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Exploring the Relationship Between Maladaptive Daydreaming and Adverse Childhood Experiences

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This study explores the intricate relationship between maladaptive daydreaming (MD) and adverse childhood experiences (ACEs). MD, characterized by immersive daydreaming that may disrupt daily functioning, has garnered attention as a potential coping mechanism for trauma. ACEs encompass a range of traumatic experiences, such as abuse, neglect, and family dysfunction, which have been associated with various mental health challenges. Using the MD Scale (MDS-16) and the ACEs scale, data were collected from a sample of $N = 386$ individuals. Significant positive correlations were found between MD and specific ACEs, including verbal abuse, mental illness or suicide, sexual abuse, and physical neglect. Regression analyses revealed that individuals with higher levels of ACEs were more likely to engage in MD. The relationship between ACEs and MD may involve MD serving as a psychological escape or coping strategy for the emotional and psychological impacts of trauma. Conversely, separation or divorce was found to have a negative association with MD scores, suggesting that different types of ACEs may affect MD tendencies differently. These findings highlight the importance of addressing childhood trauma in interventions targeting MD behaviors. Future research should delve deeper into the specific types of ACEs and their differential impacts on MD to better inform targeted interventions. This study highlights the critical role of childhood experiences in shaping MD behaviors and emphasizes the need for trauma-informed approaches in clinical practice.

Keywords: maladaptive daydreaming, trauma, adverse childhood experiences

Maladaptive daydreaming (MD) is an intriguing yet underexplored phenomenon within psychology. It is characterized by extensive and immersive daydreaming that may disrupt daily functioning and overall well-being (Mariani et al., 2021). Despite growing recognition, the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) does not classify MD as a disorder, leaving a gap in its formal conceptualization. Nevertheless, recent research has begun associating MD with Adverse Childhood Experiences (ACEs), positioning MD as a potential coping mechanism for trauma (Pietkiewicz et al., 2018; Sándor et al., 2020). This intersection between ACEs and MD remains an underdeveloped area of inquiry, with a lack of studies comprehensively exploring the psychological and neurobiological mechanisms underlying this relationship.

The existing literature often compares MD and other psychological constructs, such as fantasy proneness (FP), which involves immersive fantasies that may mimic real-life experiences. However, FP includes dissociative mystical and religious experiences not typically associated with MD, suggesting nuanced differences between these constructs (Wilson & Barber, 1982). While daydreaming can serve adaptive functions—such as enhancing creativity, planning, or cognitive relief—MD is characterized as persistent and immersive, potentially impairing academic, interpersonal, and professional functioning (Klinger, 2012; Singer, 1975).

A gap in the current body of research is the limited understanding of how ACEs, as severe early life stressors, may influence the development and persistence of MD. Studies have shown that individuals with a history of ACEs—such as childhood bullying, abuse, or neglect—are more likely to engage in MD as a coping strategy to escape from distressing realities (Somer et al., 2021). However, more nuanced research is needed to explore whether MD exacerbates trauma-related symptoms or provides temporary relief.

Recent estimates suggest that approximately 4% of the general population may meet the criteria for MD, underscoring its prevalence (Soffer-Dudek & Theodor-Katz, 2022). However, the precise mechanisms by which ACEs contribute to MD's development remain unclear, as does the bidirectional relationship between MD and trauma (Ross et al., 2020). Current neurobiological research into MD is still in its infancy, though some studies have begun exploring alterations in brain regions related to emotion regulation and self-referential processing (Bigelsen et al., 2016). This leaves a significant gap in understanding how MD and trauma influence each other over time and how this relationship affects mental and physical health outcomes across the lifespan.

This study addresses these gaps by examining the relationship between Adverse Childhood Experiences (ACEs) and Maladaptive Daydreaming (MD), hypothesizing that individuals who experience more ACEs will exhibit a higher prevalence of MD. The research aims to distinguish MD from related constructs and explore the psychological and neurobiological mechanisms underlying this relationship. By focusing on this intersection, the study seeks to contribute

to the literature by offering a more precise conceptualization of MD and its association with childhood trauma. This approach could pave the way for more effective interventions targeting both MD and the long-term impacts of ACEs on mental and physical health.

Methods

Recruitment

These data were collected during the Summer of 2020. The study aimed to assemble a representative sample of participants, as outlined in Table 1. To achieve this, the researcher employed various recruitment strategies. Initially, an advertisement was crafted using Canva, a popular graphic design tool known for its user-friendly interface and versatile templates. Subsequently, recruitment efforts were undertaken across multiple online platforms, including Canvas, Facebook, Twitter, Instagram, and Reddit. Each platform contributed differently to the overall sample.

The primary recruitment source, Facebook MD groups, was particularly effective in engaging respondents. These targeted groups proved highly effective in reaching individuals actively discussing and identifying with maladaptive daydreaming. On Reddit, recruitment was carried out in relevant subreddits that focus on mental health and maladaptive daydreaming, providing access to a diverse audience sharing their experiences with MD. Twitter was utilized for recruitment by posting targeted advertisements and engaging with hashtags and discussions related to maladaptive daydreaming and childhood trauma. Announcements and recruitment efforts on Canvas were made within university courses, targeting students with relevant interests in maladaptive daydreaming and childhood adversity. On Instagram, recruitment involves using posts and stories to connect with users interested in mental health topics. The visual and interactive nature of the platform helped engage potential participants effectively.

The most significant number of participants, totaling 250, were recruited from Facebook MD groups, representing approximately 65% of the total sample. Reddit contributed 60 participants, accounting for about 15% of the total. Twitter provided 30 participants, which is around 8% of the sample. Canvas, used for recruitment within university courses, yielded 20 participants, making up about 5% of the total. Instagram recruited 26 participants through posts and stories, approximately 7% of the sample.

Participants in this study must be 18 years of age or older and must score 50 or higher on the Maladaptive Daydreaming Scale (MDS-16), indicating significant maladaptive daydreaming. They must also report at least one Adverse Childhood Experience (ACE) based on responses to the ACE Questionnaire. All participants must be proficient in English and provide informed consent to participate in the study.

Individuals with severe cognitive impairments, such as intellectual disabilities or dementia, will be excluded, as well as those with active psychosis or severe dissociative disorders. Participants currently experiencing severe substance abuse or ongoing traumatic experiences will also be excluded. Additionally, those who do not meet the threshold for maladaptive daydreaming or do not report any significant ACEs will not be eligible for inclusion.

A total sample size of $N = 386$ individuals participated in the study. Prospective participants were required to meet specific eligibility criteria, including 18 years or older and proficient in English. Participants were asked their age when completing the survey to ensure age criteria were met. These criteria were established to ensure that participants could effectively engage with the study materials and provide accurate responses, thereby enhancing the validity and reliability of the data collected.

Measures

The primary measure utilized in this study was the Maladaptive Daydreaming Scale (MDS-16), a self-report instrument specifically designed to assess MD behaviors among individuals. Developed by Somer et al. (2016), the MDS-16 consists of 16 items (See Appendix G), it has emerged as a valuable tool in clinical and research settings for comprehensively understanding and quantifying the extent of MD tendencies within populations.

The MDS-16 prompts participants to reflect on and report the frequency and intensity of their daydreaming episodes. Unlike dichotomous assessments, this scale delves into the qualitative aspects of daydreaming, allowing for an understanding of normative daydreaming versus MD behaviors. Furthermore, the scale encompasses items exploring MD's emotional and functional dimensions. Participants are asked to rate the emotional content of their daydreams, shedding light on the affective expe-

riences associated with their daydreaming episodes. The scale examines the impact of daydreaming on various aspects of individuals' daily functioning, such as work, relationships, or academic pursuits.

The MDS-16's psychometric properties contribute to its credibility as a reliable and valid measure. It showed appropriate internal consistency and reliability with a Cronbach's alpha of 0.957. Through rigorous validation, the scale has demonstrated its ability to effectively discriminate between individuals with and without MD tendencies. Its reliability ensures consistency in measuring the construct over time and across different populations, facilitating robust comparisons and generalizability of findings.

Furthermore, the study employed the Adverse Childhood Experiences Scale (ACEs), a widely recognized and extensively utilized self-report measure designed to assess the prevalence and impact of various childhood adversities (See Appendix F). It showed appropriate internal consistency and reliability with a Cronbach's alpha of 0.70. Developed by Felitti et al. (1998), the ACEs scale encompasses ten distinct categories, each representing a specific form of adversity individuals may have encountered during their formative years. These categories include emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, as well as family-related adversities such as separation or divorce, witnessing domestic violence, having a drug or alcohol-addicted family member, having a mentally ill family member, and having an incarcerated family member.

The ACEs scale enables researchers and clinicians to evaluate and address the multifaceted nature of childhood adversities, providing valuable insights into the cumulative impact of early life stressors on individuals' well-being. The survey measures ACEs within families in adolescents and has internal consistency, validity, and criterion validity when used with relevant measures.

Procedures

The research conducted for this study was overseen and approved by the Colorado Multiple Institutional Review Board (COMIRB) at the University of Colorado—Denver | Anschutz Medical School. The study was assigned the COMIRB identification number 20-2870 to ensure compliance with ethical guidelines for human subject research.

Participants provided informed consent before completing online surveys, which lasted approximately 30 minutes each. Responses were anonymized throughout the study. Participants were informed that they would be entered into a raffle to win one of three $50 Amazon gift cards.

Using SPSS Statistics v29, 10 participants identified as MDers were randomly selected for follow-up interviews. They had previously consented to be contacted for further studies and were informed via email about the interview process and compensation, agreeing through a second consent form sent electronically.

Remote interviews lasting around 30 minutes each were conducted via Zoom, focusing on various aspects of daydreaming, guided by questions crafted based on prior research by Bigelsen et al. (2016) (See Appendix E). Participants' responses were transcribed verbatim for accurate documentation.

Quantitative data collected through Qualtrics and exported to SPSS underwent systematic analysis. Data were recorded according to specified scales, cleaned to remove incomplete cases, and descriptive statistics were computed to summarize critical characteristics. Regression and correlation analyses were performed to explore relationships between variables.

Qualitative data from interview recordings were analyzed using NVivo Release 1.5.1. The thematic analysis involved transcribing responses, identifying recurring themes, and categorizing them to facilitate exploration. Thematic nodes were created to capture key concepts, and visualization techniques aided in interpreting and presenting findings.

This systematic analysis approach provided an understanding of quantitative and qualitative data, illuminating the research phenomena under investigation.

Results

The analysis presents descriptive statistics and correlations for ACEs and total MD in Table 2. The variables examined include Verbal Abuse, Emotional Neglect, Physical Abuse, Mental Illness or Suicide, Separation or Divorce, Sexual Abuse, Witness Abuse, Drugs or Alcohol, Physical Neglect, Prison, and Total ACEs.

The mean (M) and standard deviation (SD) for each adverse childhood experience variable are as follows: Verbal Abuse (M = 0.59, SD = 0.49), Emotional Neglect (M = 0.37, SD = 0.48), Physical Abuse (M = 0.29, SD = 0.45), Mental Illness or Suicide (M = 0.47, SD = 0.50), Separation or Divorce (M = 0.18, SD = 0.39), Sexual Abuse (M = 0.33, SD = 0.47),

Witness Abuse (M = 0.23, SD = 0.42), Drugs or Alcohol (M = 0.22, SD = 0.41), Physical Neglect (M = 0.34, SD = 0.47), and Prison (M = 0.07, SD = 0.25).

Correlation coefficients between each adverse childhood experience variable and total MD are provided. Significant correlations ($p < .05$) are observed for Verbal Abuse (r = .32), Mental Illness or Suicide (r = .31), Sexual Abuse (r = .25), Witness Abuse (r = .15), Drugs or Alcohol (r = .16), Physical Neglect (r = .35), and Total ACEs (r = .33).

These results suggest that specific ACEs, such as Verbal Abuse, Mental Illness or Suicide, Sexual Abuse, Witness Abuse, Drugs or Alcohol, Physical Neglect, and the overall accumulation of adverse experiences, are positively correlated with higher levels of MD. Emotional Neglect, Physical Abuse, Separation or Divorce, and Prison do not show significant correlations with MD.

The study investigated the relationship between ACEs and total MD scores. The model included multiple independent variables, each with their respective unstandardized coefficients (B), standardized coefficients (β), standard errors, and 95% confidence intervals for B. See Table 3.

The analysis revealed several significant findings. The constant term had a coefficient of B = 34.148 (SE = 2.391), indicating the expected total MD score when all independent variables are zero, which was statistically significant (t = 14.281, $p < .001$, 95% CI [29.439, 38.858]). Verbal abuse significantly correlated with total MD scores (B = 7.93, SE = 3.64, β = 0.16, t = 2.18, p = .03, 95% CI [0.768, 15.084]). Mental illness or suicide also showed a significant positive association (B = 12.359, SE = 3.131, β = 0.247, t = 3.948, p < .001, 95% CI [6.193, 18.524]).

Separation or divorce exhibited a significant negative relationship with total MD scores (B = -13.076, SE = 4.238, β = -0.201, t = -3.086, p = .002, 95% CI [-21.423, -4.73]), indicating lower total MD scores in individuals experiencing separation or divorce.

Sexual abuse also showed a significant positive association (B = 8.401, SE = 3.396, β = 0.159, t = 2.473, p = .014, 95% CI [1.712, 15.09]). Physical neglect was positively associated with total MD scores (B = 11.836, SE = 3.29, β = 0.226, t = 3.598, $p < .001$, 95% CI [5.357, 18.315]).

Variables such as emotional neglect (B = -0.671, SE = 3.699, β = -0.013, t = -0.181, p = .856, 95% CI [-7.957, 6.614]), physical abuse (B = -1.076, SE = 3.713, β = -0.019, t = -0.29, p = .772, 95% CI [-8.389, 6.237]), witness abuse (B = 1.604, SE = 3.819, β = 0.027, t = 0.42, p = .675, 95% CI [-5.918, 9.126]), drugs or alcohol (B = 0.886, SE = 3.842, β = 0.015, t = 0.231, p = .818, 95% CI [-6.682, 8.453]), and prison (B = -8.919, SE = 5.821, β = -0.088, t = -1.532, p = .127, 95% CI [-20.384, 2.546]) did not show statistically significant associations with total MD scores.

These findings suggest that experiences of verbal abuse, mental illness or suicide, sexual abuse, and physical neglect are significant predictors of higher total MD scores. Separation or divorce is associated with lower total MD scores. Other variables examined did not show significant relationships with MD.

In the regression analysis examining the relationship between total ACEs and MD, the total ACEs yielded a significant effect on MD scores (B = 3.40, SE = 0.60, β = 0.33, t = 5.64, $p < .001^{**}$). The 95% confidence interval for the coefficient of total ACEs ranged from 2.21 to 4.59 (see Table 4). These findings convey the importance of total ACEs in predicting MD behaviors.

Case Studies

The case studies illustrate individuals' experiences with MD and its association with ACEs. Each case highlights the impact of childhood trauma on personality traits and coping mechanisms, such as excessive daydreaming. Common themes across the cases include emotional distress, difficulties forming relationships, and coping mechanisms involving vivid daydreaming.

In Case #1, a Ph.D. candidate's trauma history includes bullying and a physical assault by a peer. They cope with past trauma through daydreaming, which both alleviates stress and interferes with academic responsibilities. They state, "I often find myself lost in a world of my creation, where I am in control, and everything is perfect."

Similarly, Case #2 portrays an individual using MD to escape their painful reality, experiencing emotional exhaustion and social difficulties as a result. As a child, they experienced the trauma of witnessing domestic abuse and two car accidents, one of which left them permanently injured. The interviewee said, "Sometimes I feel like I am daydreaming more than other people. Several hours have passed before I realize how long I have been daydreaming."

Case #3 depicts an individual with elaborate daydreams, developed as a coping mechanism for child-

hood abuse and neglect, which persist into adulthood. They experienced an assault as a young child. They mention, "My daydreams are a refuge, a place where I can be myself without fear of judgment or harm."

In Case #4, an individual's childhood trauma leads to intense daydreaming, impairing their focus and relationships in adulthood. As a child, they were diagnosed with ADHD. They were bullied for having this diagnosis. Their peers often avoided them and made disparaging comments about their intellectual abilities. The participant says, "I often daydream to cope with negative emotions, stress, and anxiety."

Case #5 highlights how childhood adversity can fuel excessive daydreaming. The interviewee mentions that, as a child, they did not have adequate resources. Their childhood consisted of scarce food and clothing. This led to the interviewee needing help to focus on school and making friends. Thus, they were often alone. They say, "In my daydreams, I can rewrite my past and create a happier, more fulfilling narrative for myself."

Case #6 portrays a student overwhelmed by daydreaming, stemming from past abuse and isolation, affecting academic and social functioning. This case is a student who spends most of their time alone, like their childhood. As a child, they often moved to different locations, which made them unable to make and keep friends. They state, "I struggle to stay grounded in reality because my daydreams feel more vivid and exciting."

Case #7 illustrates how childhood emotional abuse and neglect contribute to dissociative daydreams and disconnection from reality. Parents and peers often insulted and disparaged them as a child. This caused them to have feelings of inadequacy. They mention, "I feel guilty for spending so much time daydreaming, but it helps me cope."

In Case #8, ACEs manifest in low self-esteem and avoidance behaviors, prompting the individual to seek solace in daydreams. As a child, this patient was bullied for having acne by parents and peers. They often utilized daydreaming to escape into a world where their appearance reflected their ideal. They say, "My daydreams often feature characters who protect and comfort me, fulfilling the roles I lacked in real life."

Case #9 portrays an individual using daydreaming as a coping mechanism for childhood trauma despite efforts to manage it through therapy and social engagement. This case experienced several assaults as a child. They have since sought therapy but still used MD as a coping mechanism. They mention, "I feel that my daydreaming is becoming an addiction, but I do not know how else to cope."

In Case #10, childhood sexual trauma leads to MD accompanied by hallucinations, highlighting the severe impact of ACEs on cognitive processes and mental health. They state: "Even though I know my daydreams are not real, they feel more comforting and real than anything in my life."

These cases collectively emphasize the complex interplay between childhood trauma, personality development, and maladaptive coping mechanisms like excessive daydreaming.

Future research should further explore how childhood trauma influences MD severity and associated symptoms, such as dissociation and hallucinations, to inform targeted interventions for individuals affected by both ACEs and MD.

Discussion

The findings from the present study shed light on the complex relationship between ACEs and MD. This discussion section will delve into the implications of the results obtained from the descriptive statistics, correlations, and regression analyses.

Descriptive statistics and correlations unveiled specific patterns in the relationship between individual ACEs and MD. Notably, significant positive correlations were observed between MD and several ACEs, including verbal abuse, mental illness or suicide, sexual abuse, witness abuse, drugs or alcohol, and physical neglect. These findings suggest that individuals who have experienced these adverse events during childhood may be more likely to engage in MD behaviors. On the contrary, emotional neglect, physical abuse, separation or divorce, and prison did not show significant correlations with MD. While this may seem unexpected, it underscores the multifaceted nature of the relationship between childhood experiences and MD, indicating that not all adverse experiences may contribute equally to the development of MD.

Further insights were gained through regression analyses, which aimed to identify the unique contribution of each ACE and the cumulative effect of total ACEs on MD. Results revealed significant associations between certain ACEs and MD scores. Specifically, verbal abuse, mental illness or suicide, sexual abuse, and physical neglect emerged as signif-

icant predictors of higher MD scores. Conversely, separation or divorce showed a negative association with MD scores, suggesting that individuals who have experienced these circumstances may exhibit lower levels of MD. These findings accentuate the differential impact of various ACEs on MD and emphasize the importance of considering the specific nature of adverse experiences in understanding MD behaviors.

Of particular significance is the role of total ACEs in predicting MD. The regression analysis demonstrated a robust positive relationship between total ACEs and MD scores, indicating that individuals with more ACEs are more likely to engage in MD. This highlights the cumulative effect of childhood adversities on MD and emphasizes the importance of addressing broader adverse experiences in interventions targeting MD tendencies.

The present study contributes to understanding the intricate interplay between childhood experiences and MD behaviors. By identifying specific ACEs and their cumulative impact on MD, these findings provide valuable insights for the development of targeted interventions aimed at mitigating MD tendencies and promoting mental well-being in individuals with a history of ACEs.

Future Directions

The present study offers valuable insights into the relationship between ACEs and MD, but further exploration is necessary to deepen our understanding of this complex phenomenon. Future research should focus on clarifying the mechanisms through which ACEs contribute to the development and persistence of MD. Specifically, studies could investigate how trauma-related factors, such as emotional regulation difficulties or dissociation, mediate the relationship between early adversity and MD tendencies.

Exploring potential interventions aimed at addressing trauma could be a fruitful avenue for further investigation. Trauma-informed therapeutic approaches, such as cognitive-behavioral therapy (CBT) or Eye Movement Desensitization and Reprocessing (EMDR), might offer promising avenues for mitigating the impact of ACEs on MD. Investigating whether such interventions reduce the severity or frequency of MD could provide critical information for clinicians working with individuals affected by both trauma and MD.

Additionally, research could benefit from examining the long-term mental and physical health consequences of MD in individuals with ACEs. Studies that track the trajectory of MD over time, focusing on trauma-related outcomes like depression, anxiety, or somatic symptoms, may shed light on how MD evolves and interacts with other mental health conditions. This could help inform early intervention strategies, particularly for individuals at high risk for maladaptive coping mechanisms due to their trauma history.

By building on the established link between ACEs and MD, future research can contribute to developing more effective interventions and preventative strategies, ultimately improving outcomes for individuals experiencing both childhood trauma and MD.

Limitations

This study has limitations that warrant acknowledgment. The data collection occurred during the COVID-19 pandemic, potentially introducing bias due to the unique circumstances surrounding this period. Factors such as increased stress levels, social isolation, and disruptions to daily routines may have influenced participants' experiences of maladaptive daydreaming and recollection of adverse childhood experiences. In addition, there is an overrepresentation of women in the sample. This gender disparity may skew the results and overlook potential differences in the relationship between maladaptive daydreaming and adverse childhood experiences among men. Reliance on self-report measures introduces the possibility of response bias and inaccuracies in participants' responses. Social desirability bias, memory recall errors, and interpretation discrepancies may affect the validity and reliability of the data collected. Lastly, the Adverse Childhood Experiences scale can vary widely from person to person. It is not a diagnostic tool to assess the biology of stress, yet it is a tool to evaluate potential outcomes due to adversity experienced in childhood.

Conclusion

The results of this study provide valuable insights into the complex relationship between ACEs and MD, with significant implications for clinical practice.

The findings underscore the importance of assessing childhood trauma history in individuals presenting with symptoms of MD. Clinicians should recognize that specific types of ACEs, such as verbal abuse, mental illness or suicide, sexual abuse, and physical neglect, are associated with higher levels of MD. Therefore, incorporating routine screening for ACEs into clinical assessments can help

identify individuals at heightened risk for MD and guide the development of tailored interventions.

The negative association observed between separation or divorce and MD scores suggests that individuals who have experienced these circumstances may exhibit lower levels of MD. Clinicians should explore the protective factors associated with separation or divorce, such as social support networks or adaptive coping strategies, to inform interventions aimed at reducing MD symptoms in this population.

The cumulative effect of total ACEs on MD emphasizes the importance of addressing broader adverse experiences in interventions targeting MD tendencies. Clinicians should adopt a holistic approach to treatment, addressing both the specific ACEs contributing to MD and the overall impact of childhood trauma on individuals' mental health. This may involve incorporating trauma-informed therapy modalities, such as cognitive-behavioral therapy (CBT) or eye movement desensitization and reprocessing (EMDR), to address underlying trauma and develop healthier coping mechanisms.

These findings highlight the need for greater awareness and understanding of the interplay between childhood trauma and MD in both clinical and lay settings. Educating clinicians and the public about the potential psychological consequences of ACEs, including their association with MD, can facilitate early intervention and support for affected individuals. By fostering a trauma-informed approach to mental health care and promoting resilience-building strategies, clinicians can empower individuals to overcome the adverse effects of childhood trauma and lead healthier, more fulfilling lives.

This study emphasizes the critical role of childhood experiences in shaping MD behaviors and elucidates the importance of trauma-informed care in clinical practice. By addressing the underlying trauma and providing targeted interventions, clinicians can help individuals affected by ACEs navigate their journey toward healing and recovery from MD.

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Declarations

Competing Interests. The author declares no competing interests related to this research.

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Ethical Approval. This study obtained approval from the Colorado Multiple Institutional Review Board (COMIRB) of the University of Colorado-Denver| Anschutz Medical School by the principles outlined in the Declaration of Helsinki.

Consent to Participate. Informed consent was obtained from all individual participants included in the study.

Consent to Publish. Prior informed consent was obtained from all individual participants included in the study.

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Table 1

Table of Demographic Data

Country	Total	Female	Male	Min. Age	Max. Age
United States	242	163	79	18	51
Canada	71	52	19	18	45
Mexico	29	29	0	20	31
South Africa	12	8	4	18	27
Egypt	10	5	5	25	48
Russia	11	9	2	18	19
Turkey	5	5	0	19	53
United Kingdom	4	3	1	18	37
Ukraine	4	2	0	28	45

Note: Nationality, Age, and Sex of Participants.

Table 2

Descriptive Statistics and Correlations for Adverse Childhood Experience and Total Maladaptive Daydreaming

Adverse Childhood Experience	*n*	*M*	*SD*	Total Maladaptive Daydreaming
Verbal Abuse	386	0.59	0.49	.32**
Emotional Neglect	386	0.37	0.48	.13*
Physical Abuse	386	0.29	0.45	0.0
Mental Illness or Suicide	386	0.47	0.50	.31**
Separation or Divorce	386	0.18	0.39	0.0
Sexual Abuse	386	0.33	0.47	.25**
Witness Abuse	386	0.23	0.42	.15*
Drugs or Alcohol	386	0.22	0.41	.16**
Physical Neglect	386	0.34	0.47	.35**
Prison	386	0.07	0.25	0.0
Total Adverse Childhood Experiences	386	3.06	2.41	.33**

Note. The table includes Descriptive Statistics and Correlations for Adverse Childhood Experiences and Total Maladaptive Daydreaming. The table includes mean (*M*), standard deviation (*SD*), and correlations.

*$p < .05$, **$p < .01$.

Table 3

Regression for Individual Adverse Childhood Experiences and Maladaptive Daydreaming

						95.0% CI	
Adverse Childhood Experience	*B*	*SE*	*β*	*t*	*p*	*LL*	*UL*
Verbal Abuse	7.93	3.64	0.16	2.18	0.03*	0.77	15.08
Emotional Neglect	-0.67	3.70	-0.01	-0.18	0.86	-7.96	6.61
Physical Abuse	-1.08	3.71	-0.02	-0.29	0.77	-8.39	6.24
Mental Illness or Suicide	12.36	3.13	0.25	3.95	<.001**	6.19	18.52
Separation or Divorce	-13.08	4.24	-0.20	-3.09	0.00**	-21.42	-4.73
Sexual Abuse	8.40	3.40	0.16	2.47	0.01*	1.71	15.09
Witness Abuse	1.60	3.82	0.03	0.42	0.68	-5.92	9.13
Drugs or Alcohol	0.89	3.84	0.02	0.23	0.82	-6.68	8.45
Physical Neglect	11.84	3.29	0.23	3.60	<.001**	5.36	18.32
Prison	-8.92	5.82	-0.09	-1.53	0.13	-20.38	2.55

Note. The table presents unstandardized coefficients (*B*), standardized coefficients (*β*), Lower Limit (*LL*), Upper Limit (*UL*), t-values, p-values, and 95% confidence intervals for each Adverse Childhood Experience in relation to Maladaptive Daydreaming.

*$p < .05$, **$p < .01$.

Table 4

Regression for Total Adverse Childhood Experiences and Maladaptive Daydreaming

						95% CI	
	B	*SE*	*β*	*t*	*p*	*LL*	*UL*
TOTAL ADVERSE CHILDHOOD EXPERIENCES	3.40	0.60	0.33	5.64	<.001**	2.21	4.59

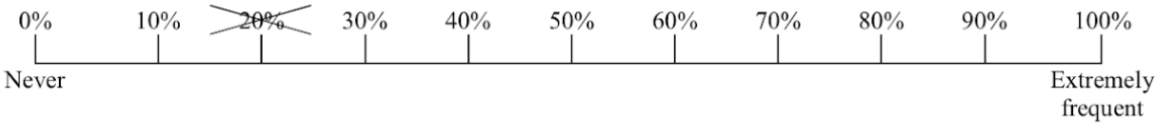
Note. The table presents unstandardized coefficients (*B*), standardized coefficients (*β*), Lower Limit (*LL*), Upper Limit (*UL*), t-values, p-values, and 95% confidence intervals for each Total Adverse Childhood Experiences in relation to Maladaptive Daydreaming.

*$p < .05$, **$p < .01$

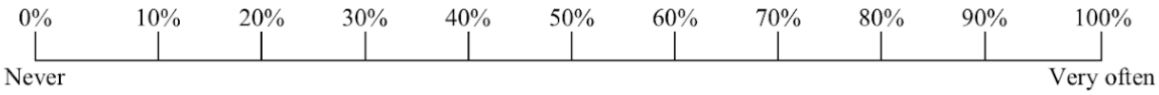
Appendix A

The 16-item Maladaptive Daydreaming Scale (MDS-16)
Eli Somer, Jayne Bigelsen, Jonathan Lehrfeld & Daniela Jopp

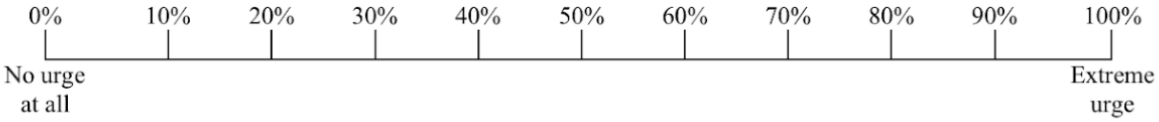
In answering the following questions, please refer to your daydreaming activities in the last month, if not otherwise specified. Choose the option that best fits your experience. For example: Some people get so caught up in their daydreaming that they forget where they are. How often do you forget where you are when you daydream? In this example, 20% is chosen.



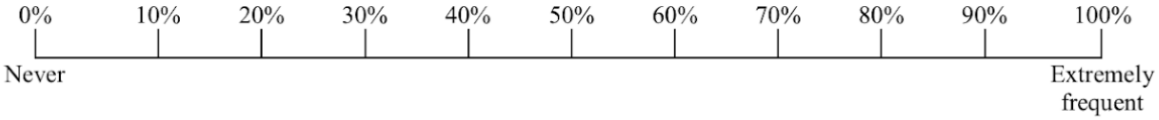
1. Some people notice that certain music can trigger their daydreaming. To what extent does music activate your daydreaming?



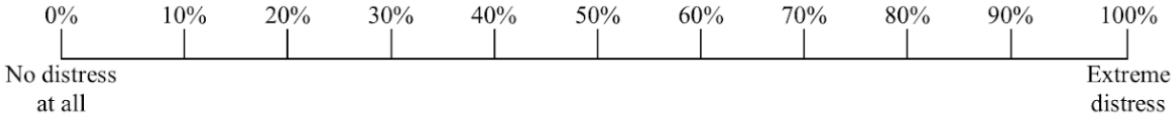
2. Some people feel a need to continue a daydream that was interrupted by a real world event at a later point. When a real world event has interrupted one of your daydreams, how strong was your need or urge to return to that daydream as soon as possible?



3. How often are your current daydreams accompanied by vocal noises or facial expressions (e.g. laughing, talking or mouthing the words)?

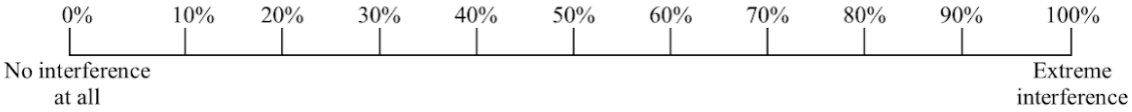


4. If you go through a period of time when you are not able to daydream as much as usual due to real world obligations, how distressed are you by your inability to find time to daydream?

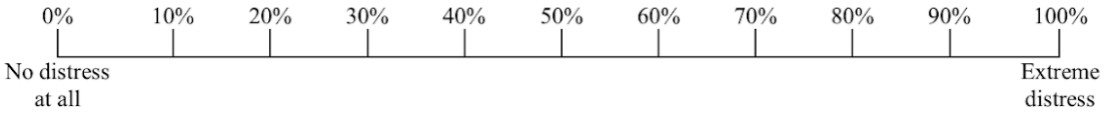


Appendix A (cont.)

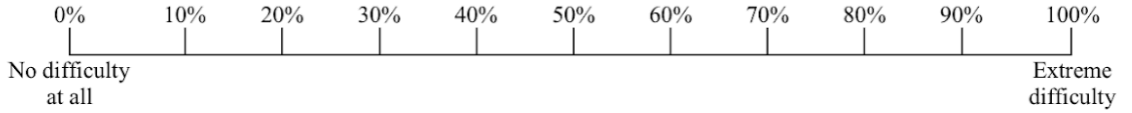
5. Some people have the experience of their daydreaming interfering with their daily chores or tasks. How much does your daydreaming interfere with your ability to get basic chores accomplished?



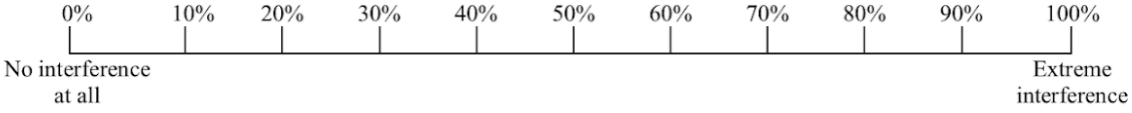
6. Some people feel distressed or concerned about the amount of time they spend daydreaming. How distressed do you currently feel about the amount of time you spend daydreaming?



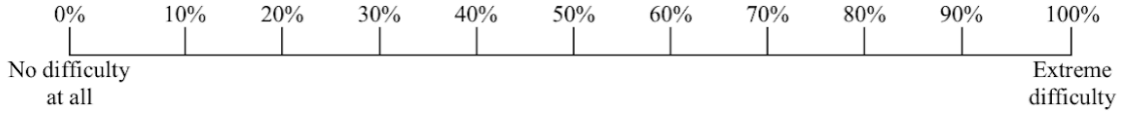
7. When you know you have had something important or challenging to pay attention to or finish, how difficult was it for you to stay on task and complete the goal without daydreaming?



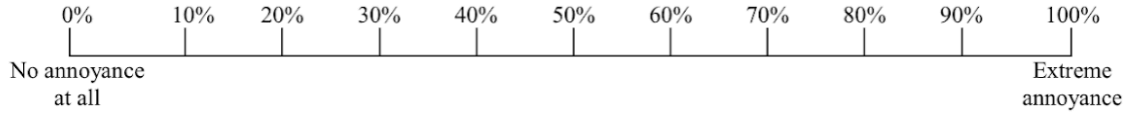
8. Some people have the experience of their daydreaming hindering the things that are most important to them. How much do you feel that your daydreaming activities interfere with achieving your overall life goals?



9. Some people experience difficulties in controlling or limiting their daydreaming. How difficult has it been for you to keep your daydreaming under control?

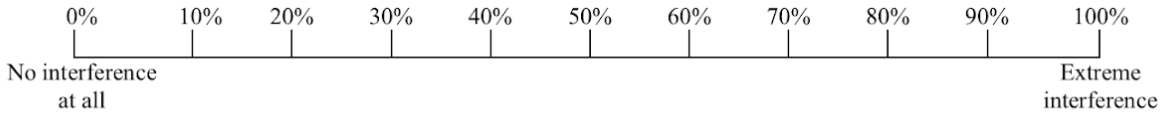


10. Some people feel annoyed when a real world event interrupts one of their daydreams. When the real world interrupts one of your daydreams, on average how annoyed do you feel?

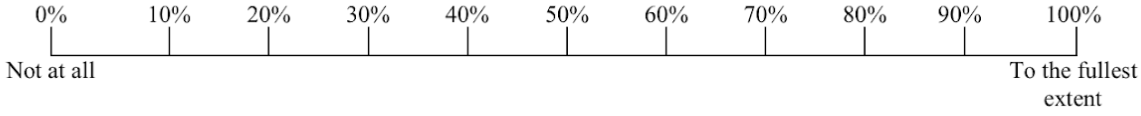


Appendix A (cont.)

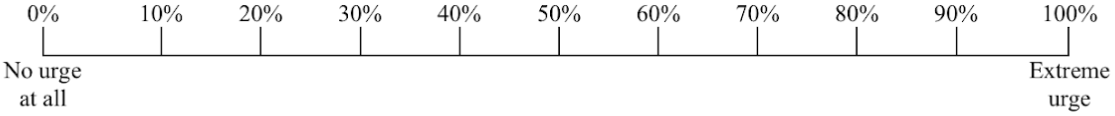
11. Some people have the experience of their daydreaming interfering with their academic/occupational success or personal achievements. How much does your daydreaming interfere with your academic/occupational success?



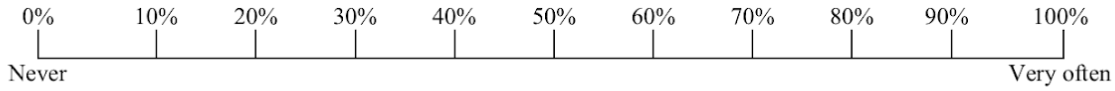
12. Some people would rather daydream than do most other things. To what extent would you rather daydream than engage with other people or participate in social activities or hobbies?



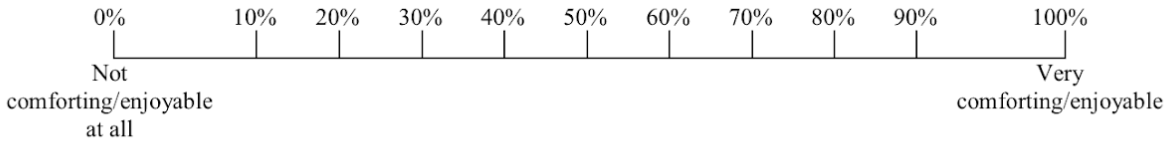
13. When you first wake up in the morning, how strong has your urge been to immediately start daydreaming?



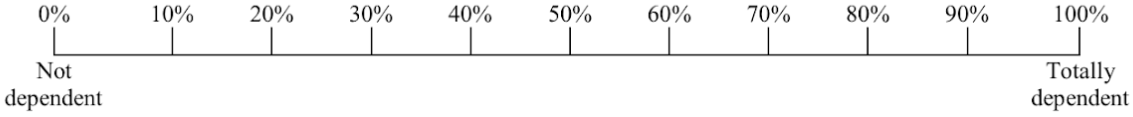
14. How often are your current daydreams accompanied by physical activity such as pacing, swinging or shaking your hands?



15. Some people love to daydream. While you are daydreaming, to what extent do you find it comforting and/or enjoyable?



16. Some people find it hard to maintain their daydreaming when they are not listening to music. To what extent is your daydreaming dependent on continued listening to music?



Appendix B

Adverse Childhood Experiences (ACEs)

Instructions: Below is a list of 10 categories of Adverse Childhood Experiences (ACEs). From the list below, please place a checkmark next to each ACE category that you experienced prior to your 18th birthday. Then, please add up the number of categories of ACEs you experienced and put the total number at the bottom.

1. Did you feel that you didn't have enough to eat, had to wear dirty clothes, or had no one to protect or take care of you?

2. Did you lose a parent through divorce, abandonment, death, or other reason?

3. Did you live with anyone who was depressed, mentally ill, or attempted suicide?

4. Did you live with anyone who had a problem with drinking or using drugs, including prescription drugs?

5. Did your parents or adults in your home ever hit, punch, beat, or threaten to harm each other?

6. Did you live with anyone who went to jail or prison?

7. Did a parent or adult in your home ever swear at you, insult you, or put you down?

8. Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?

9. Did you feel that no one in your family loved you or thought you were special?

10. Did you experience unwanted sexual contact (such as fondling or oral/anal/vaginal intercourse/penetration)?

Appendix C

Interview Questions

1. How much time do you spend daydreaming on a typical day?
2. How much time do you spend daydreaming on a high daydreaming day?
3. How much time do you spend daydreaming while in a moving vehicle?
4. How much time do you spend daydreaming when you are alone?
5. How much time do you spend daydreaming when you are in public?
6. How often do your daydreams include fictional characters or plots?
7. How often do your daydreams include people you do not personally know?
8. How often do you return to daydreams involving similar people or plots?
9. How often is the content of your daydreams positive or pleasurable?
10. How often is the content of your daydreams negative or disturbing?
11. How often are your current daydreams accompanied by physical activity?
12. How often were your childhood daydreams accompanied by physical activity?
13. How often are your current daydreams accompanied by vocal noises?
14. How often were your childhood daydreams accompanied by vocal noises?
15. How often do you confuse your daydreams with reality?
16. How difficult is it for you to keep your daydreaming under control?
17. How strong is the urge to return to a daydream that was interrupted?
18. How much influence do you have over the direction of your daydreams?
19. How strong is the urge to start daydreaming after waking up?
20. How difficult is it for you to stay on-task for something important while daydreaming?
21. How difficult is it for you to stay on-task for something boring while daydreaming?
22. How difficult is it for you to focus on what others are saying while you are daydreaming?
23. How annoyed do you feel when your daydreams are interrupted?
24. How distressed are you about the amount of time you spend daydreaming?
25. How distressed are you about your daydreaming in general?
26. How distressed are you by the content of your daydreams?
27. How ashamed are you to tell others about your daydreaming?
28. How distressed are you when you are unable to find time to daydream?
29. Would you rather daydream than be social or engage in hobbies?

Appendix C (cont.)

30. Does daydreaming add creativity to your life?
31. Do you find daydreaming comforting or enjoyable?
32. Does daydreaming help you deal with everyday life?
33. Is your life more interesting because of your daydreaming?
34. Does daydreaming interfere with your sleep?
35. Does daydreaming interfere with doing basic chores?
36. Does daydreaming interfere with your relationships?
37. Does daydreaming interfere with your academic or occupational goals?
38. Does daydreaming interfere with your life goals?