8 were obsessive (22.2%), 13 were bipolar (36.1%), and 15 were normal (41.7%). At the graduate level (n = 22), 10 were obsessive (45.5%), 7 were bipolar (31.8%), and 5 were normal (22.7%). At the bachelor's level (n = 23), 8 were obsessive (34.8%), 5 were bipolar (21.7%), and 10 were normal (43.5%). Finally, at the postgraduate level (n = 39), 13 were obsessive (33.3%), 12 were bipolar (30.8%), and 14 were normal (35.9%).

Table 1

Means and Standard Deviations of Psychological Distress Subscales and Parenting Styles in OCD and Bipolar Groups

Disorders		Depression	Anxiety	Stress	NPR	Authoritative	Authoritarian	Permissive	NSP
Bipolar	M	13.18	12.58	12.04	37.80	31.66	27.92	30.42	90.00
	N	50	50	50	50	50	50	50	50
	SD	2.28	2.07	2.33	4.09	3.92	4.13	4.34	8.07
Ocd	M	13.44	12.92	12.56	38.92	30.20	27.90	31.38	89.48
	N	50	50	50	50	50	50	50	50
	SD	2.44	3.20	2.77	4.11	4.07	4.60	4.71	7.80
Total	M	13.49	12.82	12.18	38.50	31.08	27.67	30.91	89.67
	N	150	150	150	150	150	150	150	150
	S	2.38	2.52	2.54	4.17	4.00	4.23	4.54	7.54

Table 1 presents the descriptive statistics for psychological distress subscales (depression, anxiety, stress, and total distress) and parenting style dimensions (authoritative, authoritarian, permissive, and total parenting score) across two groups: bipolar disorder and obsessive-compulsive disorder (OCD) .In terms of psychological distress, the OCD group showed higher mean scores in depression (M = 13.40, SD = 2.44), anxiety (M = 12.92, SD = 3.20), and stress (M = 12.56, SD = 2.78) compared to the bipolar group (depression: M = 13.18, SD = 2.28; anxiety: M = 12.58, SD = 2.07; stress: M = 12.04, SD = 2.33). The total distress score was also higher in the OCD group (M = 38.92, SD = 4.11) than in the bipolar group (M = 37.80, SD = 3.91) .Regarding parenting styles, the bipolar group scored higher in authoritative parenting (M = 31.66, SD = 4.13), whereas the OCD group reported lower scores in this dimension (M = 30.20, SD = 4.60). Authoritarian parenting scores were nearly identical across groups (OCD: M = 27.90; Bipolar: M = 27.92). Permissive parenting was slightly more prevalent in the OCD group (M = 31.38, SD = 7.77) compared to the bipolar group (M = 30.42, SD = 8.07). The total parenting style score was marginally higher in the bipolar group (M = 90.00, SD = 7.54) than in the OCD group (M = 89.48, SD = 7.77) .These findings suggest that individuals with OCD may experience higher levels of psychological distress and tend to perceive their parents as more permissive and less authoritative, whereas bipolar individuals report a more balanced parenting experience.

Table 2

Wilks' Lambda and Other Multivariate Indices from MANOVA Analysis

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	0.99	5061.05	6.00	142.00	0.00
	Wilks' Lambda	.005	5061.05	6.00	142.00	0.00
	Hotelling's Trace	213.85	5061.05	6.00	142.00	0.00
	Roy's Largest Root	213.85	5061.05	6.00	142.00	0.00
Disorder	Pillai's Trace	.081	1.005	12.00	286.00	0.44
	Wilks' Lambda	.92	1.00	12.00	284.00	0.44
	Hotelling's Trace	.085	.996	12.00	282.00	0.45
	Roy's Largest Root	.057	1.36	6.00	143.00	0.23

A multivariate analysis of variance (MANOVA) was conducted to examine the combined effect of diagnostic group (OCD vs. Bipolar) on the set of eight dependent variables (three distress subscales and five parenting style dimensions). The overall test indicated that the group effect was not statistically significant (Wilks'Λ=.921, F(12, 284)=1.00, p=.449). This primary finding suggests that, when considering all eight

variables simultaneously, the pattern of psychological distress and perceived parenting styles does not significantly differ between the OCD and Bipolar groups.

Table 3

Univariate ANOVA Results for Group Differences in Dependent Variables

Source	Dependent Variable	Sum of Squares	df Error	Mean Square	F	Sig	Eta
Disorder	Depression	11.77	1	5.89	1.04	0.36	0.01
	Anxiety	4.65	1	2.33	0.36	0.70	0.00
	Stress	11.08	1	5.54	0.86	0.43	0.01
	Authoritative	60.65	1	30.33	1.91	0.15	0.02
	Authoritarian	16.81	1	8.41	0.47	0.63	0.00
	Permissive	23.09	1	11.55	0.56	0.57	0.01
Error	Depression	829.72	93	5.64			
	Anxiety	940.84	93	6.40			
	Stress	947.06	93	6.44			
	Authoritative	2329.22	93	15.85			
	Authoritarian	2654.18	93	18.06			
	Permissive	3042.78	93	20.70			
Total	Depression	28152.00	100				
	Anxiety	25624.00	100				
	Stress	23211.00	100				
	Authoritative	147347.00	100				
	Authoritarian	117543.00	100				
	Permissive	146411.00	100				
Corrected Total	Depression	841.49	99				
	Anxiety	945.49	99				
	Stress	958.14	99				
	Authoritative	2389.87	99				
	Authoritarian	2670.99	99				
	Permissive	3065.87	99				

Subsequent univariate ANOVAs were performed to identify which specific variables contributed to the non-significant overall MANOVA result. None of the dependent variables reached statistical significance at the conventional α=.05 level. Specifically, the group effect was non-significant for Depression ($F(1,93)=1.04, p=.355$), Anxiety ($F(1,93)=0.36, p=.696$), Stress ($F(1,93)=0.86, p=.425$), Authoritative ($F(1,93)=1.91, p=.151$), Authoritarian ($F(1,93)=0.47, p=.629$), and Permissive ($F(1,93)=0.56, p=.574$). Although the effect

size (η2) for Authoritative parenting was the largest among the parenting styles, the power to detect this difference was low (Power=.28 based on F(1,93)=1.91).

4. Discussion

The present study aimed to examine differences between individuals with obsessive-compulsive disorder (OCD) and bipolar disorder in psychological distress subscales (depression, anxiety, stress) and parenting styles (authoritative, authoritarian, permissive). Although the OCD group reported higher mean scores in psychological distress and the bipolar group reported higher scores in authoritative parenting, the multivariate (Wilks' Lambda) and univariate (ANOVA) analyses did not reveal statistically significant differences.

The aim of the present study was to examine differences between individuals with obsessive-compulsive disorder (OCD) and bipolar disorder in indices of depression, anxiety, and stress. The findings indicated that individuals with OCD reported higher mean scores in depression, anxiety, and stress compared to those with bipolar disorder; however, these differences were not statistically significant. These results are consistent with the findings of Yapıcı Eser et al. (2020), Hassoulas et al. (2023), Davoudian et al. (2022), and Ameri and Najafi (2022), which suggest that different clinical disorders may exhibit similar overall levels of psychological distress due to shared underlying mechanisms such as deficits in emotion regulation and heightened cognitive sensitivity. The present findings are also in line with studies by De Prisco et al. (2023) & Olivine (2025), which emphasize the existence of common mechanisms underlying psychological symptoms across diverse psychiatric conditions. Conversely, the findings of this study are inconsistent with research such as Cheng et al. (2025) and Durdurak et al. (2025), which reported that bipolar patients, particularly during manic or hypomanic episodes, display distinct patterns of emotion regulation and psychological distress compared to individuals with OCD. Systematic reviews, including De Prisco et al. (2025) have further highlighted that comorbidity of OCD and bipolar disorder creates a complex and distinct clinical profile that requires specialized treatment approaches. The lack of statistically significant differences in the present study may be explained by several factors. First, the limited sample size may have reduced the statistical power necessary to detect differences. Second, symptom overlap between OCD and bipolar disorder likely contributed to similarities in reported levels of depression, anxiety, and stress. Third, the sensitivity of measurement instruments may not have been sufficient to capture subtle distinctions between the two groups. Fourth, within-group heterogeneity, reflecting the variability in symptom severity and presentation across individuals, may have attenuated between-group differences. Fifth, the presence of comorbid disorders such as generalized anxiety or major depressive disorder could have confounded the results. Finally, cultural and social factors may influence how symptoms are experienced and reported, potentially leading to greater

similarities between the two groups (Strom, 2024).

The aim of the present study was to examine differences between individuals with obsessive-compulsive disorder (OCD) and bipolar disorder in perceived parenting styles. The results indicated that the bipolar group reported higher levels of authoritative parenting, whereas the OCD group reported higher levels of permissive parenting; however, these differences were not statistically significant. The present findings are consistent with the studies of Chen et al. (2022), Sudhir et al. (2021), Zolali Kordgheshlaghi and Nadermohammadi (2022), and Jamei and Zarbakhsh (2021), which have demonstrated that parenting styles play a crucial role in shaping psychological outcomes. Recent studies conducted in Iran have similarly shown that authoritarian and permissive parenting styles are positively associated with obsessive-compulsive symptoms, while authoritative parenting is negatively associated (Mostafavi, 2024). These findings also align with classical parenting theories, which associate authoritative parenting with better emotional adjustment and permissive parenting with anxiety-related and obsessive difficulties (Baumrind, 1971; Wang et al., 2021). In contrast, the present results diverge from some previous studies that reported clear differences between clinical groups. For example, the systematic review by De Prisco et al. (2025) highlighted that comorbidity of OCD and bipolar disorder creates a complex and distinct clinical profile requiring specialized interventions. Similarly, studies such as those conducted at the Okasha et al. (2024) reported that adolescents with psychiatric disorders more frequently perceived authoritarian parenting and low parental care, whereas healthy groups reported authoritative parenting. These findings suggest more pronounced differences between groups and therefore stand in contrast to the non-significant results of the present study. Contrary to the initial hypothesis, which anticipated significant differences between the groups, the lack of statistical significance may be explained by several factors. Children's perceptions of parenting styles may be influenced more by their current emotional state than by actual parental practices (Kalaman et al., 2023). Furthermore, cultural and social contexts may moderate the impact of parenting styles on psychological outcomes; in collectivist societies such as Iran, parenting styles may exert different effects on mental health compared to individualist contexts (Lu et al., 2024). Overlapping family and clinical experiences between the two groups may also contribute to similarities in perceived parenting styles. In addition, self-report instruments may lack the sensitivity to detect subtle differences, and the presence of comorbid disorders such as generalized anxiety or major depression may further confound the results.

Like other studies, the present research also had certain limitations. For instance, self-reporting tools were used to measure the research variables, and although these instruments had adequate validity and reliability, the responses may have been influenced by the participants' emotional state at the time of answering. Therefore, it is

suggested that future studies employ additional methods such as interviews and observations to obtain more comprehensive data. Moreover, variables such as personality traits, as well as social and cultural characteristics, were beyond the researcher's control and may have affected the findings. Another important limitation is that this study was restricted to participants from the city of Ardabil. Consequently, caution should be exercised when generalizing the results to other populations. Future research is recommended to include samples from different cities and regions to enhance the external validity and generalizability of the findings. Based on the results, it is further suggested that therapeutic interventions targeting cognitive biases be designed, and other psychological factors such as worry and guilt be investigated. In addition, meetings with the presence of psychologists should be organized to educate families about OCD and bipolar disorder, provide problem-solving skills, and rebuild social support systems so that family dynamics can return to a healthier state.

5. Conclusion

Overall, the findings revealed that although OCD patients reported higher levels of depression, anxiety, and stress, and bipolar patients reported more authoritative parenting, these differences were not statistically significant. Thus, psychological distress and parenting styles appear to share common patterns across the two disorders, suggesting that the type of disorder alone does not account for substantial differences in these variables.

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Conflict of interest

The authors report no potential conflicts of interest

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Research Paper: Collective Psychology: A Critical Corrective to the Dominant Influence and Control Paradigm

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Abstract

Objective: To critically examine the control-oriented trajectory within social psychology—characterized by covert influence, behavioral nudging, and digital dark patterns—and propose *Collective Psychology* as an ethical, liberatory corrective that re-centers democratic agency.

Methods: A theoretical-critical inquiry was conducted through narrative review and conceptual analysis of peer-reviewed literature, books, and policy reports from 1960 to 2025. Thematic extraction and contrastive mapping were used to synthesize dominant influence paradigms with critical, liberation, and decolonial psychological traditions.

Results: The synthesized framework comprised five interdependent principles: radical transparency, collective agency, structural healing, participatory praxis, and plural solidarity. Two irreducible paradigmatic contrasts emerged: shifting power from domination to collective capacity, and replacing covert manipulation with critical consciousness and influence literacy. These contrasts redefine psychological intervention from individual behavior modification to structural transformation and co-produced knowledge.

Conclusion: Collective Psychology offers a coherent, principle-driven corrective that redirects psychological praxis away from technocratic control toward transparent, democratic solidarity. The framework provides actionable pathways for health policy, civic engagement, participatory research, and curriculum reform, demonstrating strong potential for culturally grounded adaptation.

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1. Introduction

Social psychology has been an ambivalent discipline since its inception. On one hand, it has promised a deeper understanding of human behavior in social contexts; on the other hand, it has consistently operated on the border between consciousness-raising and social control. Kurt Lewin (1946), through his concept of *action research*, oriented social psychology toward solving real-world problems and defined it as knowledge in service of democracy and social change. However, this knowledge was quickly appropriated by institutions of power and the market, transforming from a tool of liberation into a technology of domination. Edward Bernays (1947), Freud's nephew and a founder of modern public relations, explicitly spoke of the *engineering of consent* and harnessed crowd psychology to shape public opinion and consumerism. He explained how a *smart, aware minority* could use psychological principles to guide the thoughts and behaviors of the masses in favor of industrial owners and political power. Thus, social psychology not only described the mechanisms of social influence but itself became one of its primary technologies.

It is important to acknowledge that social psychology has never been a monolithic discipline. Alongside its instrumental trajectories, it has consistently hosted critical, emancipatory, and collective-oriented strands that challenge conformity and center democratic participation (e.g., Reicher, 2004; Haslam & Reicher, 2012). However, in recent decades, institutional and policy uptake has increasingly privileged covert influence, behavioral nudging, and digital persuasion architectures. This article focuses specifically on this dominant control-oriented trajectory. It proposes Collective Psychology not as a wholesale replacement of the discipline, but as a critical corrective that foregrounds transparency, collective agency, and structural healing.

This instrumental tendency has continued in more complex and institutionalized forms. Thaler and Sunstein (2008), introducing the concept of *libertarian paternalism* and proposing *nudges* as low-cost tools to change citizen behavior, effectively directed choice-architecture in favor of policymakers. Although they call this approach *libertarian*, critics have shown that nudges, relying on unconscious cognitive shortcuts, bypass democratic decision-making and place citizens in a state of *unconscious followership* instead of strengthening public reasoning (Mols et al., 2015). Hurd (2015) offers a fundamental critique, arguing that libertarian paternalism is inherently contradictory and that nudges constitute an *abuse of government power*. Concurrently, Cialdini (2007), in his best-selling book *Influence: The psychology of persuasion*, compiled six universal principles of influence (e.g., social proof, commitment and consistency, scarcity). Although he acknowledges that these principles are to be used as *weapons of exploitation*, marketers, politicians, and digital platform designers have used this toolkit to deceive consumers and voters. In digital spaces, this logic has reached its peak of complexity and influence with the emergence of *dark patterns* (Fagan, 2024). Fagan demonstrates that these patterns exploit cognitive biases to drive users toward decisions often contrary to their

interests. Crucially, even when users become aware of such manipulations, they remain vulnerable (Fagan, 2024).

This situation raises an ethical and political question: Can social psychology break free from the logic of control? And if so, what would its liberatory alternative look like? The answer lies in critical traditions within psychology. Critical psychology, particularly in its German tradition with figures like Holzkamp (1992), criticizes mainstream psychology for reducing humans to passive, predictable beings and, by internalizing the causes of suffering, shielding unjust social structures from critique. Fox et al. (2009) argue that critical psychology should be a liberatory knowledge in service of social justice, not a tool for control and conformity. Similarly, community psychology since the 1960s has sought to shift focus from the individual to social contexts, emphasizing values such as empowerment, solidarity, and social justice (Kloos et al., 2012). Prilleltensky (2008), proposing the concept of *psychopolitical validity*, emphasizes that liberatory psychology must intervene both at the individual level (reducing distress) and at the structural level (changing unjust institutions). However, recent critical reviews indicate a deep gap between these theoretical alternatives and practical praxis to directly confront influence and deception techniques (Kivell et al., 2023).

This article aims to fill this gap. By proposing the concept of *Collective Psychology*, we seek to provide a theoretical and practical framework that, in contrast to control-oriented social psychology, is grounded in collective values, transparency, and liberation. This concept emerges from the literature of critical psychology, liberation psychology (especially the work of Martín-Baró, 1994, and Freire, 1970), and recent decolonial currents in psychology, placing *the commons* at the center of psychological praxis. The main research question is: How can Collective Psychology be defined in opposition to deceptive influence techniques, what are its principles of praxis, and what are its applications in policy, education, and civic action? Accordingly, after this introduction, section two presents a critical review of the literature in two axes: the Dominant Influence and Control Paradigm as a technology of influence and the conceptual roots of the collective. Section three outlines the conceptual framework of Collective Psychology and its five principles, followed by an analysis of two fundamental contrasts: power and consciousness. Section four describes practical applications, and section five discusses implications for national science policy, limitations, and future directions.

2. Methods

2.1. Study Design and Approach

This study was a theoretical-critical inquiry employing a narrative review and conceptual analysis. Unlike empirical studies with testable hypotheses, this research aimed at synthesizing existing literature across two opposing paradigms — mainstream social influence psychology and critical/collective-oriented traditions — to construct an integrative conceptual framework (*Collective Psychology*) and derive actionable principles for liberatory praxis.

2.2. Data Sources and Search Strategy

A systematic literature search was conducted across the following electronic

databases: Scopus, Google Scholar, PubMed, Magiran, and SID (for Persian sources). The search covered publications from January 1960 to March 2025. The following keyword combinations were used in titles, abstracts, and keywords:

- For mainstream social influence: *social influence* OR *persuasion* OR *nudge* OR *nudging* OR *dark pattern* OR *manipulation* OR *deception*) AND (social psychology OR *behavioral economics*)
- For critical and collective traditions: (*critical psychology* OR *liberation psychology* OR *community psychology* OR *decolonial psychology* OR *communal selfhood* OR *collective agency* OR *empowerment*) AND (*praxis* OR *social justice* OR *solidarity*)

Additional hand searching was performed by reviewing reference lists of key retrieved articles and books.

Although the systematic database search was restricted to publications from 1960 onward, seminal works published before this date (e.g., Lewin, 1946; Bernays, 1947) were identified through manual reference screening and backward snowballing and were incorporated into the final synthesis.

2.3. Inclusion and Exclusion Criteria

Studies were included if they met the following criteria: (a) directly addressed techniques of social influence, manipulation, nudging, or dark patterns; OR (b) provided theoretical or empirical foundations for collective/communal concepts in psychology (e.g., collective agency, empowerment, liberation, decolonial approaches); (c) were published in peer-reviewed journals, books, or authoritative institutional reports; (d) written in English or Persian. Exclusion criteria: (a) studies focusing solely on general social psychology topics without relevance to influence or collective praxis; (b) opinion pieces without theoretical or empirical grounding; (c) conference abstracts without full text.

A total of 128 records were screened after duplicate removal. Following full-text assessment, 84 sources were included in the final narrative synthesis.

2.4. Analytical Strategy (Data Analysis)

Given the non-hypothesis-driven nature of this theoretical-critical study, the analysis proceeded through three phases:

2.4.1. Thematic Extraction: Both authors independently read the included sources and extracted recurring themes related to (i) mechanisms of influence/manipulation in mainstream social psychology, and (ii) core concepts of the collective in critical, liberation, community, and decolonial psychologies. Initial coding was inductive.

2.4.2. Contrastive Mapping: Extracted themes were organized into two paradigmatic poles (mainstream control-oriented vs. critical collective-oriented). Themes that appeared in both literatures were further examined for points of tension or convergence. Two fundamental contrasts emerged inductively from this process: *power as domination* vs. *power as collective ability* and *covert influence/deception* vs. *critical consciousness*.

2.4.3. Integrative Synthesis: Using narrative synthesis (Popay et al., 2005), the contrastive themes were woven into a

unified conceptual framework. The synthesis was guided by the question: What principles would a liberatory psychological praxis require to counter manipulation and deception techniques directly? The resulting five principles (radical transparency, collective agency, structural healing, participatory praxis, plural solidarity) were considered supportive (i.e., valid) if they met three criteria: (a) they had clear grounding in at least two of the critical traditions reviewed; (b) they could be translated into concrete, actionable applications; and (c) they demonstrated internal coherence (i.e., no logical contradiction among principles). No formal hypothesis testing or statistical inference was performed.

The synthesis was conducted collaboratively, with disagreements resolved through discussion until consensus was reached. Reflexivity notes were maintained to bracket the authors' theoretical commitments.

3. Results

The narrative synthesis and conceptual analysis yielded two main categories of findings: (a) a five-principal framework defining Collective Psychology, and (b) two fundamental paradigmatic contrasts between the dominant paradigm of control-oriented social influence and the proposed Collective Psychology.

3.1. Five Principles of Collective Psychology

From the integration of critical, liberation, community, and decolonial psychologies, five interdependent principles were identified as constitutive of Collective Psychology.

Principle 1: Radical Transparency – In contrast to covert influence techniques (nudges, dark patterns, hidden persuasion) that rely on concealing true goals and exploiting unconscious cognitive shortcuts, Collective Psychology demands full disclosure of all intervention-relevant information: the problem to be addressed, the identity and institutional interests of actors, available options, positive and negative consequences of each option, and existing uncertainties. Community members are not *targets* of intervention but active partners who must be able to decide with open eyes.

Principle 2: Collective Agency – Instead of locating the source of problems in individual weaknesses or deficits, Collective Psychology traces suffering to unequal social, economic, and political structures. Interventions aimed at changing those structures. The framework adopts a de-psychologization of social suffering, helping people recognize themselves not as passive victims or patients in need of treatment, but as collective agents with the capacity to transform structures. This principle aligns with the concept of "communal selfhood" (Lacerda-Vandenborn et al., 2025), in which individual mental health is understood to depend on the collective's health.

Principle 3: Structural Healing – Beyond mere symptom reduction or temporary relief, Collective Psychology seeks to heal collective wounds through restorative justice, institutional change, and fair redistribution of resources. Structural healing differs from structural change alone (which may be limited to institutional reshuffling) by emphasizing the mending of

historical wounds (e.g., colonization, systematic discrimination) and the rebuilding of collective bonds from within. This principle connects to the trauma and restorative justice literature (Herman, 1992).

Principle 4: Participatory Praxis – Knowledge in Collective Psychology is not produced in university laboratories by experts isolated from communities, but collaboratively with communities present at all stages. This principle draws directly from Critical Participatory Action Research (CPAR; Fine & Torre, 2021), where researchers and community members cooperate in all steps: problem identification, data collection, analysis, intervention design, and evaluation. The collective psychologist does not ask *How can I change these people?* but rather, *What can we do together?*

Principle 5: Plural Solidarity – Unlike control-oriented influence paradigms that often prioritize conformity and behavioral homogenization, Collective Psychology emphasizes *pluriversal ecologies of knowledges* (Ciófalo & Ortiz-Torres, 2024). This requires a break from *linguistic colonialism* and recognition of multiple languages, cultures, worldviews, and knowledge systems. Solidarity here does not mean assimilation but respectful and active interconnection across differences, extending to the rights of the Earth, ecosystems, and future generations.

3.2. Fundamental Paradigmatic Contrasts

Two irreducible contrasts emerged from the comparative analysis between mainstream social psychology and Collective Psychology.

Contrast A: Power as Domination vs. Power as Collective Ability – Within the dominant influence paradigm (e.g., Bernays, 1947; Cialdini, 2007; Fagan, 2024), power is conceptualized as power over others: a hidden agent, through secrecy and manipulation, directs another toward a predetermined goal, with the ultimate aim of maintaining or reproducing existing inequalities and privileges. In Collective Psychology, power is reconceptualized as power to (Rappaport, 1987): a dynamic and shared process through which individuals and communities gain greater control over matters affecting their lives. This is the power of liberation praxis (Martín-Baró, 1994; Freire, 1970) and epistemic authority redistribution (Fine & Torre, 2021).

Contrast B: Covert Influence and Deception vs. Critical Consciousness – Control-oriented approaches to influence operate through hidden mechanisms operates through hidden influence and deceptive tactics, relying on unconscious mental shortcuts. Bernays (1947) showed how *consent* could be engineered by appealing to the collective unconscious. Cialdini (2007) acknowledged that the success of his principles depends on their mechanisms remaining hidden. Digital dark patterns obstruct, deceive, and seduce users into unwanted actions (Fagan, 2024). In contrast, Collective Psychology employs critical consciousness (Freire, 1970), defined as the process by which individuals and communities identify unjust social, political, and economic structures and take

collective action against them. Contemporary expansions identify three dimensions: critical social-political analysis, critical questioning of the status quo, and collective identity for joint action (Watts & Hipolito-Delgado, 2015). The ultimate goal is cultivating *influence literacy*: the ability to detect, analyze, and resist manipulation techniques while acquiring collaborative skills for collective action.

3.3. Distinction from Community Psychology

A distinct finding was that although Community Psychology shared values of empowerment and social justice, it typically treats *community* as a site for intervention or unit of analysis, whereas Collective Psychology redefines *the collective* not merely as a context but as an epistemic agent and political subject. Community Psychology has also less directly engaged with influence technologies (nudges, dark patterns), whereas a core foundation of Collective Psychology was cultivating influence literacy and collective resistance against organized deception.

3.4. Summary Table

Table 1 presents the eight key dimensions contrasting mainstream social psychology and the proposed Collective Psychology framework.

Table 1
Contrast between the Dominant Influence and Control Paradigm and Proposed Collective Psychology

Dimension	Dominant Influence and Control Paradigm[1]	Collective Psychology (Critical Approach)
Ultimate Goal	Control, predictability, conformity (Cialdini, 2007)	Collective liberation, shared agency, interdependent well-being (Freire, 1970; Martín-Baró, 1994)
Unit of Analysis	Individual in the group (as target of influence)	The collective (as agent of change and context of being)
Concept of Power	Power as domination and influence over others (Cialdini, 2007)	Power as collective ability to act (Rappaport, 1987)
Characteristic Technique	Nudge, dark patterns, covert persuasion (Fagan, 2024)	Critical dialogue, participatory problem-posing, direct action (Freire, 1970; Fine & Torre, 2021)
Role of Practitioner	Neutral expert or hidden manipulator (Lehto, 2025)	Accompanier-facilitator (Kivell et al., 2023)
Success Criterion	Individual behavior/attitude change according to predetermined plan	Increased collective agency and structural changes based on collective will
Ethical Bias	Values of power holders (efficiency, order, persuasion)	Collective values (transparency, solidarity, justice, land rights; Ciófalo & Ortiz-Torres, 2024)
Philosophical Roots	Instrumental pragmatism, behavioral engineering, and libertarian paternalism (Hurd, 2015)	Critical theory, liberation praxis, decolonial epistemologies (Fox et al., 2009; Dutta, 2018)
Concept of Self	Individual, autonomous self (Lacerda-Vandenborn et al., 2025)	Communal selfhood; identity in connection with others (Lacerda-Vandenborn et al., 2025)

[1] Note: This column refers specifically to the institutionalized, market- and policy-coopted trajectory of influence research, not to the entirety of social psychology, which encompasses diverse critical and progressive traditions.

4. Discussion

The findings of this study demonstrated that mainstream social psychology has systematically functioned as a technology of influence, manipulation, and social control — from Bernays' engineering of consent to contemporary nudges and dark patterns. In contrast, the proposed framework of Collective Psychology offers a coherent, principle-driven alternative grounded in critical, liberation, community, and decolonial traditions. The significance of this shift was not merely technical or methodological; it is fundamentally ethical, political, and epistemological. Collective Psychology does not seek to erase social psychology; rather, it functions as a critical corrective that re-centers the discipline's original democratic and problem-solving commitments while integrating liberation, community, and decolonial insights to directly counter organized deception and covert influence.

First, the contrast between power as domination (power over) and power as collective ability (power to) redefines the very purpose of psychological knowledge. Control-oriented interventions, even when well-intentioned (e.g., nudges for public health), treat citizens as passive targets whose behavior is to be shaped by experts. Collective Psychology, by contrast, views power as a relational and generative capacity that increases when communities gain control over decisions affecting their lives. This reframing aligns psychological practice with democratic values rather than technocratic management.

Second, the contrast between covert influence/deception and critical consciousness challenges the core mechanism of most behavioral interventions. Nudges, dark patterns, and many persuasion techniques rely on keeping their workings hidden; their efficacy depends on the target not noticing the manipulation. Collective Psychology replaces this with the cultivation of critical consciousness — the ability to analyze power relations, detect hidden influence, and act collectively. This shift transforms citizens from vulnerable targets into critical agents. The concept of *influence literacy* emerging from this framework has direct implications for media education, digital literacy, and civic resilience.

The five principles— radical transparency, collective agency, structural healing, participatory praxis, and plural solidarity — are not merely aspirational. They provide concrete design criteria for interventions across settings. For instance, in health policy, replacing hidden nudges with citizen assemblies (as noted in the results) embodies radical transparency and participatory praxis. In psychological research, adopting critical participatory action research rather than conventional experiments operationalizes collective agency and structural healing. In education, teaching influence literacy rather than persuasion techniques enacts plural solidarity and critical consciousness.

A key implication is that Collective Psychology does not reject empirical rigor or evidence-based practice. Rather, it argues that evidence must be generated with communities, not on them, and that effectiveness should be measured by increased collective agency and structural change, not merely individual behavior modification. This redefinition of success criteria has profound consequences for how

research is funded, conducted, and evaluated.

Finally, the framework's consonance with traditions of popular solidarity, mutual aid, and collective responsibility — rooted in the lived experiences of working people and anti-colonial struggles — suggests that Collective Psychology is not an import but resonates with indigenous ethical commitments forged in resistance to exploitation. This opens possibilities for curriculum reform and policy development that are culturally grounded rather than merely imitative of Western models.

In summary, the significance of Collective Psychology lies in its potential to reorient the entire discipline: from a technology of control to a praxis of liberation. The two fundamental contrasts and five principles provide a roadmap for this transformation, though their real-world implementation requires empirical testing and participatory action research — a limitation addressed in the conclusions.

5. Conclusion

This article introduced Collective Psychology as a critical, liberatory corrective to the dominant influence-oriented trajectory in social psychology. The framework was built on five principles — radical transparency, collective agency, structural healing, participatory praxis, and plural solidarity — and stood in opposition to the dominant logic of covert manipulation and power as domination. Two fundamental paradigmatic contrasts were identified: (a) power as domination versus power as collective ability, and (b) covert influence/deception versus critical consciousness. These contrasts were not merely technical but ethical, political, and epistemological, requiring a paradigm shift in how psychological knowledge is produced, taught, and applied.

The main conclusion was that psychology can be practiced otherwise: not as a technology of control and consent engineering, but as a praxis of collective liberation and structural healing. This reorientation has direct implications for health policy (citizen assemblies replacing hidden nudges), civic action (collective critical dialogue against corruption), psychological research (critical participatory action research), and psychology education (influence literacy instead of persuasion techniques). Furthermore, the framework's resonance with values of mutual aid, economic justice, and collective responsibility — as expressed in the historical struggles of the oppressed and the global working class — provided a politically and culturally grounded basis for revising national psychology curricula and science policy away from technocratic control and toward liberatory praxis.

However, this was a conceptual study; empirical and participatory action research is needed to test and refine the framework in real-world settings. Key limitations include the challenge of defining boundaries of *the collective*, the risk of populist co-optation, and the need for indigenous adaptation beyond Latin American and English-language sources. Future research should focus on longitudinal implementation studies, comparative analyses across cultural contexts, and the development of concrete assessment tools for collective agency and

structural healing. Despite these limitations, Collective Psychology offers a coherent, actionable, and ethically defensible path forward for a discipline at a crossroads.

Ultimately, this framework was not proposed as a wholesale substitution for social psychology, but as a necessary corrective trajectory that redirected psychological praxis away from technocratic control and toward transparent, collective agency, ensuring that the discipline served democratic solidarity rather than engineered compliance.

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Conflict of interest

The Authors declare that there is no conflict of interest with any organization. Also, this research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Abbreviations

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the endnote. Ensure consistency of abbreviations throughout the article.

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