Modeling the Relationship Between Reality Testing and Object Relations with Psychological Well-being Through the Mediation of Defense Mechanisms in Grief Disorder

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A B S T R A C T

Objective: The present research aimed to model the relationship between reality testing and object relations with psychological well-being through the mediation of defense mechanisms in grief disorder.

Methods and Materials: The research method was correlational and of the Structural Equation Modeling (SEM) type. The statistical population included all individuals who met the diagnostic criteria for grief disorder and visited psychological clinics in District 1 of Tehran in the year 2022. The sample size, considering the number of observed variables and allocating a coefficient of 15 for each observed variable, was selected as 240 individuals through a convenience sampling method. Data collection tools included Bell's Reality Testing and Object Relations Questionnaire (1988), Andrews' Defense Mechanisms Questionnaire (1993), and Ryff's Psychological Well-being Questionnaire (1995). In this study, structural regression equation modeling and SPSS22 and Amos 23 software were used for data analysis.

Findings: The research results showed that the indirect relationship of object relations to psychological well-being through defense mechanisms ($\beta = -0.32$) is significant ($p \leq 0.01$). Also, it was determined that the indirect relationship of reality testing to psychological well-being through defense mechanisms ($\beta = -0.35$) is significant ($p \leq 0.01$).

Conclusion: Based on the results of the present study, the research model was confirmed in terms of significance and fit indicators. The findings highlight the role of reality testing, object relations, and psychological well-being in grief disorder, hence, these findings can have clinical applications and be effective in therapeutic programs related to grief disorder.

Keywords: *Grief disorder, Reality testing, Object relations, Psychological well-being, Defense mechanisms*

1.   Introduction

Grieving following the death of loved ones is a natural and necessary process experienced by all individuals; however, some lack the skills and abilities to solve the problem of grief, which can lead to a variety of other issues (Fowley, 2021). The prevalence of grief and its consequences varies due to differences in social norms and cultural expectations. Defining the stages and duration of grief is not only difficult due to these individual differences and cultural complexities, but the prevalence and characteristics of this disorder also vary across different cultures and societies (León & Guzmán-Saldaña, 2023; Mehdipour et al., 2009). Previous studies on the prevalence of complicated grief have reported a wide range of statistics, from 24% to 44%. It seems that the ratio and severity of complicated grief are directly under the influence of emotional attachment and cultural characteristics (O'Donnell et al., 2014; Worden, 2002). Studies indicate that the ratio and severity of complicated grief in some countries are such that individuals isolate themselves from social activities for extended periods (Eisma et al., 2020; Eisma et al., 2021; Gesi et al., 2020; Lin & Brown, 2020; Louw, 2020; Moradi & Fathi, 2016; O'Donnell et al., 2014; Worden, 2002). Normally, reactions resulting from grief experience gradually diminish, and the mourning period in a normal state does not exceed six months; however, in abnormal and unnatural reactions to the phenomenon of grief, an individual's mourning can manifest as mental disorders over longer periods and with greater intensity. Most bereaved individuals experience the loss of their loved ones with moderate to severe negative emotions, physical disturbances, and health problems, exposing them to various psychological disorders that can affect physical and physiological aspects (Ravanpoor et al., 2022; Shear et al., 2005; Worden, 2002). Grief can lead to complications such as severe depression, insomnia, weight loss, and loss of appetite. If these complications persist for a year, they evolve into a psychological disorder, a condition known as complicated grief (Masiejovsky et al., 2019). Clinical studies and evidence have shown that many grieving individuals display symptoms of depression, anxiety disorders, physical illnesses, and immune system dysfunction, increasing their mortality risk (Boelen et al., 2019). A decrease in psychological well-being is one of the occurrences that happens to bereaved individuals. Psychological well-being reflects individuals' mindset and emotional reactions and feelings towards life events; thus,

when well-being decreases, the individual may face mental health issues such as feelings of loneliness, isolation, and depression (Eisma et al., 2013). In severe psychological pathology in individuals with grief disorder, weakened ego boundaries lead to a distortion of reality and serve as compensatory defenses against further ego disintegration. Such symptoms are interpreted as psychotic states and often encompass the unstable characteristics of borderline personality organization (Eisma et al., 2013; Louw, 2020; Mehdipour et al., 2009). Accepting the fact that the lost individual will not return is part of the grieving process. This occurs on a fluctuating spectrum from mild reality distortion to full delusion. However, if this distortion (mild or in the form of delusion and hallucination) persists for a long time, the bereaved person's reality testing becomes problematic, and the mourner can never fully complete the grieving stages (Eisma et al., 2021; Faramarzi et al., 2013). The ability to distinguish between reality and imagination in one's thoughts is an important aspect of mental development and growth. Errors in thinking can affect behavior and lead to anxiety. Grief crises cause an imbalance and disharmony in thought, body, and psyche. The predominant state for the patient during this period is a feeling of despair and hopelessness. Upon reviewing the research conducted, it appears that grief most significantly affects the quality of object relations and is considered a threatening factor (Holaday & Glidewell, 2000; Poshtareh et al., 2023). Disturbances in object relations undermine the foundations of personal security and lead to increased vulnerability to grief (Ahadian fard et al., 2017; Orang et al., 2018). Numerous studies have confirmed the hypothesis that mental health is significantly related to defense mechanisms (Besharat, 2008; Blanco et al., 2023; Brockman et al., 2016; Brody & Carson, 2012; Conversano et al., 2023; Cramer, 1987, 2002; Giuseppe & Perry, 2021; Jamilian et al., 2014; Jun et al., 2015; Lee et al., 2020; Lotfi-Hajilo et al., 2017; Mesgarian et al., 2017; Poshtareh et al., 2023; Rubino et al., 2007). More mature defenses enable an individual to act more adaptively and with fewer anxiety symptoms in anxiety-provoking situations, such as social scenarios, while immature defense mechanisms lead to the emergence of anxiety and avoidance in these situations (Jamilian et al., 2014; Lee et al., 2020). Immature mechanisms and coping styles are associated with many negative health indicators, such as personality disorder, depression, and low psychological well-being (Blanco et al., 2023; Cramer, 2002). In the psychoanalytic system, defense plays a significant role in mental health, and each psychological

disorder is followed by specific maladaptive defense mechanisms. Psychological well-being is associated with the use of mature defense mechanisms such as anticipation, sublimation, humor, and suppression. Individuals who employ mature defense mechanisms cope well with psychological stress and adaptively respond to conflict. Identifying defense mechanisms of various disorders has practical application in aiding differential diagnosis; determining which disorder is associated with specific prominent defense mechanisms, in addition to providing a deeper understanding of mental system functioning, offers a strategic aid in diagnosing and distinguishing psychological disorders (Cramer, 1987, 2002). Grief disorder has been mostly examined from the perspectives of social and cultural factors. Factors such as the complexity of this disorder, its comorbidity with other disorders, increasing statistics of grief in the country, social withdrawal, and psychological injuries underscore the necessity of examining psychological variables related to it and also, although various studies have been conducted on grief disorder and its impact on reducing physical and mental health, this disorder remains one of the significant issues in the country. Given the above, the present research aims to answer the question of whether the model of the relationship between reality testing, object relations, and psychological well-being with the mediation of defense mechanisms in grief disorder fits.

2. Methods and Materials

2.1. Study Design and Participants

This study, considering its objectives, is a fundamental research, employing a cross-sectional data collection method and correlational analysis through Structural Equation Modeling (SEM). The research population includes all individuals diagnosed with grief disorder by a psychiatric specialist who visited psychological clinics in District 1 of Tehran in 2022. Regarding the optimal sample size for studies related to Structural Equation Modeling, there are differing opinions, including those of Kline (2010) and Loehlin (2004), as cited by Ghasemi (2011), who believe that a sample size of less than 100 is inadequate, while sizes above 200 are preferable. In this research, considering the number of observed variables and allocating a coefficient of 15 for each observed variable, accounting for the possibility of incomplete questionnaires, 240 individuals were selected using a convenience sampling method. Initially, clinics willing to cooperate in District 1 of Tehran were chosen, and then individuals visiting these centers for grief issues who

were willing to participate in the research were introduced by the centers to take part in the study. Inclusion criteria for the study included having diagnostic criteria for grief disorder and an interest in participating in the research. Recent psychological and medication treatments, suffering from psychiatric disorders, and incomplete or incorrect completion of questionnaires were among the exclusion criteria.

The research was conducted over six months in psychological clinics in District 1 of Tehran. After coordinating and explaining the research objectives to the authorities, necessary permissions were obtained. The questionnaires were provided in a packet to participants who were willing to cooperate with the research, and each individual with a grief disorder was given 3 hours to complete the questionnaires. Weekly visits were made to the clinics to collect the completed questionnaires from the clinic authorities. Participants were fully briefed on the research objectives before responding to the questionnaires.

2.2. Measures

2.2.1. Object Relations

Bell's Object Relations and Reality Testing Inventory (BORRTI): This questionnaire, developed by Bell and colleagues, assesses two functions of the ego. It consists of 90 items answered with yes/no, including 45 items covering four factors: Alienation (ALN), Insecure Attachment (IA), Ego Resiliency (EGO), and Social Incompetence (SI) for object relations, and another 45 items measuring three factors: Reality Distortion (RD), Uncertainty of Perception (UP), and Hallucinations and Delusions (HD) for reality testing. Bell et al. reported four-week and thirteen-week test-retest reliability coefficients for the object relations subscales ranging from 0.58 to 0.90 and 0.65 to 0.81, respectively. Similarly, test-retest reliability coefficients for the reality testing subscales over four and thirteen weeks ranged from 0.63 to 0.89 and 0.63 to 0.64, respectively. The validity of the test was confirmed through high correlations with the Brief Psychiatric Rating Scale (BPRS), the Positive and Negative Syndrome Scale (PANSS), the Symptom Checklist-90-Revised (SCL-90-R), the Minnesota Multiphasic Personality Inventory-2 (MMPI-2), and the Millon Clinical Multiaxial Inventory-II (MCMI-II) (Bell et al., 1986). In a preliminary study of the Persian version's validity and reliability conducted by Hadinejad and colleagues (2014) on 141 students (88 females and 53 males) from the University of Art in Tehran using convenience

sampling and assessed against the SCL-90-R, correlations between all BORRTI subscales and all SCL-90-R dimensions were significant (p≤0.001). The 21-week test-retest reliability of BORRTI ranged from 0.65 for Uncertainty of Perception to 0.78 for Hallucinations and Delusions. Cronbach's alpha for the subscales ranged from 0.66 for Social Incompetence to 0.82 for Alienation, indicating that the Persian version of BORRTI has acceptable validity and reliability for assessing the constructs of object relations and reality testing (Holaday & Glidewell, 2000; Poshtareh et al., 2023).

2.2.2. Defense Style

Defense Style Questionnaire (DSQ-40): Developed by Andrews et al. (1993), this questionnaire measures responses to 40 items on a Likert scale across three categories: immature (undeveloped) defense mechanisms, mature (developed) defense mechanisms, and neurotic defense mechanisms. DSQ-40 has been evaluated in countries such as Japan, France, Brazil, Portugal, and Iran. Studies in Japan indicated that this instrument is valid in conjunction with the Maudsley Personality Inventory (MPI) and, despite some doubts about its factor structure, has satisfactory test-retest reliability. Overall, in Japan, this tool was assessed as useful for examining ego development and functioning through defensive styles (Hayashi et al., 2004). In a study aimed at validating the DSQ questionnaire in Iranian samples, 666 high school students (average age 16.61 years) and 401 university students (average age 21.3 years), totaling 1067 participants, were included. The study's reliability was examined through test-retest method and Cronbach's alpha in the studied groups, and content validity, convergent validity, and construct validity were assessed through expert opinions regarding the relationship of questionnaire items with definitions related to the defense mechanisms under examination, as well as using the NEO test. High consensus among experts on the relationship of defensive style questionnaire items with the provided definitions of defense mechanisms in credible sources (ranging from 2.46 to 4.53 on a 5-point scale where 5 indicates a complete relationship and 1 indicates no relationship), acceptable correlations between NEO factors and the defensive style questionnaire, and high correlations between questionnaire items and related mechanisms and styles indicate the acceptable validity of this questionnaire. Additionally, high Cronbach's alpha in the studied groups (ranging from 0.81 to 0.87) and high test-retest correlations demonstrate the acceptable

reliability of this questionnaire in the Iranian population. Furthermore, Besharat et al. (2001), for a sample of 214 University of Tehran students, reported Cronbach's alpha coefficients for mature, immature, and neurotic defense styles as 0.75, 0.73, and 0.74, respectively, and a test-retest reliability coefficient for a sample of 30 individuals over four weeks as 0.82 for male students, 0.81 and 0.84 for female participants. The test-retest reliability after two weeks was 0.78, and Cronbach's alpha was 0.72, with validity determined by psychology professors. These findings indicated that the Defense Styles Questionnaire is reliable for use in the studied groups (Mesgarian et al., 2017).

2.2.3. Psychological Well-Being

Ryff's Psychological Well-Being Questionnaire: This questionnaire was developed by Ryff and Keyes (1995). It measures different dimensions of psychological well-being, including self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Initially, the Ryff test was administered to a sample of 321 individuals (130 men and 191 women) with an average age of 19 years. In that study, an 18-item scale was used, with internal consistency coefficients for the scales ranging from 0.86 to 0.93 and a test-retest reliability coefficient over six weeks for 117 individuals ranging from 0.81 to 0.86. Ryff reported correlations between the RSPWB and the Life Satisfaction Index (LSI) ranging from 0.26 to 0.73, the Rosenberg Self-Esteem Scale (RSES) from 0.29 to 0.62, and the Zung Depression Scale from -0.33 to -0.60. The validity and reliability obtained in Iran are as follows: In a descriptive cross-sectional study, 145 students from the Islamic Azad University, Azadshahr Branch (96 women and 49 men), selected through stratified random sampling, responded to the Ryff Psychological Well-Being scales, the Life Satisfaction Scale, the Oxford Happiness Questionnaire, and the Rosenberg Self-Esteem Scale. The data were analyzed using descriptive statistical methods and correlation coefficients. Findings: The test-retest reliability of the Ryff Psychological Well-Being Scale was 0.82, and the reliability coefficients for the subscales of self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth were 0.70, 0.77, 0.78, 0.77, 0.71, and 0.78, respectively, which were statistically significant (p<0.001). The correlation of the Psychological Well-Being Scale with the Life Satisfaction Scale, the Oxford Happiness

Questionnaire, and the Rosenberg Self-Esteem Scale were 0.58, 0.47, and 0.46, respectively (p<0.001). The Ryff Psychological Well-Being Scale has suitable validity and reliability for assessing the psychological well-being of Iranian students (Orang et al., 2018).

2.3. Data analysis

After verifying the assumptions for conducting parametric tests, the data related to the pre-test and post-test stages were analyzed using one-way ANOVA and follow-up tests with the SPSS 22 software.

3. Findings and Results

The demographic analysis of the study showed that among the participants, 52 individuals (21.22%) were under 30 years old, 58 individuals (23.67%) were between 30 and 40 years old, 65 individuals (26.53%) were between 40 and 50 years old, and 70 individuals (28.58%) were over 50 years old. Additionally, 108 participants (44.08%) were male, and 137 participants (55.92%) were female. Furthermore, the results indicated that 25 individuals (10.20%) had education levels below high school diploma, 46 individuals (18.77%) had a high school diploma, 38 individuals (15.52%) had an associate degree, 80 individuals (32.65%) had a bachelor's degree, and 56 individuals (22.86%) had a master's degree or higher.

Table 1

Descriptive Findings Related to Research Variables

Descriptive Indices	Mean	Standard Deviation	Skewness	Kurtosis
Object Relations	23.35	6.14	0.88	0.49
Alienation	6.84	3.12	0.35	0.18
Insecure Attachment	6.74	3.08	0.29	-0.25
Self-Object Differentiation	8.12	3.66	-0.33	0.19
Social Incompetence	13.88	6.05	0.56	-0.30
Reality Testing	21.90	5.95	0.62	0.45
Reality Distortion	8.05	3.82	0.55	0.16
Perceptual Uncertainty	7.42	3.36	0.24	-0.13
Delusions and Hallucinations	6.08	3.04	-0.17	-0.23
Defensive Mechanisms	168.05	32.75	0.40	0.14
Immature Mechanisms	42.30	10.18	-0.74	-0.53
Mature Mechanisms	28.96	8.63	0.64	-0.51
Neurotic Mechanisms	30.18	9.08	-0.57	-0.26
Psychological Well-Being	48.85	12.50	0.45	-0.15
Self-Acceptance	5.45	2.13	0.73	-0.22
Positive Relations with Others	5.37	2.08	0.64	-0.20
Autonomy	5.35	2.05	0.53	-0.13
Environmental Mastery	5.16	1.95	0.71	0.12
Purposeful Life	5.10	1.88	0.44	-0.24
Personal Growth	5.32	2.02	0.36	-0.22

As observed in Table 1, the mean and (standard deviation) for the variables were as follows: object relations 23.35 (16.14), reality testing 21.90 (5.95), defense mechanisms 168.05 (32.75), and psychological well-being 48.85 (12.50). Additionally, for all variables of the study, the skewness and kurtosis values ranged between (-2 and 2), indicating a normal distribution of variables. To examine the multicollinearity of independent variables in the regression model, the Variance Inflation Factor (VIF) and Tolerance index were utilized. Since the VIF index is less than ten (VIF<10) and the Tolerance statistic is less than 0.1, it can be stated that there is no violation of the multicollinearity assumption. Moreover, each variable faces its own error or unexplained variance, which should not be collinear with each other. The only test that can examine the non-collinearity of errors is the Durbin-Watson test. This test should have a value in the range of (1.5 to 2.5). Otherwise, the regression model lacks validity, and the index value in the present study is 1.582, which is within the acceptable range of the Durbin-Watson test. Therefore, the assumption of non-collinearity of errors is also validated as an important presupposition of regression models.

Table 2

Correlation Matrix

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Object Relations	1											
2. Alienation	-0.25*	1										
3. Insecure Attachment	-0.23*	0.24*	1									
4. Ego-Dystonic Self-Perception	-0.19*	0.17*	0.11	1								
5. Social Incompetence	-0.21*	0.26*	0.08	0.15*	1							
6. Reality Testing	-0.30**	-0.23*	-0.19*	-0.17*	-0.14*	1						
7. Reality Distortion	-0.27*	-0.24*	-0.22*	-0.23*	-0.20*	-0.22*	1					
8. Perceptual Uncertainty	-0.22*	-0.20*	-0.23*	-0.21*	-0.17*	-0.16*	-0.19*	1				
9. Delusions and Hallucinations	-0.17*	-0.16*	-0.28*	-0.18*	0.06	-0.25*	-0.23*	-0.20*	1			
10. Defense Mechanisms	-0.37**	-0.35**	-0.26*	-0.27*	-0.25*	-0.28*	-0.26*	-0.24*	-0.27*	1		
11. Immature Defense Mechanisms	-0.32**	-0.34**	-0.30**	-0.33**	-0.31**	-0.36**	-0.34**	-0.37**	-0.42**	-0.47**	1	
12. Mature Defense Mechanisms	0.35**	-0.37**	-0.33**	-0.36**	-0.32**	0.38**	-0.36**	-0.40**	-0.40**	-0.49**	-0.52**	1
13. Neurotic Defense Mechanisms	-0.31**	-0.21*	-0.31**	-0.35**	-0.34**	-0.33**	-0.37**	-0.36**	-0.39**	-0.46**	-0.55**	-0.45**

$*p<0.05$; $**p<0.01$

As indicated in Table 2, the correlation coefficients between object relations and psychological well-being is -0.43, between object relations and defense mechanisms is -0.37, between reality testing and psychological well-being is 0.39, between reality testing and defense mechanisms is -0.28, and between defense mechanisms and psychological well-being is -0.47, all significant at a minimum level of 0.05.

Table 3

Direct Relationship Parameters in the Proposed Model

Path	Standard Estimate	Unstandardized Estimate	Standard Error	Critical Ratio	P
Object Relations to Psychological Well-being	-0.38	-1.35	0.23	-5.86	0.01
Object Relations to Defense Mechanisms	-0.45	-1.48	0.21	-7.04	0.01
Reality Testing to Psychological Well-being	-0.32	-1.26	0.28	-4.50	0.01
Reality Testing to Defense Mechanisms	-0.33	-1.29	0.30	-4.30	0.01
Defense Mechanisms to Psychological Well-being	-0.35	-1.32	0.26	-5.07	0.01

Based on the standard path coefficients and corresponding critical values presented in Table 3, it is observed that all direct paths are significant ($p \leq 0.001$).

Table 4

Direct, Indirect, and Total Effects in the Proposed Research Model

Path	Direct Effects	Indirect Effects	Total Effects
Object Relations to Psychological Well-being	-0.38**	-0.17*	-0.55***
Object Relations to Defense Mechanisms	-0.45**	-	-0.45**
Reality Testing to Psychological Well-being	-0.32**	-0.15*	-0.47**
Reality Testing to Defense Mechanisms	-0.33**	-	-0.33**
Defense Mechanisms to Psychological Well-being	-0.35**	-	-0.35**

$*p < 0.05$, $**p < 0.01$, $***p < 0.001$

According to Table 4, the indirect effect of object relations on psychological well-being (-0.17) and the indirect effect of defense mechanisms on psychological well-being (-0.15) are both significant at a 0.05 level.

To evaluate the proposed model, the structural part was examined using fit indices. The model fit was assessed using several indices, including the Chi-square, degrees of freedom, Chi-square to degrees of freedom ratio (χ^2/df), Root Mean Square Error of Approximation (RMSEA), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Normed Fit Index (NFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI), and Non-Normed Fit Index (NNFI), which were respectively 21.32, 13, 1.64,

0.047, 0.97, 0.95, 0.99, 0.98, 0.99, and 0.98. Assessing the model fit using the mentioned indices, an acceptable fit and validity of the tool were reviewed. A Chi-square to degrees of freedom ratio smaller than 3 is considered acceptable. Also, when the RMSEA is less than 0.1, the analysis and model report an acceptable fit, and as the GFI, AGFI, NFI, CFI, and NNFI indices approach one, they indicate a more favorable model fit. Given the indices obtained in the table above, the Chi-square to degrees of freedom ratio of 1.64 was obtained, and the fit indices GFI, AGFI, NFI, CFI, and NNFI range from ninety to one, indicating that these indices have met the required standards. Therefore, it can be stated that the model has a good fit and is validated.

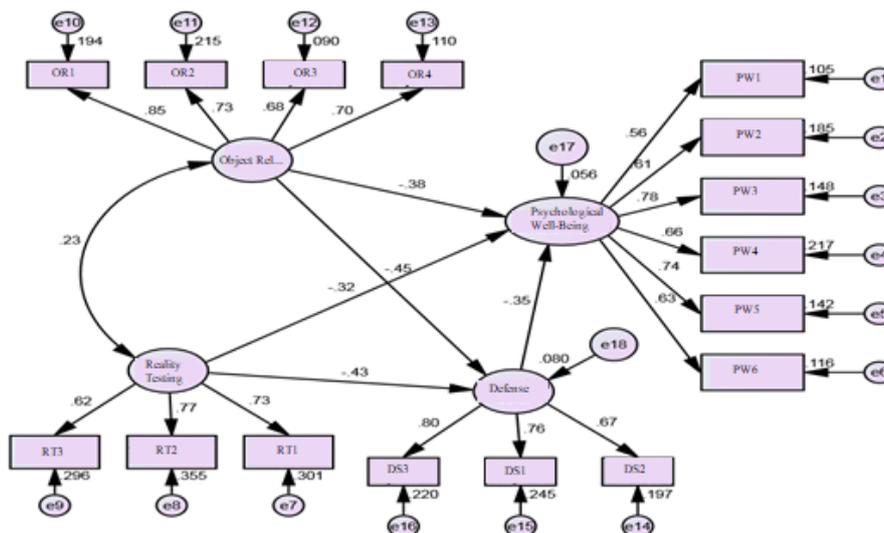**Figure 1**

Structural Model with Beta Coefficients

Table 5

Bootstrap Results for the Indirect Relationship in the First Mediation Model

Path	Standard Estimate	Upper Limit	Lower Limit	P
Reality Testing to Psychological Well-being through Defense Mechanisms	-0.32	-0.28	-0.36	≤ 0.01
Object Relations to Psychological Well-being through Defense Mechanisms	-0.35	-0.31	-0.42	≤ 0.01

According to the results in Figure 1

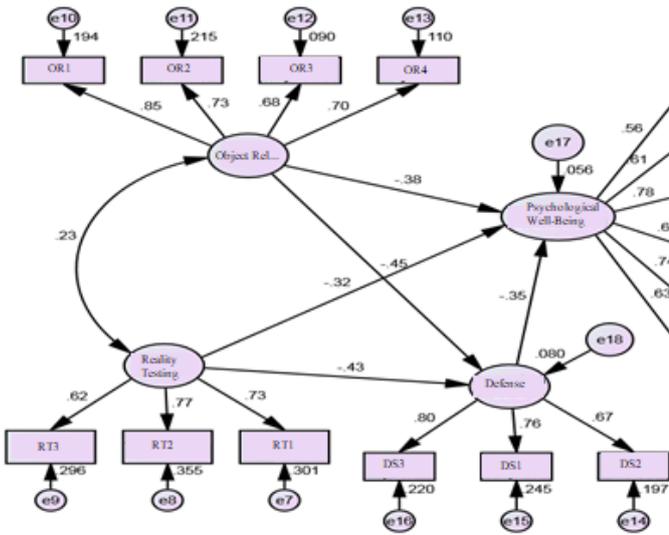*Structural Model with Beta Coefficients*

Table 5, the indirect relationship of object relations to psychological well-being through defense mechanisms with a beta of -0.32 is significant at a significance level of p≤0.01. Thus, it can be said that the indirect relationship between reality testing and psychological well-being through defense mechanisms is established and significant.

Additionally, the indirect relationship of object relations to psychological well-being through defense mechanisms with a beta of -0.35 is significant at a significance level of p≤0.01. Therefore, it can be concluded that the indirect relationship between object relations and psychological well-being through defense mechanisms is established and significant.

4.   Discussion and Conclusion

The current research aimed to model the relationship between reality testing, object relations, and psychological well-being through the mediation of defense mechanisms in grief disorder. The results indicate a relationship exists between reality testing and psychological well-being with the mediation of defense mechanisms in grief disorder. These findings align with the previous research conducted (Eisma et al., 2013; Faramarzi et al., 2013; Lin & Brown, 2020; Moradi & Fathi, 2016; Ravanpoor et al., 2022; Shear et al., 2005).

From a positive psychology perspective, psychological well-being does not merely refer to the absence of psychological issues but views individuals holistically and independently of illness. Various dimensions such as autonomy, personal growth, purpose in life, environmental mastery, relationships with others, and self-acceptance, all

rooted in personal character development, encompass the broader construct of psychological well-being (Besharat et al., 2008; Orang et al., 2018). In psychoanalytic theory, psychological well-being is assured when the ego is in harmony with reality. Furthermore, for instinctual impulses to be managed, a relative balance must be established among the id, ego, and superego. The emergence of psychological problems is highly likely if there is a conflict between the ego and superego (Saul, 1940). Ensuring psychological well-being initially requires the individual's psychological system to resist damages and disorders, achieved through defense mechanisms. These unconscious processes protect the ego in situations of threat or stress by avoiding anxiety-inducing issues or employing specific methods to deal with anxiety. On one hand, employing defense mechanisms facilitates coping with internal conflicts; on the other, it can disrupt psychological development and prevent effective coping responses. Examining flawed defense mechanisms and effective coping strategies paves the way for a deeper understanding of psychological well-being. Defense mechanisms, controlled by the ego, shape the structure and organization of an individual's personality. Research on the correlation between defense mechanisms and psychological disorders shows that some defense mechanisms have a positive and significant relationship with grief disorder; unacceptable superego impulses are transformed into acceptable ones for the affected individual (Cramer, 2002; Poshtareh et al., 2023). Given that defense mechanisms activate in response to stressful events, it seems individuals with grief disorder experience such events more frequently, resulting in reduced psychological well-being. It appears that individuals with a strong ego possess traits allowing them to efficiently deal with their pressures and problems, managing obstacles correctly. These individuals have the ability to change stressful situations into safe ones, maintain composure in the face of challenges, making problem confrontation not a difficult task. They can also accurately identify efficient and situation-specific coping mechanisms to reduce internal anxiety (Brody & Carson, 2012; Conversano et al., 2023). Individuals with positive temporal attitudes are optimistic, focusing on positives rather than dwelling on negatives, regretting the past, or fearing the future, thus preparing them to accept reality and live in the present. In fact, positive temporal attitudes guide individuals towards mental health in the past, present, and future. Moreover, reality testing fosters optimism, meaning individuals see fewer risks and problems in the future for themselves, their families, friends, etc. (Poshtareh et al.,

2023). This means that an individual with a strong ego has a positive outlook towards the future. Furthermore, it seems natural that if an individual sees themselves capable of dealing with problems, they won't have debilitating anxiety about their future and will view it positively, thus believing they can create their own future. As a result, they report high psychological well-being. Indeed, optimism and a positive outlook towards the future bring hope and optimism, giving direction to life, increasing effort, and all these contribute to the growth of psychological well-being in individuals (Faramarzi et al., 2013; Holaday & Glidewell, 2000). Reality testing also enables individuals to effectively cope with the realities of their life at any given moment, maintaining psychological balance in stressful situations, thus overcoming challenges. These individuals are aware of their emotions at the moment, recognize their strengths and weaknesses, and find efficient ways to overcome pressures, remaining positive and reporting higher self-esteem. One of the functions of a strong ego is to adapt to realities and accept them. Indeed, an individual with a strong self accepts life's realities (good or bad) (Poshtareh et al., 2023) and is better prepared for adaptation, thus accepting their life with all its good aspects and unfortunate events and adapting to it. Reality testing also allows an individual to feel in control of their life and recognize valuable progress in their life, focusing on positive traits despite weaknesses and remaining positive. Given all the points discussed so far, it appears that human psychological well-being hinges on accepting reality, which shields them from the pressures of life's problems, aids in selecting efficient coping strategies for each situation to reduce anxiety without being overwhelmed, and fosters wisdom in individuals to have the courage to face and confront issues and challenges stemming from grief disorder. It grants individuals the ability to love and maintain positive and effective intimate relationships, distancing them from feelings of loneliness and ensuring social support. These factors enable individuals to view their lives and even the world with a positive outlook, exhibit a more positive personality, set life goals they are capable of planning and achieving, and also have the strength to overcome obstacles to these goals.

Since psychological well-being generally depends on having social connections, experiencing joy, pleasure, and finding meaning in life, as well as optimism and positive thinking (Orang et al., 2018), individuals who accept reality have high psychological well-being. Reality testing enables individuals with grief disorder to move towards change by gaining self-awareness and introspection, because when a lifestyle is monotonous (habitual) and deep enough, it can turn into a grave and bury individuals under the lethargy caused by inactivity. This component causes individuals to seek ways to change carefully, to have openness and constant acceptance towards change, even in the height of comfort and ease, giving life vitality and hope. Research has shown that different measures of happiness, satisfaction, joy, and positive feelings are all correlated and create a clear general factor. Therefore, the cognitive and attitudinal change in individuals with grief disorder leads to an increase in happiness and psychological well-being due to the use of effective coping strategies. Explaining the mediating role of defense mechanisms in the relationship between reality testing and psychological well-being, it can be stated that grief disorder triggers defense mechanisms in the human unconscious, causing changes in our perception of the world and the assessment of reality. These changes lead to failure in progressing through the stages of mourning and put the individual's psychological well-being at risk. Ensuring psychological well-being initially requires the individual's psychological system to resist damages and disorders, achieved through defense mechanisms (Poshtareh et al., 2023). Immature coping mechanisms and styles are related to dimensions of self-acceptance, autonomy, and mastery. Psychological well-being is associated with the use of mature defense mechanisms. Individuals who employ mature defense mechanisms cope well with psychological stress and adaptively respond to conflict. Identifying defense mechanisms of various disorders has practical applications in aiding differential diagnosis; determining which disorder is associated with specific prominent defense mechanisms, in addition to providing a deeper understanding of mental system functioning, offers a strategic aid in diagnosing and distinguishing psychological disorders. In fact, it can be said that individuals with grief disorder experience more anxiety than normal individuals. Adapted defense mechanisms have a positive and significant relationship with mental health, and unadapted defense mechanisms have a significant relationship with mental health. These results show that individuals with grief disorder have more immature defense mechanisms. In other words, in the face of difficult and stressful situations, the ability to analyze, make decisions, and choose the correct behavior is reduced, and the likelihood of maladaptive behaviors increases. In this concept, it can be said that individuals with grief disorder resort to immature defense mechanisms when faced with difficult situations. Also, it can be stated that when emotional and cognitive information is not correctly

processed, perceived, and evaluated, the organization of emotions and cognitions of the individual will not perform optimally, and the likelihood of using immature defense mechanisms in stressful situations increases. According to Vaillant, defense mechanisms automatically act to reduce cognitive dissonance and minimize sudden changes in internal and external reality by influencing how threatening events are perceived. The more powerful the ego, the better an individual can cope with psychological pressures that come from the environment in conflict with the internal psychological world. The ego resolves internal psychological conflict through defense mechanisms. If these mechanisms are immature, symptoms of neurosis and even psychosis appear in the individual, and sometimes the connection with reality, which is another function of the ego, becomes problematic (Atmaca et al., 2011; Besharat, 2008; Besharat et al., 2019). Object relations are an individual's representations of others and their environment. These representations are stable internal patterns activated in relational situations and determine how an individual relates to others. In fact, these stable internal patterns determine the quality of relational patterns. Also, in psychoanalytic theory, every psychological disorder is associated with specific maladaptive defense mechanisms, and defenses play a significant role in individuals' mental health. Numerous studies have supported this hypothesis, showing a significant correlation between individuals' mental and physical health and their defense mechanisms. Therefore, accessing defense mechanisms as a fundamental construct of personality that shapes thought and behavior is essential (Mesgarian et al., 2017; Orang et al., 2018). More developed defenses allow an individual to respond adaptively and with fewer signs of anxiety in anxiety-provoking situations, such as social situations, whereas immature defense mechanisms cause anxiety and avoidance in these situations. Individuals employing mature defense mechanisms cope well with psychological stress and adaptively respond to conflict. Identifying defense mechanisms of various disorders has acceptable applications in aiding differential diagnosis; determining each disorder's association with specific prominent defense mechanisms, besides providing a deeper understanding of the psychological system's functioning, offers a strategic aid in diagnosing and distinguishing psychological disorders. Overall, this research, in convergence with other studies, demonstrates the reality that low cognitive differentiation and immature and distressed defense mechanisms, due to their inefficiency in interpersonal situations, cause emotional turmoil and

distress in individuals and if this condition persists in various life situations for a long period, as they reduce the sense of environmental mastery and distort reality, overshadow individuals' health and psychological well-being. On the other hand, high cognitive differentiation and mature defense mechanisms, due to their adaptive nature and positive functioning, reduce internal strife and consequently increase students' psychological well-being.

5.   Limitations & Suggestions

This study faced certain limitations. Given that the population and sample of this research were individuals with grief disorder visiting psychological clinics in District 1 of Tehran, generalizing the results to other populations should be done cautiously. Like many studies in the humanities, having a cross-sectional nature was one of the fundamental limitations of this research. Future research is recommended to be conducted on a broader sample and use longitudinal and experimental designs that allow for the inference of a cause-and-effect relationship. It is suggested that future studies increase the number of participants and use structured or semi-structured interviews for data collection. Considering that the components of object relations and defense mechanisms are internal psychological elements and questionnaire tools lack the necessary precision in accurately measuring these components, it is recommended that clinical interviews be used to assess these variables. In such research, precise comments about the causal relationship between the research variables are not possible. Therefore, replication and expansion of these findings require the use of longitudinal designs. The tools used in this study were self-report instruments. In these tools, participants might not respond honestly to questions. This research, by examining the dimensions of reality testing, object relations, and defense mechanisms in individuals with grief disorder, has taken a preliminary step toward creating a psychoanalytic explanatory model in the future. In diagnostic and therapeutic interventions, special attention should be given to the role of psychoanalytic variables such as object relations, defense mechanisms, and other components of this approach as etiological, perpetuating, and therapeutic factors. Given the results of this study, training defense mechanisms to increase psychological well-being could be one of the programs for counselors and therapists in counseling centers. At the theoretical level, the findings of this study can confirm current theories related to reality testing, object relations, and defense mechanisms in some

aspects. On the practical level, the findings of this study can reveal the need for psychological intervention programs for individuals with grief disorder. The results of this study could have implicit applications for the authorities of counseling centers, social workers, and psychologists.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors significantly contributed.

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