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Coping Through Fantasy: The Role of Difficulties in Emotion Regulation and Psychological Acceptance in the Link between Childhood Trauma and Maladaptive Daydreaming

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Abstract

Introduction: This study aimed to investigate the impact of childhood trauma on maladaptive daydreaming, considering the mediating roles of difficulties in emotion regulation and psychological acceptance.

Method: This cross-sectional, correlational study was conducted on a sample comprising nurses working in hospitals in Tehran in 2021. A total of 225 participants were selected through convenience sampling. Data were collected using the 16-item Maladaptive Daydreaming Scale (MDS-16; Somer et al.), the Childhood Trauma Questionnaire (CTQ; Bernstein et al.), the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer), and the Acceptance and Action Questionnaire–II (AAQ-II; Bond et al.) Data analysis was performed using Pearson correlation, Structural Equation Modeling (SEM).

Results: The SEM showed that childhood trauma had a small but significant positive direct effect on maladaptive daydreaming ($\beta=0.12$, $p=0.027$). Emotion regulation difficulties had a strong positive effect ($\beta=0.47$, $p<0.001$), while psychological acceptance had a significant negative effect ($\beta=-0.18$, $p<0.001$). Childhood trauma was associated with poorer emotion regulation ($\beta=0.58$) and lower acceptance ($\beta=-0.51$). Both variables significantly mediated the trauma–maladaptive daydreaming relationship.

Conclusion: According the findings of the present study, childhood trauma influenced maladaptive daydreaming directly and indirectly, with emotion regulation difficulties and psychological acceptance mediating this relationship among nurses.

Keywords: Acceptance, Childhood Trauma, Emotional Regulation, Maladaptive Daydreaming

Introduction

Maladaptive Daydreaming (MD) is a clinical condition characterized by a time-consuming and compulsive mental habit involving vivid and immersive fantasy. This intense fantasy activity often revolves around complex scenarios that significantly disrupt key areas of functioning, such as learning, work, and interpersonal relationships [1]. In other words, MD interferes considerably with daily functioning and personal well-being and is marked by persistent craving for daydreaming, stereotypical movements (such as rocking, pacing, or hand movements), and the use of music to facilitate and sustain immersion in fantasy [2]. Research suggests a strong association between this form of psychopathology and adverse childhood experiences [3, 4]. Seminal work on MD indicated a connection between MD and

histories of childhood abuse and neglect. In fact, MD may originate as a coping mechanism developed under psychological distress during childhood [5]. However, findings did not identify significant differences in childhood trauma histories among professional populations [6]. Despite such contradictions, the investigation into the link between childhood trauma and MD has continued, with studies offering increasing support for this association [7, 8].

While there is considerable evidence supporting a relationship between childhood trauma and MD, trauma alone may not be a necessary condition for the etiology of MD [8]. On one hand, daydreaming can sometimes be perceived as a meaningful or enriching experience; and on the other, trauma survivors may engage in fantasy-driven reconstructions of past events, which in turn might influence their daydreaming patterns. Thus, examining the potential mediating mechanisms between trauma and MD becomes imperative.

Research shows that individuals with histories of emotional and physical neglect often engage in MD as a means of regulating emotional pain [3]. Their findings also indicated that fantasy can serve as an emotional regulatory function, especially when fantasies about close others resonate with the individual's real-life emotional needs [9]. Based on this, Emotion Regulation (ER) may act as a mediating mechanism between trauma and MD, given the association between MD and emotional processes. In essence, intense and excessive daydreaming may function as an escape strategy from painful emotions and distressing experiences [10]. Immersion in fantasy may reduce psychological distress, anxiety, loneliness, isolation, and social inadequacies [10].

Studies confirmed that MD enables individuals to regulate their emotions to some extent and serves as a psychological shield against both external and internal realities [11]. However, although MD attempts to regulate affect, it is not considered as an effective or adaptive form of ER. Investigation showed that individuals who engage in MD tend to have poorer ER abilities and suffer from significant ER difficulties [12]. Moreover, researchers suggest that none of the subtypes of MD constitute effective ER strategies [9] .Collectively, these studies underscore a significant relationship between problematic daydreaming symptoms and ER difficulties. Notably, a negative correlation has been observed between emotional clarity and the pleasure derived from fantasy, suggesting that more enjoyable daydreams may facilitate emotional processing, thereby increasing emotional clarity [13]. Accordingly, ER difficulties in nurses may play a critical role in the development and maintenance of MD, particularly in the aftermath of traumatic experiences.

Conversely, while deficits in ER may contribute to the persistence of MD, psychological acceptance has been shown to negatively correlate with MD [14]. Acceptance stands in contrast to daydreaming as an avoidant coping strategy. MD often serves as a psychological escape from distress, emotional pain, traumatic memories, and negative affect. In contrast, acceptance entails the open, non-defensive experience of internal events such as thoughts, emotions, memories, and bodily sensations just as they are. Individuals who resort to MD often struggle with accepting emotional experiences and painful memories. As a result, they may turn to fantasy as a means of avoidance rather than face the reality of the external world [14]. Thus, this study posits that individuals with a history of childhood trauma who possess higher levels of acceptance may be less likely to use MD as an avoidant strategy. Consequently, acceptance may serve as a mediator between childhood trauma and MD in nurses.

Although there is an increasing number of studies investigating MD and its psychological correlates, the mechanisms linking childhood trauma and MD, especially within the context of occupational settings, are not yet fully understood. More precisely, little empirical clarification has been given to how ER difficulties and psychological acceptance work together as mediating mechanisms in this relationship among nurses. From this perspective, examining these mechanisms within a high-stress occupational group such as nurses becomes particularly important, as it allows for a more applied and context-sensitive understanding of MD.

In summary, individuals with childhood trauma histories may resort to MD as a means of avoiding distressing emotional experiences, particularly under stressful conditions. Nurses, due to the inherently stressful nature of their profession, are not exempt from this vulnerability. As such, they may be particularly susceptible to MD, which could lead to detrimental outcomes including diminished job performance and irreversible psychological and occupational damage [15]. Notably, trauma is not a necessary condition for MD [8], but multiple studies have demonstrated a relationship between childhood trauma and MD [2, 8]. Although prior studies have separately addressed the associations between childhood trauma, ER, acceptance, and MD, few have examined these variables in an integrated model. Furthermore, despite growing attention to MD as a psychological construct, empirical studies targeting occupational groups such as nurses who are highly exposed to stress and emotional burden remain limited. Nurses' dual vulnerability, stemming from both childhood adversity and the emotional demands of their profession, presents a unique context in which to explore MD as a maladaptive coping strategy. This study addresses a critical gap in the literature by investigating not only the direct effects of childhood trauma on MD but also the indirect effects through two key psychological constructs: difficulties in ER and psychological acceptance. From an applied perspective, uncovering the psychological mechanisms by which childhood trauma leads to MD may provide the scientific ground for the development and implementation of preventive and therapeutic interventions in nursing settings. Enhanced ER capacities and increased psychological acceptance may work in a way that the reduction of MD is accompanied by improvement in the mental health status, occupational functioning, and quality of care provided by nurses. Therefore, important implications for clinical practice,

psychological rehabilitation, and occupational health interventions among nurses are expected based on the findings of the present study.

Despite growing evidence linking childhood trauma to MD, the underlying psychological mechanisms through which early adverse experiences contribute to the development and persistence of MD remain insufficiently clarified. In particular, previous studies have largely focused on bivariate associations and have rarely examined how difficulties in ER and psychological acceptance simultaneously function as explanatory mechanisms within an integrated model. Furthermore, empirical investigations targeting high-stress occupational groups such as nurses are scarce, despite their heightened vulnerability due to sustained emotional demands and exposure to stress. As a result, it remains unclear whether MD among nurses with histories of childhood trauma is primarily driven by deficits in ER, reduced psychological acceptance, or the combined effects of both processes. This lack of a mechanism-focused and occupation-specific understanding constitutes the central problem addressed in the present study. Clarifying these psychological mechanisms holds important practical and clinical implications. Identifying the specific roles of ER difficulties and psychological acceptance in MD can inform the development of targeted prevention and intervention programs for nurses exposed to occupational stress. From an applied perspective, interventions aimed at enhancing adaptive ER skills and increasing psychological acceptance may help reduce reliance on MD as an avoidant coping strategy. Such programs could be integrated into workplace mental-health services, occupational counseling, and stress-management training within healthcare systems. Moreover, early identification of nurses at risk for MD, particularly those with histories of childhood trauma, may prevent long-term psychological distress, burnout, reduced job performance, and compromised quality of patient care. At a broader level, the findings of this study can provide empirical evidence for policymakers and healthcare administrators to design evidence-based psychological support initiatives, ultimately promoting nurses' mental well-being and the sustainability of healthcare services.

Consequently, the main aim of this investigation was to explore the direct and indirect impacts of childhood trauma on MD via difficulties in ER and psychological acceptance among a sample of nurses. Stemming from this purpose, this study explored the following hypotheses: (1) Childhood trauma has a direct and indirect effect on MD through ER difficulties, and (2) childhood trauma has a direct and indirect effect on MD through psychological acceptance.

The main aim of the present study was to examine the direct and indirect relationships between childhood trauma and MD among nurses by focusing on the mediating roles of difficulties in ER and psychological acceptance. Specifically, this study sought to determine whether childhood trauma is directly associated with MD and whether this relationship is indirectly explained through deficits in ER and lower levels of psychological acceptance within a structural model.

Method

This study employed a descriptive–correlational design using SEM. The statistical population consisted of nurses working in hospitals across Tehran in 2021. A total of 225 participants were recruited through convenience sampling. Inclusion criteria were being employed as a nurse at the time of data collection and providing written informed consent to participate in the study. Exclusion criteria included incomplete or invalid questionnaire responses. Childhood trauma was assessed as a continuous variable using the Childhood Trauma Questionnaire, allowing for the examination of individual differences in trauma exposure across participants. Ethical principles, including confidentiality, voluntary participation, and the right to withdraw at any stage, were strictly observed. Data were analyzed using Pearson correlation coefficients and SEM with SPSS version 23 and AMOS version 23. The tools used in this study were as follows:

The 16-item Maladaptive Daydreaming Scale (MDS-16): This scale consists of 16 self-report items and is an extended version of the original 14-item measure, with two additional items assessing the role of music as a trigger and enhancer of daydreaming [14,16]. Items are rated on a 0–100 scale in 10% increments, ranging from "never" to "very much," with higher scores indicating greater severity of MD. A cut-off score of 50 has been suggested to identify individuals with MD [14,16]. In the original validation studies conducted in Israel, the MDS-16 demonstrated good criterion validity ($r = 0.58$, $p < 0.01$), excellent test–retest reliability ($r = 0.92$), sensitivity of 95%, and specificity of 89%, and has been applied in both clinical and non-clinical populations [14,16]. Psychometric evaluation in an Italian sample showed strong internal consistency and a two-factor structure, including functional impairment and sensorimotor regression [16]. In Iran, Ahmadi et al. validated the Persian version of the MDS-16. Exploratory factor analysis revealed a three-factor structure consisting of Intrusive Daydreaming (items 5, 6, 7, 8, 9, 11), Sustained Daydreaming (items 2, 3, 4, 10, 12, 13), and Dependent Daydreaming (items 1, 14, 15, 16). Cronbach's alpha coefficients were reported as 0.90, 0.86, and 0.79 for the three factors, respectively, and 0.93 for the total scale. Divergent validity was supported by significant inverse correlations with acceptance measures, while convergent validity was demonstrated through positive associations with dissociative amnesia, depersonalization/derealization, and absorption/imaginative involvement [14]. In the present normed questionnaire, no cutoff score exists; therefore, the results are reported using the mean and standard deviation. In the present study, the internal consistency of the MDS-16 was [Cronbach's $\alpha = 0.89$].

Childhood Trauma Questionnaire (CTQ): The Childhood Trauma Questionnaire (CTQ) was developed by Bernstein et al. (2003). This self-report measure consists of

28 items assessing five dimensions of childhood trauma: Emotional Abuse (items 3, 8, 14, 18, 25), Physical Abuse (items 9, 11, 12, 15, 17), Sexual Abuse (items 20, 21, 23, 24, 27), Emotional Neglect (items 5, 7, 13, 19, 28), and Physical Neglect (items 1, 2, 4, 6, 26). Items 10, 16, and 22 are not included in any subscale. Responses are rated on a five-point Likert scale ranging from 1 (never) to 5 (very often), with higher scores indicating greater trauma exposure. Trauma severity is categorized using the following ranges: 25–36 (low trauma), 41–51 (low to moderate trauma), 56–68 (moderate to severe trauma), and 73–125 (severe trauma) [17]. In the original validation studies, Cronbach's alpha coefficients ranged from 0.81 to 0.95, and concurrent validity with therapist-rated trauma scores ranged from 0.59 to 0.78 [17,18]. In Iranian samples, the CTQ demonstrated acceptable psychometric properties, with an overall Cronbach's alpha of 0.86 and subscale alphas ranging from 0.59 to 0.84. Convergent validity was supported by significant correlations with the Generalized Anxiety Disorder Scale ($r = 0.72$, $p < 0.01$) (18). In the present study, Cronbach's alpha coefficient for the CTQ was 0.725.

Difficulties in Emotion Regulation Scale (DERS): The Difficulties in Emotion Regulation Scale (DERS) was developed by Gratz and Roemer (2004). The scale includes 36 items measuring six dimensions: Non acceptance of Emotional Responses, Difficulties Engaging in Goal-Directed Behavior, Impulse Control Difficulties, Lack of Emotional Awareness, Limited Access to Emotion Regulation Strategies, and Lack of Emotional Clarity. Items are rated on a five-point Likert scale from 1 (almost never) to 5 (almost always). Several items are reverse-scored, and higher total scores indicate greater difficulties in ER. The original version of the DERS demonstrated good internal consistency, with Cronbach's alpha coefficients ranging from 0.80 to 0.89 [19]. In Iran, psychometric evaluations reported satisfactory test–retest reliability coefficients ranging from 0.57 to 0.80 ($p < 0.01$), with internal consistency estimates between 0.83 and 0.95 for subscales and 0.96 for the total scale [20, 22]. In the present study, the internal consistency of the DERS was 0.81.

Acceptance and Action Questionnaire – Version II (AAQ-II): The Acceptance and Action Questionnaire-II (AAQ-II) was developed by Bond et al. (2011) as a revised version of the original AAQ. The scale consists of 10 items assessing experiential avoidance, acceptance, and psychological flexibility. Items are rated on a seven-point Likert scale from 1 (never true) to 7 (always true). Higher scores indicate greater experiential avoidance, while lower scores reflect higher levels of acceptance and committed action. The original AAQ-II demonstrated satisfactory internal consistency (mean $\alpha = 0.84$) and good test–retest reliability over 3- and 12-month intervals ($r = 0.81$ and 0.79, respectively) [21]. In Iran, validation studies reported Cronbach's alpha coefficients ranging from 0.71 to 0.84 across samples and 0.89 for the total scale, supporting acceptable reliability and convergent validity [22]. In the present study, Cronbach's alpha for the AAQ-II was 0.78.

Results

Among the 225 participants, 94 individuals (41.8%) held a bachelor's degree and 131 individuals (58.2%) held a master's degree. The sample had a mean age of 31.29 years with a standard deviation of 2.370.

Based on the descriptive data provided in the table, a significant correlation matrix between the research variables has been calculated and reported. Pearson correlation coefficients were used, and the significance level is indicated with asterisks: $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

The correlation matrix illustrates the linear relationships between the research variables. The calculated Pearson correlation coefficients indicate the direction and strength of the associations between the variables. As observed, the different subscales of MD (intrusive, sustained, and dependent daydreaming) show strong positive correlations with each other (ranging from 0.68 to 0.92), indicating high coherence within this construct. Furthermore, all forms of childhood trauma (emotional abuse, sexual abuse, physical abuse, emotional neglect, and physical neglect) are significantly and positively correlated with each other and with the total childhood trauma score, suggesting the co-occurrence of these types of adversities in the studied sample. Additionally, all components of ER difficulties exhibit strong positive correlations with one another (ranging from 0.58 to 0.92), demonstrating that this construct is well-measured by its subscales. Notably, significant positive correlations are found between the various types of MD and both childhood trauma types and ER difficulties, which may indicate the role of these variables in the formation or maintenance of MD. In contrast, acceptance shows significant negative correlations with all other variables, suggesting that higher levels of acceptance are associated with lower levels of MD, childhood trauma experiences, and ER difficulties.

Several key assumptions must be met to appropriately employ parametric analyses, such as correlation and regression. First, univariate normality was assessed using skewness and kurtosis indices. The absolute values of skewness for all variables were less than two, and the absolute values of kurtosis were less than seven, indicating that the data for each variable are normally distributed. Second, multivariate normality was evaluated using Mardia's coefficient. The obtained Mardia's coefficient (2.50) and critical ratio (2.12) suggest that the data meet the assumption of multivariate normality. Third, linearity of the relationships between variables was confirmed through the correlation matrix and (hypothetical) scatter plots, as the pattern of correlations is consistent with linear relationships. Fourth, homogeneity of variances should be examined in subsequent analyses using tests such as Levene's test; however, given the normality of the data and the adequate sample size ($n = 225$), this assumption is considered met. Fifth, independence of errors should be tested in subsequent regression analyses. Finally, the absence of severe multicollinearity among predictor variables can be checked in regression analysis using

Variance Inflation Factor (VIF) values, which should be below 10. Given that the correlation coefficients are generally below 0.9, severe multicollinearity is not evident in the data. Therefore, with the parametric assumptions satisfied, parametric methods can be appropriately used for data analysis.

This model illustrates how childhood trauma is linked to maladaptive fantasy both directly and indirectly through difficulties in ER and acceptance. Childhood trauma is strongly represented by multiple forms of abuse and neglect and shows a moderate positive effect on difficulties in ER, indicating that higher trauma is associated with greater problems in managing emotions such as lack of awareness, impulse control difficulties, and limited access to adaptive strategies. Childhood trauma also has a direct positive effect on maladaptive fantasy, suggesting that individuals with higher trauma may be more prone to excessive or interfering fantasy. In contrast, childhood trauma negatively predicts acceptance, meaning that greater trauma is associated with lower levels of acceptance, which in turn is negatively related to maladaptive fantasy; lower acceptance is linked to higher fantasy involvement. Additionally, ER difficulties have a substantial positive effect on maladaptive fantasy, highlighting maladaptive fantasy as a possible coping mechanism when ER capacities are impaired. Overall, the model suggests that maladaptive fantasy may function as an emotional escape shaped by early traumatic experiences, operating through reduced acceptance and impaired ER capacities.

Table 1. Correlation Matrix of Research Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Intrusive Daydreaming	1																	
2. Sustained Daydreaming	0.72***	1																
3. Dependent Daydreaming	0.68***	0.74***	1															
4. Total Maladaptive Daydreaming	0.89***	0.91***	0.92***	1														
5. Emotional Abuse	0.41***	0.38***	0.36**	0.42***	1													
6. Sexual Abuse	0.32**	0.29**	0.31**	0.33**	0.65***	1												
7. Physical Abuse	0.27*	0.24*	0.25*	0.28*	0.58***	0.52***	1											
8. Emotional Neglect	0.39***	0.35**	0.34**	0.40***	0.71***	0.61***	0.55***	1										
9. Physical Neglect	0.35**	0.32**	0.33**	0.37***	0.63***	0.57***	0.50***	0.68***	1									
10. Total Childhood Trauma	0.45***	0.41***	0.40***	0.47***	0.88***	0.78***	0.72***	0.85***	0.82***	1								
11. Non-Acceptance of Emotional Responses	0.38***	0.35**	0.33**	0.39***	0.49***	0.43***	0.39***	0.47***	0.44***	0.52***	1							
12. Goal-Directed Behavior Difficulties	0.34**	0.31**	0.30**	0.35**	0.45***	0.40***	0.36**	0.43***	0.41***	0.48***	0.74***	1						
13. Impulse Control Difficulties	0.40***	0.37***	0.35**	0.41***	0.51***	0.45***	0.41***	0.49***	0.46***	0.54***	0.77***	0.71***	1					
14. Lack of Emotional Awareness	0.29**	0.26*	0.25*	0.28*	0.37***	0.33**	0.30**	0.35**	0.33**	0.39***	0.62***	0.58***	0.64***	1				
15. Limited Access to ER Strategies	0.42***	0.39***	0.37***	0.43***	0.53***	0.47***	0.43***	0.51***	0.48***	0.56***	0.79***	0.73***	0.78***	0.66***	1			
16. Lack of Emotional Clarity	0.31**	0.28*	0.27*	0.32**	0.41***	0.36**	0.33**	0.39***	0.37***	0.44***	0.68***	0.63***	0.69***	0.59***	0.71***	1		
17. Total Emotion Regulation Difficulties	0.44***	0.41***	0.39***	0.45***	0.55***	0.49***	0.45***	0.53***	0.50***	0.58***	0.90***	0.84***	0.88***	0.75***	0.92***	0.81***	1	
18. Acceptance	-0.33**	-0.30**	-0.29**	-0.34**	-0.42***	-0.37***	-0.34**	-0.40***	-0.38***	-0.45***	-0.61***	-0.56***	-0.60***	-0.51***	-0.63***	-0.55***	-0.67***	1
Variable	**Mean**	**SD**	**Skewness**	**Kurtosis**														
Intrusive Daydreaming	16.62	6.71	0.25	-0.67														
Sustained Daydreaming	16.80	7.26	0.37	-0.93														
Dependent Daydreaming	17.16	7.20	0.29	-0.93														
Emotional Abuse	13.91	4.70	-0.09	-1.42														
Sexual Abuse	13.52	4.50	-0.03	-1.48														
Physical Abuse	15.08	3.66	-0.52	-0.54														
Emotional Neglect	14.19	4.67	-0.23	-1.34														
Physical Neglect	13.85	4.54	0.06	-1.31														
Non-Acceptance of Emotional Responses	14.45	9.35	0.41	1.68														
Goal-Directed Behavior Difficulties	10.21	5.58	0.28	1.86														
Impulse Control Difficulties	15.34	8.40	0.32	1.73														
Lack of Emotional Awareness	14.60	8.04	0.31	1.69														
Limited Access to ER Strategies	19.04	10.97	0.28	1.87														
Lack of Emotional Clarity	14.10	7.56	0.04	1.66														
Acceptance	21.41	12.69	1.05	0.50														

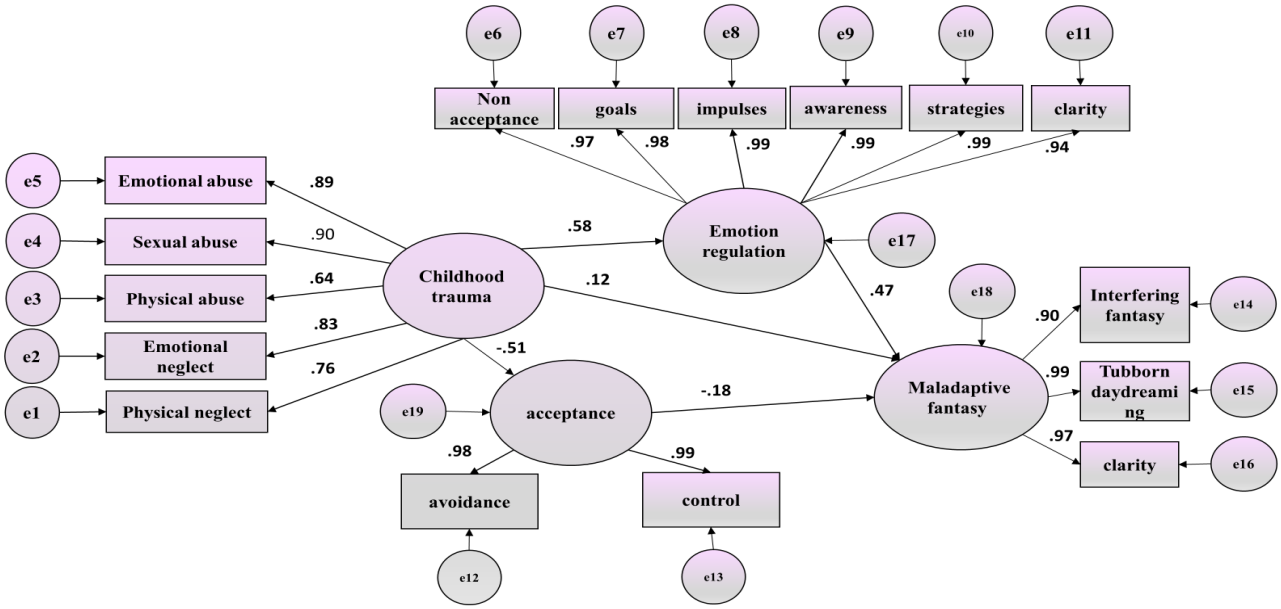

Figure 1. The final fitted structural.

Table 3. Path Analysis Coefficients

Pathway	β (Standardized)	b (Unstandardized)	SE	t	p
Childhood Trauma → Maladaptive Daydreaming	0.12	0.18	0.14	2.21	0.027
Difficulties in Emotion Regulation → Maladaptive Daydreaming	0.47	0.56	0.06	9.33	0.001
Acceptance → Maladaptive Daydreaming	-0.18	-0.31	0.05	-3.60	0.001
Childhood Trauma → Difficulties in Emotion Regulation	0.58	-0.74	0.09	-8.22	0.001
Childhood Trauma → Acceptance	-0.51	-0.61	0.11	-5.55	0.001

Table 4. Indirect Effects Analysis

Indirect Pathway	Standardized Indirect Effect (β)	95% CI (Lower Bound)	95% CI (Upper Bound)	p
Childhood Trauma → Emotion Regulation → Maladaptive Daydreaming	-0.33	-0.46	-0.21	0.001
Childhood Trauma → Acceptance → Maladaptive Daydreaming	0.27	0.16	0.39	0.001

The results of the SEM indicated that childhood trauma had a positive and statistically significant direct effect on MD (β = 0.12, b = 0.18, SE = 0.14, t = 2.21, p = 0.027). Although the standardized coefficient was relatively small, the path reached statistical significance, suggesting that higher levels of childhood trauma are associated with higher levels of MD. The ER difficulties exhibited a strong and positive effect on MD (β = 0.47, b = 0.56, SE = 0.06, t = 9.33, p < 0.001). The magnitude of the standardized coefficient and the large t-value indicate that difficulties in ER is a substantial predictor of MD within the model. In contrast, psychological acceptance showed a significant negative association with MD (β = −0.18, b = −0.31, SE = 0.05, t = −3.60, p < 0.001), indicating that higher levels of acceptance are linked to lower levels of MD. With respect to the predictor variable, childhood trauma was significantly associated with difficulties in ER (β = 0.58, b = −0.74, SE = 0.09, t = −8.22, p < 0.001). Despite the positive standardized coefficient, the negative unstandardized coefficient and t-value indicate that higher levels of childhood trauma predict poorer ER functioning. Similarly, childhood trauma had a statistically significant negative effect on acceptance (β = −0.51, b = −0.61, SE = 0.11, t = −5.55, p < 0.001), suggesting that greater exposure to childhood trauma is associated with lower levels of psychological acceptance.

The results of the bootstrapped indirect effect analysis indicate that difficulties in ER and acceptance significantly mediate the relationship between childhood trauma and MD. The indirect pathway from childhood trauma to MD through difficulties in ER was statistically significant and negative (β = −0.33, 95% CI [−0.46, −0.21], p = 0.001). Because the confidence interval does not include zero, this indirect effect is reliable. The negative standardized coefficient indicates that higher levels of childhood trauma are associated with greater impairments in ER, which in turn are linked to higher levels of MD. In statistical terms, difficulties in ER functions as a significant mediator transmitting the effect of childhood trauma to MD. Similarly, the indirect pathway from childhood trauma to MD through psychological acceptance was also statistically significant, but in the positive direction (β = 0.27, 95% CI [0.16, 0.39], p = 0.001). The confidence interval again excludes zero, confirming the robustness of

this mediating effect. The positive sign of the indirect coefficient indicates that childhood trauma is associated with lower levels of acceptance, which in turn predict higher levels of MD, thereby conveying the effect of trauma to MD through reduced acceptance. Taken together, these findings demonstrate that the association between childhood trauma and MD is indirectly transmitted through two distinct yet significant mechanisms. The ER difficulties and diminished psychological acceptance each carry a significant portion of the effect of childhood trauma on MD, supporting a multiple-mediator model in which early traumatic experiences influence MD via impairments in emotional and acceptance-based processes.

The overall fit of the proposed SEM was assessed using a combination of absolute, relative, and incremental fit indices. The results indicate that the model demonstrates an acceptable to good fit with the observed data. With respect to absolute fit indices, the chi-square statistic was statistically significant, $\chi^2(86) = 229.31$, $p = .001$. Although a non-significant chi-square value is desirable, the chi-square test is known to be highly sensitive to sample size; therefore, reliance on relative chi-square indices is recommended. In this regard, the ratio of chi-square to degrees of freedom (CMIN/df) was 2.44, which is below the commonly accepted threshold of 3.00, indicating an adequate overall model fit. Regarding error of approximation, the Root Mean Square Error of Approximation (RMSEA) was .068, which falls below the recommended cutoff value of .08, suggesting a reasonable approximation of the model to the population covariance matrix. However, the PCLOSE value was .001, indicating that the hypothesis of close fit (RMSEA ≤ .05) was not supported. This result suggests that while the model does not exhibit a *close* fit, it nonetheless achieves an acceptable level of approximation. In terms of incremental (comparative) fit indices, the model demonstrated strong performance. The Comparative Fit Index (CFI = .93), Incremental Fit Index (IFI = .93), Goodness-of-Fit Index (GFI = .94), and Normed Fit Index (NFI = .93) all exceeded the recommended cutoff value of .90. These findings indicate that the proposed model provides a substantial improvement in fit compared to the null (independence) model.

Table 5. Goodness-of-Fit Indices for the SEM

Fit Index Type	Fit Index	Obtained Value	Acceptable Threshold
Absolute Fit	Chi-square (CMIN)	229.31	–
	Degrees of Freedom	86	–
	P	0.001	>0.05
	CMIN/df	2.44	< 3
Relative Fit	RMSEA	0.06	< 0.08
	PCLOSE	0.001	>0.05
Incremental Fit	CFI	0.93	>0.90
	IFI	0.93	>0.90
	GFI	0.94	> 0.90
	NFI	0.93	>0.90

Discussion

The present study investigated the mediating roles of ER difficulties and acceptance in the relationship between childhood trauma and MD in nurses. The findings revealed that childhood trauma exerts its influence on MD through two distinct psychological pathways: one involving ER difficulties and the other involving acceptance. These results are consistent with developmental trauma theory and ER models, which posit that early adverse experiences disrupt the development of adaptive emotional processing systems, leading to reliance on maladaptive coping strategies in adulthood [3, 9].

The first pathway demonstrates that childhood trauma increases MD severity through heightened ER difficulties. This aligns with previous research indicating that individuals with MD exhibit intense emotional reactivity to negative affect, poor emotional awareness, and limited access to adaptive regulation strategies [9]. Our statistical findings (β = 0.59, p < .001) support Sándor et al.'s [9] conceptualization that trauma-exposed individuals with impaired ER capacity increasingly turn to fantasy-based avoidance. This mechanism operates through a cascade where childhood trauma creates emotional vulnerability, which combined with the chronic occupational stress experienced by nurses, leads to emotional dysregulation that manifests as compulsive daydreaming. The relationship follows a clear sequence: childhood trauma, ER difficulties, increased MD, illustrating how emotional dyscontrol serves as a crucial mediator in this pathway.

The second pathway reveals that childhood trauma influences MD through reduced acceptance (β = -0.33, p < 0.001), consistent with Acceptance and Commitment Theory's emphasis on experiential avoidance [14]. This finding extends the work of Sándor et al. [9] and Ahmadi et al. [22] by demonstrating that nurses with lower acceptance of internal experiences are more likely to use MD as an avoidance strategy when confronting trauma-related distress. The psychological mechanism here involves: childhood trauma, reduced acceptance, increased experiential avoidance, heightened MD. Individuals lacking acceptance tend to suppress emotional pain, which paradoxically intensifies distress and strengthens compulsive fantasy engagement [27]. This pathway highlights how non-acceptance functions as a form of emotional diversion from unbearable affect associated with unresolved trauma [25, 26].

While our findings strongly support these mediation pathways, some studies have reported weaker trauma-MD associations in non-clinical or highly resilient

populations [13], suggesting that individual differences in emotional skills and environmental support may moderate these relationships. This contextual variation underscores the importance of examining mediators rather than assuming a direct trauma-MD link across all populations. The current results provide robust evidence for these mediation effects specifically within the nursing population, where occupational stressors may amplify these psychological processes.

From a theoretical perspective, these dual pathways can be integrated within psychodynamic trauma models, where fantasy serves as both an ER strategy and a dissociative reenactment mechanism [27]. Nurses with childhood trauma histories may use MD not only to regulate current emotional distress but also to symbolically rework traumatic experiences, particularly in a caregiving profession where occupational demands reactivate early attachment wounds. This theoretical integration helps explain why MD persists despite its maladaptive consequences – it serves multiple psychological functions simultaneously.

In conclusion, the current study demonstrates through rigorous statistical analysis that childhood trauma influences MD in nurses through two complementary pathways: one mediated by ER difficulties and another by acceptance. These findings advance our theoretical understanding by specifying the precise mechanisms through which early adversity leads to fantasy-based coping and highlight potential intervention targets for addressing MD in trauma-exposed healthcare professionals.

Despite its contributions, this study has several limitations that warrant attention. The reliance on a convenience sampling method and the exclusive focus on nurses limit the generalizability of findings to other populations and introduce potential selection bias. Additionally, the use of retrospective self-report measures for assessing childhood trauma may have introduced recall bias, compromising the accuracy of trauma reports. The cross-sectional design further restricts our ability to draw causal inferences about the relationships among variables, highlighting the need for longitudinal studies to better understand temporal and developmental pathways. Moreover, the lack of control for co-occurring psychological disorders such as depression, anxiety, dissociation, or PTSD may confound the observed relationships, as these conditions often interact with trauma and ER processes. Future research should address these limitations by employing diverse and representative sampling methods, incorporating objective trauma assessments, utilizing longitudinal designs, and systematically controlling for comorbid psychological disorders to enhance the validity and generalizability of findings.

Conclusion

This study focuses on the central role of ER problems and psychological acceptance in the connection among early trauma and MD among nurses. The findings suggest that MD will serve as a maladaptive defense when painful affect cannot be regulated or distressing internal procedures based on early trauma cannot be accepted. Identifying these mediating processes, the study contributes to a more targeted body of knowledge of MD and informs practice. Interventions that foster ER and acceptance such as acceptance-based or trauma-informed therapies may reduce reliance on MD and mitigate the psychologic impact of child trauma. Longitudinal and intervention studies in the future need to follow up on these findings.

Conflict of Interest

The authors declare that they have no conflicts of interest.

Ethical Approval

All ethical principles were observed in this study. Participation was voluntary, informed consent was obtained from all participants, and confidentiality of the information was ensured.

Declaration of Generative AI and AI-Assisted Technologies:

During the preparation of this work the authors used ChatGPT in order to translate some of the sections of this manuscript from Persian to English. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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