ATTACHMENT STYLES AND SUICIDE RISK: THE EFFECTS OF NEUROTICISM AND MALADAPTIVE DAYDREAMING

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Abstract

Suicide remains a significant public health concern, necessitating a deeper understanding of the psychological factors contributing to suicidal ideation and behavior. Attachment theory posits that early relationships with caregivers shape emotional and behavioral responses throughout life, influencing interpersonal relationships and mental health. Neuroticism, characterized by heightened emotional instability and negative affectivity, has been linked to various mental health outcomes, including suicidal behavior. Similarly, maladaptive daydreaming (MD), marked by excessive fantasy and escapism, may exacerbate feelings of isolation and despair. This study thus aimed to examine whether neuroticism and MD play a sequential mediating role in the relationship between attachment styles (AS) and suicide risk (SR). In this study, 1152 young adults (50% women) aged 18 to 25 years (M=21.48, SD=2.31) engaged in an online survey and completed self-report questionnaires assessing their AS, neuroticism, MD, and SR. The analysis utilized hybrid structural equation modeling (SEM) to test for mediation effects. Four models were tested, one for each AS: secure (SA), dismissing (DA), preoccupied (PA), and fearful (FA). The models showed a good fit. Specifically, SA model: $\chi^2(36)=237.73$; p<.001, CFI=.97, RMSEA=.07 (90% CI=.06-.08), SRMR=.04; DA model: $\chi^2(36)=230.52$; p<.001, CFI=.97, RMSEA=.07 (90%) CI=.06-.08), SRMR=.04; PA model: χ2(36)=233.01; p<.001, CFI=.97, RMSEA=.07 (90% CI=.06-.08), SRMR=.04; FA model: χ2(36)=226.52; p<.001, CFI=.97, RMSEA=.07 (90% CI=.06-.08), SRMR=.04. The findings indicated that SA did not exhibit a direct relationship with SR; however, it was linked to SR through the mediating influence of neuroticism. Conversely, DA showed no significant correlations with the other variables. The relationship between PA and SR was fully mediated by neuroticism and MD, while the association between FA and SR was partially mediated by these factors. All the other paths were statistically significant. The findings suggest that targeting neuroticism and MD may be crucial for reducing SR, particularly among individuals with certain AS. Additionally, the results highlight the need for personalized interventions tailored to specific AS, as different AS may be more strongly linked to specific negative outcomes compared to others. By tailoring strategies to address specific AS and specific factors such as neuroticism and MD, practitioners can thus better target the root causes of suicide risk.

Keywords: Attachment styles, neuroticism, maladaptive daydreaming, suicide risk, young adults.

1. Introduction

This study explores how attachment styles (AS) influence suicide risk (SR), particularly through the mediating roles of neuroticism and maladaptive daydreaming (MD). AS, formed in early interactions with caregivers (Allen, 2023), shape emotional patterns in relationships and are categorized as secure, dismissing, preoccupied, and fearful (Bartholomew & Horowitz, 1991). A secure style trust and emotional stability, while insecure styles (dismissing, preoccupied, fearful) are linked to greater neuroticism, emotional reactivity, and issues with emotional regulation (Eggert et al., 2007). Neuroticism, characterized by intense emotional reactivity and negative emotions, is associated with insecure AS and is a significant factor in emotional dysregulation (Barlow et al., 2014). Those with higher neuroticism may turn to MD, a compulsive escape into vivid fantasies, as a coping mechanism (Zhiyan & Singer, 1997). Though MD offers temporary relief from emotional distress, it can disrupt daily life, relationships, and well-being, potentially increasing feelings of isolation and despair (Somer, 2002). This isolation and emotional pain can elevate SR, with MD potentially reinforcing negative thoughts and worsening mental health challenges (Selby et al., 2007). The study hypothesizes that neuroticism and MD may sequentially mediate the relationship between insecure AS and SR. By exploring these pathways, the research aims to identify intervention points to improve mental health outcomes, promote healthier AS, and ultimately reduce SR through targeted therapies that address neuroticism and MD (Bigelsen et al., 2016; Somer et al., 2017).

2. Methods

2.1. Participants

The study involved 1152 young adults from Italy, with an equal distribution of males (576) and females (576), aged 18 to 25 (M = 21.48, SD = 2.31). Participants were recruited from various Italian cities using offline and online methods, ensuring diverse representation. The educational background varied, with 17% having completed middle school, 48% holding a high school diploma, 31% having a university degree, and 4% holding a postgraduate degree. Regarding occupational status, 45% were students, 22% were unemployed, 24% were employed, and 9% were self-employed. In terms of marital status, 40% were single, 35% were engaged, 15% were cohabiting, and 10% were married.

2.2. Procedures

The study adhered to ethical guidelines set by the Helsinki Declaration and the Italian Association of Psychology. Ethical approval was obtained from the Institutional Review Board of the Institute for the Study of Psychotherapy (reference number: ISP-IRB-2023-4). Participants completed an online survey voluntarily, ensuring informed consent and prioritizing confidentiality. No compensation was offered for participation.

2.3. Measures

AS were assessed using the Italian version of the Relationship Questionnaire (RQ; Carli, 1995). This measure includes items that assess four AS: secure, dismissing, preoccupied, and fearful. Participants rated each item on a 7-point Likert scale, with higher scores indicating stronger AS. Neuroticism was measured using the Neuroticism subscale of the Italian version of the Big Five Inventory (BFI-N; Ubbiali et al., 2013). This scale consists of 8 items that assess personality traits associated with neuroticism, with higher scores indicating greater neuroticism. MD was assessed using the Italian version of the Maladaptive Daydreaming Scale-16 (MDS-16; Schimmenti et al., 2020). Participants rated 20 items on an 11-point scale, with higher scores reflecting more frequent and intense MD. SR was assessed using the Italian version of the Suicidal Behaviors Questionnaire-Revised (SBQ-R; Osman et al., 2001). This 4-item scale measures suicidal ideation and behaviors. Higher scores indicate a greater level of SR.

2.4. Statistical analyses

Descriptive statistics and correlations were analyzed using IBM SPSS, while primary analyses used the RStudio's lavaan package. The researchers applied a Hybrid Structural Equation Modeling (SEM) approach, treating AS as observable variables and neuroticism, MD, and SR as latent variables. Four mediation models were tested, one for each attachment style, exploring the relationships between AS, neuroticism, MD, and SR. The significance of indirect effects was assessed using a bias-corrected confidence interval method with 5000 resamples. Gender was included as a control variable.

3. Results

3.1. Descriptive statistics and correlations

The descriptive and correlational statistics of all the study variables are presented in Table 1.

Table 1.	Descriptive	analyses a	and correl	lations.
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	М	SD	α	1	2	3	4	5	6
1. Secure	3.77	1.74	-	-	-	-	-	-	-
2. Dismissing	3.94	1.83	-	.19**	-	-	-	-	-
3. Preoccupied	3.70	1.71	-	.09**	.04	-	-	-	-
4. Fearful	3.93	1.85	-	06*	.16**	.45**	-	-	-
5. Neuroticism	3.28	.80	.84	12**	06*	.29**	.38**	-	-
6. Maladaptive Daydreaming	3.07	1.98	.94	.00	.03	.31**	.32**	.35**	-
7. Suicide Risk	1.27	.80	.83	06*	.00	.16**	.26**	.26**	.36**

Note: n = 1152. * p < .05. ** p < .01.

3.2. Mediation models

Secure attachment (SA) model: The model for SA fit the data well ($\chi^2 = 237.73$, p < .001). Significant paths were found for all direct and indirect relationships except for the paths between SA and MD, and SA and SR.

Dismissing attachment (DA) model: The model for DA also fit the data well ($\chi^2 = 230.52$, p < .001), but none of the direct or indirect paths between DA and the other variables were significant. However, direct and indirect paths between neuroticism, MD, and SR were significant.

Preoccupied attachment (PA) model: The PA model fit the data well ($\chi^2 = 233.01$, p < .001), with all direct and indirect paths significant, except for the direct path from PA to SR.

Fearful attachment (FA) model: The FA model also fit the data well ($\chi^2 = 226.52$, p < .001), and all paths, both direct and indirect, were significant.

All direct and indirect paths of the four models are shown in Table 2.

	β	р	SE	CI (LL)	CI (UL)
Secure attachment model					
Direct Effect					
Secure Attachment \rightarrow Neuroticism	11	.002	.01	07	02
Secure Attachment \rightarrow Maladaptive Daydreaming	.04	.17	.03	02	.11
Secure Attachment \rightarrow Suicide Risk	04	.18	.02	05	.01
Neuroticism \rightarrow Maladaptive Daydreaming	.42	<.001	.10	.88	1.27
$Neuroticism \rightarrow Suicide Risk$.22	<.001	.06	.16	.39
Maladaptive Daydreaming \rightarrow Suicide Risk	.31	<.001	.02	.11	.18
Indirect Effect via Neuroticism					
Secure Attachment \rightarrow Maladaptive Daydreaming	05	.002	.02	08	02
Secure Attachment \rightarrow Suicide Risk	03	.01	.01	02	004
Indirect Effect via Maladaptive Daydreaming					
Secure Attachment \rightarrow Suicide Risk	.01	.17	.01	003	.02
Neuroticism \rightarrow Suicide Risk	.13	<.001	.02	.11	.21
Dismissing attachment model					
Direct Effect					
Dismissing Attachment \rightarrow Neuroticism	05	.10	.01	05	.004
Dismissing Attachment \rightarrow Maladaptive Daydreaming	.05	.09	.03	01	.11
Dismissing Attachment \rightarrow Suicide Risk	01	.82	.01	03	.02
Neuroticism \rightarrow Maladaptive Daydreaming	.42	<.001	.10	.87	1.26
Neuroticism \rightarrow Suicide Risk	.23	<.001	.06	.17	.39
Maladaptive Daydreaming \rightarrow Suicide Risk	.31	< .001	.02	.11	.18
Indirect Effect via Neuroticism					
Dismissing Attachment \rightarrow Maladaptive Daydreaming	02	.11	.01	05	.01
Dismissing Attachment \rightarrow Suicide Risk	01	.14	.004	01	.001
Indirect Effect via Maladaptive Daydreaming					
Dismissing Attachment \rightarrow Suicide Risk	.02	.09	.004	001	.02
Neuroticism \rightarrow Suicide Risk	.13	< .001	.02	.11	.20
Preoccupied attachment model					
Direct Effect					
Preoccupied Attachment \rightarrow Neuroticism	.33	<.001	.01	.11	.16
Preoccupied Attachment \rightarrow Maladaptive Daydreaming	.20	<.001	.03	.15	.28
Preoccupied Attachment \rightarrow Suicide Risk	.02	.61	.02	03	.04
Neuroticism \rightarrow Maladaptive Daydreaming	.35	< .001	.10	.71	1.12
Neuroticism \rightarrow Suicide Risk	.23	<.001	.06	.17	.40
Maladaptive Daydreaming \rightarrow Suicide Risk	.30	< .001	.02	.11	.18

Table 2. Path Estimates, SEs and 95% CIs.

Indirect Effect via Neuroticism					
Preoccupied Attachment \rightarrow Maladaptive Daydreaming	.12	<.001	.02	.09	.16
Preoccupied Attachment \rightarrow Suicide Risk	.07	<.001	.01	.02	.06
Indirect Effect via Maladaptive Daydreaming					
Preoccupied Attachment \rightarrow Suicide Risk	.06	<.001	.01	.02	.04
$Neuroticism \rightarrow Suicide Risk$.11	<.001	.02	.09	.17
Fearful attachment model					
Direct Effect					
Fearful Attachment \rightarrow Neuroticism	.41	<.001	.01	.13	.18
Fearful Attachment \rightarrow Maladaptive Daydreaming	.19	<.001	.03	.12	.25
Fearful Attachment \rightarrow Suicide Risk	.11	.001	.02	.02	.08
Neuroticism \rightarrow Maladaptive Daydreaming	.34	<.001	.11	.67	1.10
$Neuroticism \rightarrow Suicide Risk$.20	.001	.06	.13	.36
Maladaptive Daydreaming \rightarrow Suicide Risk	.28	<.001	.02	.10	.17
Indirect Effect via Neuroticism					
Fearful Attachment \rightarrow Maladaptive Daydreaming	.14	<.001	.02	.10	.18
Fearful Attachment \rightarrow Suicide Risk	.08	.001	.01	.02	.06
Indirect Effect via Maladaptive Daydreaming					
Fearful Attachment \rightarrow Suicide Risk	.05	<.001	.01	.02	.04
$Neuroticism \rightarrow Suicide Risk$.10	<.001	.02	.08	.16

Note: p level of significance; SE standard error; CI confidence interval; LL lower limit; UL upper limit.

4. Discussion

The results emphasize the significant role neuroticism and MD play in the relationship between AS and SR, offering insights into the mechanisms that may contribute to SR among individuals with different attachment patterns. SA is linked to stable and supportive early caregiving experiences, while insecure AS may stem from inconsistent or negative early caregiving, contributing to neuroticism and anxiety in adulthood (Bartholomew & Horowitz, 1991; Eggert et al., 2007). Individuals with insecure attachments often exhibit maladaptive coping strategies, which may heighten neuroticism and anxiety in adulthood. For example, fearful individuals may struggle with emotional instability due to contradictory needs for closeness and fear of rejection, while preoccupied individuals might excessively rely on external validation. These patterns can increase neuroticism, emotional reactivity, and self-doubt (Bartholomew et al., 2001; Hagekull & Bohlin, 2003). Neuroticism and MD are interconnected, with MD often used as an avoidance strategy for managing negative emotions and stress (Bigelsen et al., 2016; Somer, 2002). Highly neurotic individuals are more likely to engage in MD to escape unpleasant feelings or stressful situations. While MD can temporarily provide comfort or emotional regulation, over-reliance on this coping strategy can impair real-life functioning, leading to greater emotional instability and, ultimately, increasing SR (Zhiyan & Singer, 1997; Selby et al., 2007). MD can exacerbate negative emotions and impede real-world functioning, fostering feelings of hopelessness, worthlessness, and isolation-known risk factors for suicide (Somer, 2002; Selby et al., 2007). Over time, this emotional detachment and avoidance may hinder problem-solving, heighten distress, and increase the likelihood of suicidal thoughts. Additionally, individuals who use MD excessively may struggle with emotional regulation, further intensifying emotional discomfort and increasing SR (Bigelsen et al., 2016; Somer et al., 2017). In conclusion, the study suggests that neuroticism and MD mediate the relationship between AS and SR, highlighting the complex interplay of attachment, emotional regulation, and coping strategies in the development of SR.

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