



Exploring the Association between Maladaptive Daydreaming Frequency and Depression: Mediation by Adverse Childhood Experiences in Emerging Adults

¹**Shreshtha Verma**, M.A. *Clinical Psychology Student, Amity Institute of Psychology and Allied Sciences, Amity University Noida, Uttar Pradesh (AUUP), India*

shreshtha.verma369@gmail.com

²**Dr. Anjali Srivastava**, Professor, *Amity Institute of Psychology and Allied Sciences, Amity University Noida, Uttar Pradesh (AUUP), India*

assrivastava@amity.edu

Abstract: This study explored the interplay among maladaptive daydreaming (MD), adverse childhood experiences (ACEs), and depressive symptom severity in Indian emerging adults. A cross-sectional quantitative design was employed with 150 participants (aged 18-30 years) recruited via purposive convenience sampling through an online Google Forms survey. Three validated self-report measures were administered: the Maladaptive Daydreaming Scale-16 (MDS-16), the Patient Health Questionnaire-9 (PHQ-9), and the Adverse Childhood Experiences Questionnaire (ACE-Q). Pearson correlations, multiple regression, and bootstrapped mediation analysis (PROCESS Model 4; Hayes, 2022) were conducted using IBM SPSS Statistics. Significant positive associations were found among all three constructs. The combined regression model explained 62.7% of variance in depressive symptom scores. ACEs emerged as the strongest predictor of depression and significantly partially mediated the MD-depression pathway (Indirect Effect = .067, 95% Boot CI [.045, .094]). These findings underscore the centrality of developmental history in understanding compulsive fantasy engagement and its emotional sequelae, and point toward trauma-informed clinical approaches for individuals presenting with both MD and depressive symptoms.

Keywords: *Maladaptive Daydreaming, Depressive Symptoms, Adverse Childhood Experiences, Mediation, Emerging Adults, Trauma, Emotion Regulation, Cross-Sectional Study, Coping, Psychological Distress, PHQ-9, MDS-16, ACE-Q*

1. Introduction

Spontaneous mental wandering constitutes an unremarkable feature of ordinary waking consciousness, frequently serving adaptive ends such as creative ideation and affective processing. However, for a clinically significant minority of individuals, this intrinsic cognitive tendency intensifies into a pervasive, ego-dystonic preoccupation with elaborate fantasy, interfering substantially with real-world functioning—a phenomenon identified in the scholarly literature as maladaptive daydreaming (MD). Unlike normative mind-wandering, MD is defined by its compulsive quality, the sustained immersion in richly constructed imaginary scenarios, and the preservation of metacognitive awareness distinguishing fantasy from reality. Physical repetitive behaviours and auditory stimuli such as music frequently precede or accompany episodes. Qualitative analyses of experiential accounts have demonstrated that fantasy engagement of this kind intensifies during periods of psychological distress and becomes progressively entrenched within the individual's habitual regulatory repertoire (Nowacki & Pyszkowska, 2024). A growing empirical literature has since linked MD to clinically meaningful elevations in depression, anxiety, and dissociation (Soffer-Dudek & Oh, 2024).

The consequences of MD extend across cognitive, affective, and interpersonal domains. Sustained internal preoccupation with fantasy content impairs attentional regulation and reduces engagement with productive tasks, while the affective experience is paradoxically ambivalent: episodes are typically subjectively rewarding in the moment, yet are followed by guilt and a diminished sense of satisfaction with real-life circumstances, thereby reinforcing further escapist engagement. Longitudinal diary methodology has confirmed that within-person elevations in MD correspond to concurrent increases in depressive mood and general psychological distress (Soffer-Dudek & Somer, 2018). A comprehensive meta-analytic synthesis aggregating data from approximately 25,000 participants across 40 independent samples identified robust associations between MD and depression, anxiety, trauma-related symptomatology, and dissociation, pointing toward shared aetiological mechanisms rather than mere co-occurrence (Somer, Herscu, Samara, & Abu-Rayya, 2025).

The present investigation conceptualises depression dimensionally rather than categorically, recognising that subthreshold symptom levels nevertheless generate genuine

functional impairment. The affective core of depression comprises persistently low or empty mood and anhedonia—a notable attenuation of interest in previously rewarding activities—alongside cognitive distortions, ruminative ideation, impaired concentration, disrupted sleep, and somatic changes. Research consistently demonstrates that individuals who score highly on MD measures also report substantially elevated depressive symptoms (Soffer-Dudek & Oh, 2024), and that histories of early adversity are associated with a more severe, recurrent, and treatment-resistant depressive course (Lippard & Nemeroff, 2020).

Adverse childhood experiences (ACEs)—encompassing physical, emotional, and sexual abuse, neglect, domestic violence exposure, and household dysfunction occurring prior to age eighteen—represent a well-established antecedent of both MD and depression. Epidemiological evidence indicates that more than sixty percent of adults report at least one ACE, with approximately one in six endorsing four or more, with disproportionate exposure among women, ethnic minority groups, and those from lower socioeconomic strata (Merrick et al., 2018). At the neurobiological level, chronic stress during developmentally sensitive periods recalibrates hypothalamic-pituitary-adrenal and immunological systems; prospective longitudinal research has demonstrated that greater ACE burden predicts persistently elevated inflammatory markers from childhood through adolescence, which in turn forecast higher depressive symptom severity in young adulthood (Iob et al., 2022). Psychologically, disrupted early attachment relationships impair the acquisition of affective self-regulation capacities, and adverse relational experiences consolidate negative self-referential schemas that heighten susceptibility across multiple psychopathological domains.

Cross-national data indicate that specific subtypes of early adversity—most notably emotional neglect and emotional abuse—predict distinct patterns of pathological fantasy engagement, including memory-avoidant daydreaming and compensatory idealisation of unmet relational needs (Somer, Abu-Rayya, & Brenner, 2021). Structural equation modelling has further shown that the pathway from early trauma to MD is sequentially mediated by dissociative absorption and internalised shame: traumatic experience amplifies immersive dissociative states that deepen fantasy engagement, while shame motivates withdrawal into an internal world experienced as safer than social reality (Ferrante, Marino, Guglielmucci, & Schimmenti, 2020). Network-analytic approaches have additionally established that MD occupies a central, bridging position within a symptom constellation encompassing depressive affect, shame, and dysregulation, functioning as a transdiagnostic mechanism through which early adversity becomes consolidated into enduring psychological distress (Pyszkowska, Celban, Nowacki, & Dubiel, 2023). Collectively, these findings suggest that ACEs may operate

as a mediating developmental variable, shaping both the propensity for compulsive fantasy engagement and the severity of depressive symptomatology through shared pathways of compromised regulatory functioning and negative self-representation. The present study seeks to test this proposed mediational structure empirically among emerging adults in India, addressing an existing gap in the literature and informing developmentally sensitive approaches to psychological assessment and intervention.

1.1 Purpose and Significance of the Study

Despite a growing scholarly interest in maladaptive daydreaming as a clinically meaningful construct, the developmental conditions that give rise to it remain poorly understood. Existing research has examined its co-occurrence with depression and its association with trauma in isolation, but no study to date has directly tested whether adverse childhood experiences serve as an explanatory bridge between compulsive fantasy engagement and depressive symptom severity. The present investigation addresses this gap by examining a three-variable mediational model within a sample of emerging adults in India, a demographic and geographic context that is notably underrepresented in the international literature on both maladaptive daydreaming and ACEs. From a theoretical standpoint, establishing this mediational pathway would advance understanding of how early developmental adversity shapes not only affective outcomes but also the specific coping strategies that individuals carry into adulthood. From a clinical standpoint, the findings hold direct relevance for psychological assessment and intervention: practitioners working with individuals who present with compulsive fantasy or depressive difficulties may benefit from routinely exploring developmental history, and treatment approaches sensitive to early adversity may prove more effective than standard protocols that do not account for these roots. The study therefore contributes to both theory and practice by offering an integrated developmental account of the relationship between maladaptive daydreaming and depression.

2. Methodology

2.1 Aim

The study aimed to examine the relationship between maladaptive daydreaming frequency and depressive symptom severity, and to determine whether adverse childhood experiences (ACEs) mediate this association, thereby shedding light on the developmental pathways through which early life adversity may contribute to compulsive fantasy engagement and negative affect in emerging adults.

2.2 Objectives

The study was guided by the following specific objectives:

- To assess and describe the levels of maladaptive daydreaming, depressive symptoms, and adverse childhood experiences within the study sample.
- To examine the association between the frequency and intensity of maladaptive daydreaming and the severity of depressive symptoms.
- To investigate the relationship between maladaptive daydreaming frequency and the severity of adverse childhood experiences.
- To explore the association between adverse childhood experiences severity and depressive symptom severity.
- To test whether adverse childhood experiences severity mediates the relationship between maladaptive daydreaming frequency and depressive symptom severity.

2.3 Hypotheses

- **H 01:** There is no statistically significant relationship between the frequency and intensity of maladaptive daydreaming and the severity of depressive symptoms.
- **H 02:** Adverse childhood experiences do not significantly mediate the relationship between maladaptive daydreaming frequency and depressive symptom severity.
- **H 03:** There is no statistically significant relationship between maladaptive daydreaming frequency and the severity of adverse childhood experiences.
- **H 04:** There is no statistically significant relationship between adverse childhood experiences severity and depressive symptom severity.

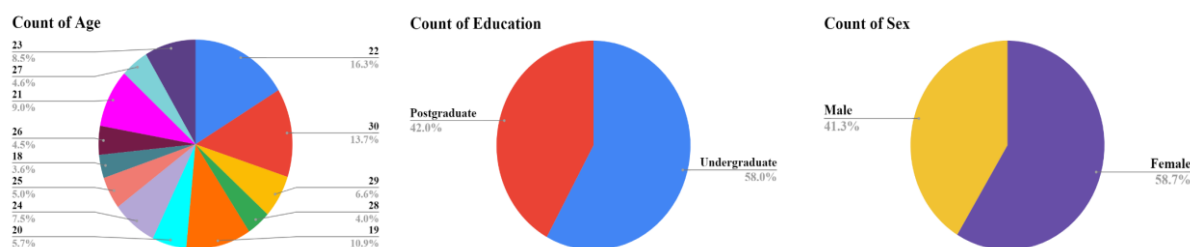
2.4 Variables

Three psychological constructs constituted the analytical framework of this study. The frequency and intensity of maladaptive daydreaming was positioned as the independent variable, capturing the extent to which participants engaged in lengthy, compulsive, and distressing episodes of vivid inner fantasy that disrupted daily functioning. Depressive symptom severity served as the dependent variable, reflecting the current burden of affective, cognitive, somatic, and motivational symptoms across a dimensional continuum. Adverse childhood experience severity functioned as the mediator, representing cumulative exposure to early developmental adversity, including emotional, physical, and sexual abuse; emotional and physical neglect; and household-level dysfunction such as witnessing domestic violence, parental substance misuse, parental mental illness, parental incarceration, and high-conflict parental separation.

2.5 Research Design and Sample

A cross-sectional, non-experimental quantitative design was adopted. Participants comprised 150 adults aged 18-30 residing in India, recruited via social media and personal networks through a Google Forms survey. Purposive convenience sampling was employed. Inclusion criteria required: age between 18 and 30 years; English proficiency adequate for comprehending and responding to questionnaire items; voluntary digital informed consent; completion of the entire survey without omissions; and physical residence in India at the time of data collection. Exclusion criteria included responses outside the designated age range, incomplete submissions, duplicate entries, and a prior psychotic disorder diagnosis. The final sample of 150 exceeded the minimum of 100 recommended by Hayes (2018) for achieving adequate statistical power in bootstrapped mediation analyses.

Sample Characteristics (Figures 1-3)



Figures 1-3. Distribution of Age, Sex, and Educational Qualification (Source: Google Forms)

2.6 Instruments

MDS-16 (Somer et al., 2017): A 16-item scale assessing MD on an 11-point scale (0 = never, 10 = always); total scores range 0-160. Cronbach's alpha is consistently $\geq .90$, with confirmed construct validity via confirmatory factor analysis across diverse populations.

PHQ-9 (Kroenke et al., 2001): A 9-item measure of depressive symptom frequency over the preceding two weeks, scored 0-3 per item (total 0-27). Internal consistency ranges from .86-.89 across clinical and community samples. Items align directly with DSM-5 criteria for major depressive disorder.

ACE-Q (Felitti et al., 1998): A 10-item binary questionnaire covering three abuse categories, two neglect categories, and five household dysfunction categories; total scores range 0-10. The instrument demonstrates strong test-retest stability and extensive predictive validity across decades of epidemiological research.

2.7 Data Analysis

IBM SPSS Statistics and Hayes' (2018) PROCESS macro were used. Descriptive

statistics characterised sample distributions. Pearson correlations examined bivariate associations among the three constructs. Multiple regression assessed the independent predictive contributions of MD and ACEs to depressive symptom severity simultaneously. Mediation was formally tested using PROCESS Model 4, with bootstrapping across 5,000 resamples and 95% bias-corrected confidence intervals. The bootstrapped approach was preferred over conventional causal-step frameworks as it does not assume normality of the indirect effect's sampling distribution and produces more precise estimates consistent with current best practice in psychological mediation research.

3. Results

Table 1. *Descriptive Statistics of Study Variables (N = 150)*

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
MD	150	0	121	76.89	29.343
PH	150	0	27	16.16	6.771
ACE	150	0	10	3.35	2.391
Valid N (listwise)	150				

Table 1 presents distributional properties across the 150 participants. MD scores (M = 76.89, SD = 29.34) indicated notably elevated fantasy engagement. Depressive symptoms (M = 16.16, SD = 6.77) placed the sample within the moderate-to-moderately-severe range. ACE scores (M = 3.35, SD = 2.39) reflected moderate cumulative early adversity. Adequate variability across all measures confirmed sufficient heterogeneity for subsequent inferential analyses.

Correlation Analysis

Table 2. *Pearson Correlation Matrix (** $p < .01$, 2-tailed; N = 150)*

		MD	PH	ACE
MD	Pearson Correlation	1	.648**	.538**
	Sig. (2-tailed)		.000	.000
	N	150	150	150
PH	Pearson Correlation	.648**	1	.732**
	Sig. (2-tailed)	.000		.000
	N	150	150	150

ACE	Pearson Correlation	.538**	.732**	1
	Sig. (2-tailed)	.000	.000	
	N	150	150	150

**, Correlation is significant at the 0.01 level (2-tailed).

Table 2 presents bivariate Pearson correlations. A moderately strong positive association was observed between MD and depressive symptoms ($r = .648, p < .01$). MD also correlated significantly with ACEs ($r = .538, p < .01$). The strongest relationship emerged between ACEs and depression ($r = .732, p < .01$), indicating that early adversity burden most substantially co-occurs with depression severity. All inter-variable correlations were positive and significant at the $p < .01$ level (2-tailed).

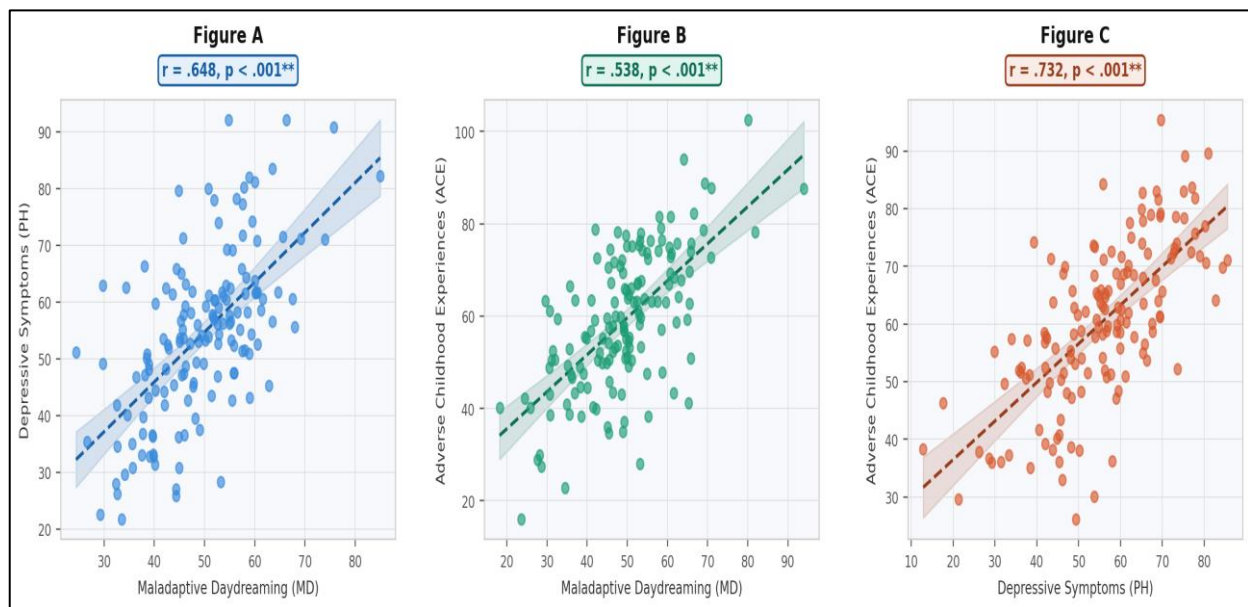


Figure 4. Scatter Plots Depicting Correlational Relationships Among MD, PH, and ACE ($N = 150$; dashed lines = regression lines; shaded bands = 95% CI; $^{**} p < .001$, 2-tailed)

Regression Analysis

Table 3. Model Summary (Predictors: MD, ACE; Dependent: Depressive Symptoms)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.792 ^a	.627	.622	4.164

a. Predictors: (Constant), MD, ACE

Table 4. ANOVA Summary (Dependent Variable: Depressive Symptoms)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4281.643	2	2140.821	123.484	.000 ^b
	Residual	2548.517	147	17.337		
	Total	6830.160	149			

Table 5. Regression Coefficients (Dependent Variable: Depressive Symptoms)

Coefficients						
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.708	.956		4.923	.000
	ACE	1.530	.169	.540	9.040	.000
	MD	.082	.014	.357	5.971	.000
a. Dependent Variable: PH						

Tables 3-5 collectively present the multiple regression results. The overall model was highly significant ($F(2,147) = 123.484$, $p < .001$) and accounted for 62.7% of variance in depression scores ($R^2 = .627$, Adjusted $R^2 = .622$). ACEs emerged as the relatively stronger predictor ($Beta = .540$, $p < .001$), followed by MD ($Beta = .357$, $p < .001$), with both variables contributing independently and meaningfully to the outcome variable.

Mediation Analysis

Table 6. Mediation Analysis: ACEs Mediating MD-Depression Pathway (PROCESS Model 4; 5,000 Bootstrap Resamples; Hayes, 2022)

Mediation Analysis – PROCESS Model 4 Output (Hayes, 2022)				
Outcome Variable: ACE (Mediator)				
Predictor	coeff	se(HC3)	t	p
constant	-.0244	.3847	-.0635	.9495
MD	.0438	.0049	8.9815	.0000
$R = .538$, $R^2 = .290$, $F(HC3) = 80.667$, $p < .001$				
Outcome Variable: PH (Depressive Symptoms)				
Predictor	coeff	se(HC3)	t	p
constant	4.7081	1.2205	3.8575	.0002

MD	.0824	.0198	4.1553	.0001
ACE	1.5299	.2917	5.2447	.0000
R = .792, R ² = .627, F(HC3) = 79.397, p < .001				
Indirect Effect of MD on PH via ACE (Bootstrap, 5000 samples)				
Effect	BootSE	BootLLCI	BootULCI	
.0671	.0128	.0445	.0936	
Direct Effect of MD on PH	Effect = .0824	p = .0001	LLCI = .0432	ULCI = .1215

Table 6 presents the PROCESS Model 4 mediation output. In the first path, MD significantly predicted ACEs ($b = .044$, $p < .001$), satisfying the predictor-to-mediator condition. In the second path, ACEs significantly predicted depressive symptoms while controlling for MD ($b = 1.530$, $p < .001$). The bootstrapped indirect effect was positive and significant (Effect = .067, 95% Boot CI [.045, .094]), as the confidence interval excluded zero entirely, confirming ACEs as a statistically significant mediator. The direct effect of MD on depression remained significant after the mediator was introduced ($b = .082$, $p < .001$), indicating partial rather than full mediation. All four null hypotheses were consequently rejected.

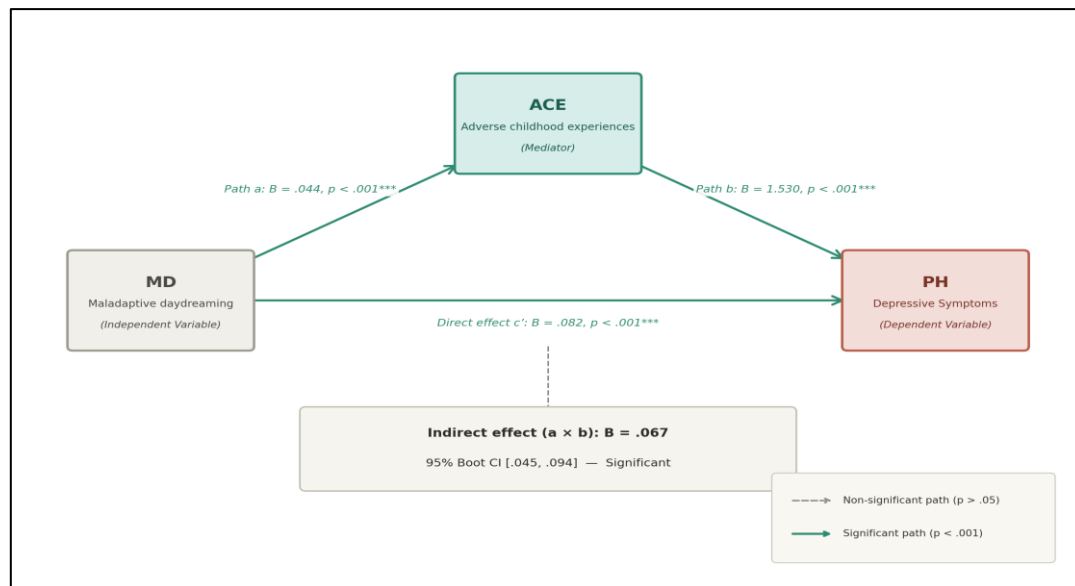


Figure 5. Mediation Path Diagram: MD --> ACE --> Depressive Symptoms. Path a (MD>ACE): $B = .044$, $p < .001$; Path b (ACE>PH): $B = 1.530$, $p < .001$; Direct effect c' (MD>PH): $B = .082$, $p < .001$. Indirect effect significant ($B = .067$, 95% Boot CI [.045, .094]). *** $p < .001$.

4. Discussion

Findings from this investigation consistently point to meaningful relationships among maladaptive daydreaming (MD), adverse childhood experiences (ACEs), and depressive symptomatology. Each analytical strand produced coherent, statistically robust results.

A substantial positive relationship emerged between MD and depression ($r = .648$, $p < .01$), one that held independently after controlling for ACE burden ($\beta = .357$, $p < .001$). This suggests that compulsive fantasy engagement carries its own psychological weight rather than serving merely as a proxy for developmental history. Theoretically, while immersive fantasy may initially offer temporary relief from distress, its sustained use likely entrenches avoidance-oriented coping, erodes engagement with lived experience, and perpetuates the very emotional pain it was intended to escape. Network-based analyses of psychopathology further suggest MD occupies a structurally central role within symptom clusters, actively maintaining depressive states rather than simply accompanying them.

MD was also meaningfully associated with ACE burden ($r = .538$, $p < .01$; $b = .044$, $p < .001$). Early environments marked by relational neglect or emotional unavailability appear to foster the development of fantasy as an internal refuge — a compensatory mechanism for unmet developmental needs. Several intersecting processes contribute to this: dissociative responses to trauma, shame-driven withdrawal from external engagement, compromised self-regulation, and disrupted early attachment. When secure external relationships are absent, internal imaginative worlds may serve as substitutes, though at significant psychological cost.

The strongest association observed was between ACEs and depression ($r = .732$, $p < .01$; $\beta = .540$, $p < .001$). Together with MD, ACEs accounted for 62.7% of variance in depressive symptom scores ($R^2 = .627$, $F(2,147) = 123.484$, $p < .001$). Prolonged early-life stress appears to reconfigure neurobiological stress systems in ways that endure into adulthood — including altered threat sensitivity and disrupted inflammatory regulation — rendering individuals more vulnerable to persistent mood difficulties that tend to be more severe and less treatment-responsive than depression without adversity histories.

Mediation analyses confirmed that ACEs partially explain the pathway from MD to depressive symptoms (indirect effect = 0.067, 95% Boot CI [.045, .094], $k = 5,000$ resamples). Given that the direct effect of MD on depression also remained significant ($b = .082$, $p < .001$), partial mediation was established. This dual-pathway model captures both a developmental dimension — where fantasy-rooted distress reflects unresolved early experience — and a contemporaneous one, in which ongoing MD independently sustains depression through

mechanisms such as sleep disruption, social withdrawal, and dissatisfaction with non-imagined reality.

Clinically, these findings underscore the value of incorporating early developmental assessment into formulations for individuals presenting with MD and depressive symptoms. Trauma-sensitive and attachment-oriented approaches appear particularly suited to cases with adversity-rooted fantasy. Simultaneously, the direct MD–depression link supports independent screening for MD regardless of known trauma history.

5. Conclusion

This investigation examined the associations among maladaptive daydreaming frequency, adverse childhood experiences, and depressive symptom severity in 150 Indian emerging adults, and formally tested whether ACEs mediate the MD-depression relationship. All four null hypotheses were rejected on the basis of accumulated statistical evidence. Maladaptive daydreaming demonstrated a significant and independent positive association with depressive symptom severity. Both constructs showed moderate and significant associations with ACEs. Adverse childhood experiences emerged as the strongest predictor of depressive outcomes within the study, producing the largest bivariate correlation ($r = .732$) and the highest standardised regression coefficient ($Beta = .540$). Critically, ACEs were confirmed as a statistically significant partial mediator of the MD-to-depression pathway, with a bootstrapped indirect effect of .067 (95% CI [.045, .094]).

These findings collectively position MD not as an isolated psychological curiosity but as a clinically meaningful phenomenon embedded within a developmental trajectory shaped by early adversity and expressed in parallel with depressive psychopathology. The partial mediation pattern affirms that ACEs constitute one important but not exclusive pathway connecting compulsive fantasy to depressive outcomes, pointing simultaneously to the developmental roots of the phenomenon and to the contemporaneous mechanisms through which fantasy engagement sustains negative affect independently of early adversity history. Future longitudinal, multivariate, and mixed-method designs will be essential for deepening the mechanistic understanding of these relationships and for translating the present findings into targeted clinical interventions. The present study contributes to an emerging literature by integrating MD, ACEs, and depressive symptoms within a single explanatory framework and offers a foundation for trauma-informed assessment and intervention approaches that address the full developmental context of compulsive fantasy engagement and its psychological consequences.

References

- Abate, B. B., Sendekie, A. K., Merchaw, A., Abebe, G. K., Azmeraw, M., Alamaw, A. W., Zemariam, A. B., Kitaw, T. A., Kassaw, A., Wodaynew, T., Kassie, A. M., Yilak, G., & Kassa, M. A. (2025). Adverse childhood experiences are associated with mental health problems later in life: An umbrella review of systematic review and meta-analysis. *Neuropsychobiology*, 84(1), 48–64. <https://doi.org/10.1159/000542392>
- Abu-Rayya, H. M., Somer, E., & Knane, H. (2020). Maladaptive daydreaming is associated with intensified psychosocial problems experienced by female survivors of childhood sexual abuse. *Violence Against Women*, 26(8), 825–837. <https://doi.org/10.1177/1077801219845532>
- Al-Mamun, F., Habib, A. A., Almerab, M. M., Soraci, P., & Mamun, M. A. (2025). Adverse childhood experiences and mental health: The mediating role of perceived social support and coping strategies. *BMC Psychiatry*, 25, 836. <https://doi.org/10.1186/s12888-025-07262-9>
- Babatunde, O. A., Ramkumar, S. P., Nguyen, S. A., Okereke, O. I., Clark, F. A., Nagar, A., Osazuwa-Peters, N., & Boakye, E. A. (2024). Association between number of adverse childhood experiences and depression among older adults is moderated by race. *Preventive Medicine*, 181, 107921. <https://doi.org/10.1016/j.ypmed.2024.107921>
- Begum, A., & Khan, M. J. (2024). Childhood emotional maltreatment and maladaptive daydreaming among adolescents: Mediating role of emotional processing. *Pakistan Journal of Psychological Research*, 39(1), 123–137. <https://doi.org/10.33824/PJPR.2024.39.1.08>
- Brown, M. J., Esiaka, D. K., & Viswanathan, J. (2025). Adverse childhood experiences, depression and subjective cognitive decline by gender: A moderated mediation analysis. *Journal of Applied Gerontology*. <https://doi.org/10.1177/07334648251386108>
- Chirico, I., Volpato, E., Landi, G., Maranesi, E., Prevete, E., & Musetti, A. (2024). Maladaptive daydreaming and its relationship with psychopathological symptoms, emotion regulation, and problematic social networking sites use: A network analysis approach. *International Journal of Mental Health and Addiction*, 22, 1484–1500. <https://doi.org/10.1007/s11469-022-00938-3>
- Dagnino, P., Cordeu, C., Franco-Chalca, E., Gloger, S., Duisallant, M., Mizon, J., & Romero, L. (2025). The impact of different adverse childhood experiences on the dimensions of emotional dysregulation in adults with major depression. *Frontiers in Psychology*, 16, 1587042. <https://doi.org/10.3389/fpsyg.2025.1587042>
- Desch, L., Testa, A., Jackson, D. B., & Kennedy, M. (2023). The association between adverse childhood experiences and depression trajectories in the Add Health study. *International Journal of Environmental Research and Public Health*, 20, 3028. <https://doi.org/10.3390/ijerph20043028>
- Ferrante, E., Marino, A., Guglielmucci, F., & Schimmenti, A. (2020). The mediating role of dissociation and shame in the relationship between emotional trauma and maladaptive daydreaming. *Psychology of Consciousness: Theory, Research, and Practice*, 9(1), 27–39. <https://doi.org/10.1037/cns0000253>

- Giampetruzzi, E., Tan, A. C., LoPilato, A., Kitay, B., Riva Posse, P., McDonald, W. M., Hermida, A. P., Crowell, A., & Hershenberg, R. (2023). The impact of adverse childhood experiences on adult depression severity and treatment outcomes. *Journal of Affective Disorders*, 333, 233–239. <https://doi.org/10.1016/j.jad.2023.04.071>
- Infurna, M. R., Reichl, C., Parzer, P., Schimmenti, A., Bifulco, A., & Kaess, M. (2016). Associations between depression and specific childhood experiences of abuse and neglect: A meta-analysis. *Journal of Affective Disorders*, 190, 47–55. <https://doi.org/10.1016/j.jad.2015.09.006>
- International Journal of Psychiatry. (2023). Psychological correlates of maladaptive daydreaming. [Link: https://ijps.tums.ac.ir/index.php/ijps/article/view/4293](https://ijps.tums.ac.ir/index.php/ijps/article/view/4293)
- Iob, E., Lacey, R., Giunchiglia, V., & Steptoe, A. (2022). Adverse childhood experiences and severity levels of inflammation and depression from childhood to young adulthood: A longitudinal cohort study. *Molecular Psychiatry*, 27, 2255–2263. <https://doi.org/10.1038/s41380-022-01478-x>
- Kim, Y., Lee, H., & Park, A. (2022). Patterns of adverse childhood experiences and depressive symptoms: Self-esteem as a mediating mechanism. *Social Psychiatry and Psychiatric Epidemiology*, 57, 331–341. <https://doi.org/10.1007/s00127-021-02129-2>
- Kobrinisky, V., & Siedlecki, K. L. (2023). Mediators of the relationship between adverse childhood experiences (ACEs) and symptoms of anxiety, depression, and suicidality among adults. *Journal of Child & Adolescent Trauma*, 16(2), 233–246. <https://doi.org/10.1007/s40653-022-00510-0>
- Lemon, E. D., Vu, M., Roche, K. M., Osaghae, I., Tobin, E., & Berg, C. J. (2022). Depressive symptoms in relation to adverse childhood experiences, discrimination, hope, and social support in a diverse sample of college students. *Journal of Racial and Ethnic Health Disparities*, 9, 992–1002. <https://doi.org/10.1007/s40615-021-01038-z>
- LeMoult, J., Humphreys, K. L., Tracy, A., Hoffmeister, J. A., Ip, E., & Gotlib, I. H. (2020). Meta-analysis: Exposure to early life stress and risk for depression in childhood and adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry*, 59(8), 842–855. <https://doi.org/10.1016/j.jaac.2019.10.011>
- Lippard, E. T. C., & Nemeroff, C. B. (2020). The devastating clinical consequences of child abuse and neglect: Increased disease vulnerability and poor treatment response in mood disorders. *American Journal of Psychiatry*, 177(1), 20–36. <https://doi.org/10.1176/appi.ajp.2019.19010020>
- Mancinelli, E., Spisto, S., Sukhija, V. J., & Salcuni, S. (2024). Maladaptive daydreaming as an emotion regulation strategy: Exploring associations with emotion regulation and psychological symptoms. *Current Psychology*. <https://doi.org/10.1007/s12144-024-06487-3>
- Mariani, R., Caselli, G., & Spada, M. M. (2025). Understanding maladaptive daydreaming from the attachment framework: The intertwining roles of parental care, unresolved attachment,

- depression/anxiety and obsessive-compulsive symptoms. *Journal of Psychiatric Research*.
<https://doi.org/10.1016/j.jpsychires.2025.01.015>
- Mariani, R., Musetti, A., Di Monte, C., Danskin, K., Franceschini, C., & Christian, C. (2022). Maladaptive daydreaming in relation to linguistic features and attachment style. *International Journal of Environmental Research and Public Health*, 19(1), 386.
<https://doi.org/10.3390/ijerph19010386>
- McKeen, H., Hook, M., Podduturi, P., Beitzell, E., Jones, A., & Liss, M. (2023). Mindfulness as a mediator and moderator in the relationship between adverse childhood experiences and depression. *Current Psychology*, 42(8), 6576–6586. <https://doi.org/10.1007/s12144-021-02003-z>
- Merrick, M. T., Ford, D. C., Ports, K. A., & Guinn, A. S. (2018). Prevalence of adverse childhood experiences from the 2011–2014 Behavioral Risk Factor Surveillance System in 23 states. *JAMA Pediatrics*, 172(11), 1038–1044. <https://doi.org/10.1001/jamapediatrics.2018.2537>
- Merrick, M. T., Ford, D. C., Ports, K. A., Guinn, A. S., Chen, J., Klevens, J., Metzler, M., Jones, C. M., Simon, T. R., Daniel, V. M., Ottley, P., & Mercy, J. A. (2019). Vital signs: Estimated proportion of adult health problems attributable to adverse childhood experiences and implications for prevention—25 states, 2015–2017. *MMWR Morbidity and Mortality Weekly Report*, 68(44), 999–1005. <https://doi.org/10.15585/mmwr.mm6844e1>
- Moment, L. (2024). Exploring the relationship between maladaptive daydreaming and adverse childhood experiences. *Graduate Student Journal of Psychology*, 23.
<https://doi.org/10.52214/gsjp.v23i.12525>
- Musetti, A., Franceschini, C., Pingani, L., Freda, M. F., Saita, E., Vegni, E., Zenesini, C., Quattropani, M. C., Lenzo, V., Margherita, G., Lemmo, D., Corsano, P., Borghi, L., Cattivelli, R., Plazzi, G., Castelnovo, G., Somer, E., & Schimmenti, A. (2021). Maladaptive daydreaming in an adult Italian population during the COVID-19 lockdown. *Frontiers in Psychology*, 12, 631979.
<https://doi.org/10.3389/fpsyg.2021.631979>
- Musetti, A., Soffer-Dudek, N., Imperato, C., Schimmenti, A., & Franceschini, C. (2023). Longitudinal associations between maladaptive daydreaming and psychological distress during the COVID-19 health crisis. *Journal of Behavioral Addictions*, 12(1), 288–294.
<https://doi.org/10.1556/2006.2023.00001>
- Nowacki, A., & Pyszkowska, A. (2024). The ever-changing maladaptive daydreaming: A thematic analysis of lived experiences of Reddit users. *Current Psychology*.
<https://doi.org/10.1007/s12144-024-06506-3>
- Poole, J. C., Dobson, K. S., & Pusch, D. (2017). Childhood adversity and adult depression: The protective role of psychological resilience. *Child Abuse & Neglect*, 64, 89–100.
<https://doi.org/10.1016/j.chiabu.2016.12.012>

- Pourmoazzen, M., Doosalivand, H., Bastemi, M., & Kianimoghadam, A. S. (2025). The impact of attachment styles and traumatic experiences on maladaptive daydreaming among Iranian population: The mediating role of shame and emotion dysregulation. *BMC Psychology*, 13, 1085. <https://doi.org/10.1186/s40359-025-03453-x>
- Pyszkowska, A., Celban, J., Nowacki, A., & Dubiel, I. (2023). Maladaptive daydreaming, emotional dysregulation, affect and internalized stigma in persons with borderline personality disorder and depression disorder: A network analysis. *Clinical Psychology & Psychotherapy*, 30(6), 1246–1255. <https://doi.org/10.1002/cpp.2923>
- Research Square. (2023). Psychological correlates of maladaptive daydreaming and emotional distress. [Link: https://www.researchsquare.com/article/rs-3380341/latest](https://www.researchsquare.com/article/rs-3380341/latest)
- Research Square. (2024). Psychological predictors of maladaptive daydreaming and emotional distress. [Link: https://www.researchsquare.com/article/rs-3693926/latest](https://www.researchsquare.com/article/rs-3693926/latest)
- Ricci, F., Valentini, C. P., Torales, J., Caycho-Rodríguez, T., Hualparuca-Olivera, L., Castaldelli-Maia, J. M., & Ventriglio, A. (2025). When imagination turns into disorder: The case of maladaptive daydreaming. *International Review of Psychiatry*, 37(6–7), 706–718. <https://doi.org/10.1080/09540261.2025.2562185>
- Ross, C. A., Ridgway, J., & George, N. (2020). Maladaptive daydreaming, dissociation, and the dissociative disorders. *Psychiatric Research and Clinical Practice*, 2(2), 53–61. <https://doi.org/10.1176/appi.prcp.20190050>
- Sandor, A., Bugan, A., Nagy, A., Nagy, N., Toth-Merza, K., & Molnar, J. (2023). Childhood traumatization and dissociative experiences among maladaptive and normal daydreamers in a Hungarian sample. *Current Psychology*, 42(11), 9509–9525. <https://doi.org/10.1007/s12144-021-02223-3>
- Sheremet, A. (2022). Maladaptive daydreaming and psychological functioning. Masaryk University. [Link: https://is.muni.cz/th/evjyt/Sheremet_Maladaptive_Daydreaming.pdf](https://is.muni.cz/th/evjyt/Sheremet_Maladaptive_Daydreaming.pdf)
- Soffer-Dudek, N., & Oh, H. (2024). Maladaptive daydreaming: A shortened assessment measure and its mental health correlates in a large United States sample. *Comprehensive Psychiatry*, 129, 152441. <https://doi.org/10.1016/j.comppsy.2023.152441>
- Soffer-Dudek, N., & Somer, E. (2018). Trapped in a daydream: Daily elevations in maladaptive daydreaming are associated with daily psychopathological symptoms. *Frontiers in Psychiatry*, 9, 194. <https://doi.org/10.3389/fpsy.2018.00194>
- Soffer-Dudek, N., Aquarone, R., & Somer, E. (2025). Maladaptive daydreaming among patients with dissociative identity disorder: A prevalence study. *Journal of Psychiatric Research*, 185, 40–45. <https://doi.org/10.1016/j.jpsychires.2025.03.038>
- Somer, E., & Herscu, O. (2017). Childhood trauma, social anxiety, absorption and fantasy dependence: Two potential mediated pathways to maladaptive daydreaming. *Journal of Addictive Behaviors, Therapy & Rehabilitation*, 6(4). <https://doi.org/10.4172/2324-9005.1000170>

- Somer, E., & Otgaar, H. (2024). Exploring the nexus between childhood adversities, trauma-related fantasy and memory in maladaptive daydreaming. *Acta Psychologica*, 247, 104301. <https://doi.org/10.1016/j.actpsy.2024.104301>
- Somer, E., Abu-Rayya, H. M., & Brenner, R. (2021). Childhood trauma and maladaptive daydreaming: Fantasy functions and themes in a multi-country sample. *Journal of Trauma & Dissociation*, 22(3), 288–303. <https://doi.org/10.1080/15299732.2020.1809599>
- Somer, E., Herscu, O., Samara, M., & Abu-Rayya, H. M. (2025). Maladaptive daydreaming and psychopathology: A meta-analysis. *International Journal of Psychology*, 60(2), e70027. <https://doi.org/10.1002/ijop.70027>
- Song, C., Yao, L., Chen, H., Zhang, J., & Liu, L. (2024). The relationship between adverse childhood experiences and depressive symptoms in rural left-behind adolescents: A cross-sectional survey. *Heliyon*, 10(4), e26587. <https://doi.org/10.1016/j.heliyon.2024.e26587>
- Sukhija, V. J., La Torre, A., & Salcuni, S. (2025). Delving into online narratives of maladaptive daydreaming: A qualitative study across a maladaptive daydreaming Facebook community. *Mediterranean Journal of Clinical Psychology*. [Link: https://cab.unime.it/journals/index.php/MJCP/article/download/3223/pdf](https://cab.unime.it/journals/index.php/MJCP/article/download/3223/pdf)
- Swedo, E. A., Aslam, M. V., Dahlberg, L. L., Niolon, P. H., Guinn, A. S., Simon, T. R., & Mercy, J. A. (2023). Prevalence of adverse childhood experiences among U.S. adults—Behavioral Risk Factor Surveillance System, 2011–2020. *MMWR Morbidity and Mortality Weekly Report*, 72(26), 707–715. <https://doi.org/10.15585/mmwr.mm7226a2>
- Tan, M., Mao, P., Jiang, H., Liu, Y., Xiao, L., Ye, M., Chen, Y., & Liu, X. (2023). Type and dose-response effect of adverse childhood experiences in predicting depression: A systematic review and meta-analysis. *Child Abuse & Neglect*, 139, 106091. <https://doi.org/10.1016/j.chiabu.2023.106091>
- Thurston, C., Murray, A. L., Franchino-Olsen, H., Silima, M., Hemady, C. L., & Meinck, F. (2025). Prospective longitudinal associations between adverse childhood experiences and adult mental health outcomes: Systematic review and meta-analysis. *Trauma, Violence, & Abuse*. Advance online publication. <https://doi.org/10.1177/15248380251358223>
- Topcu, F. (2025). The role of social anxiety and emotional self-efficacy in the link between childhood trauma and maladaptive daydreaming among university students: A moderated mediation model. *Current Psychology*, 44(20), 16298–16309. <https://doi.org/10.1007/s12144-025-08352-3>
- Xiang, S., Chen, W., Zhang, J., Zhang, X., & Wu, Q. (2022). Adverse childhood experiences, inflammation, and depressive symptoms in late life: A population-based study. *The Journals of Gerontology: Series B*, 78(2), 220–229. <https://doi.org/10.1093/geronb/gbac179>
- Youssef, N. A., Belew, D., Hao, G., Wang, X., Treiber, F. A., Stefanek, M., Yassa, M., Boswell, E., McCall, W. V., & Su, S. (2017). Racial/ethnic differences in the association of childhood

adversities with depression and the role of resilience. *Journal of Affective Disorders*, 208, 577–581. <https://doi.org/10.1016/j.jad.2016.10.024>

Zhang, T., Kan, L., Jin, C., & Shi, W. (2023). Adverse childhood experiences and their impacts on subsequent depression and cognitive impairment in Chinese adults: A nationwide multi-center study. *Journal of Affective Disorders*, 323, 884–892. <https://doi.org/10.1016/j.jad.2022.12.058>