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📅 Published online: 26 Aug 2020.

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Childhood Trauma and Maladaptive Daydreaming: Fantasy Functions and Themes In A Multi-Country Sample

Eli Somer[a]*, Hisham M. Abu-Rayya[a,b]*, and Reut Brenner[a]

[a]School of Social Work, University of Haifa, Haifa, Israel; [b]School of Psychology and Public Health, La Trobe University, Melbourne, Australia

ABSTRACT

We analyzed responses of 539 adults who met an evidence-based criterion for probable maladaptive daydreaming (MD). Their reported childhood traumata were associated with the utilization of MD to distract from painful memories. A history of childhood physical and emotional neglect as well as emotional abuse was associated with daydreaming aimed to regulate emotional pain. Childhood exposure to physical and emotional abuse was associated with an increased likelihood of daydreaming about an idealized version of their original families. Themes of emotional suffering were associated with exposure to childhood emotional abuse. A range of morbid imageries and trauma-related reenacting behaviors featured in the fantasies of our respondents. Childhood emotional abuse was related to daydreaming about death, physical violence as a victim, being a captor, being rescued, and being a rescuer. Childhood sexual abuse was correlated with themes of sexual violence as a victim, being a captive, and being rescued. Childhood emotional neglect was linked with daydreaming about taking revenge, and a childhood history of physical abuse was associated with current fantasies about being captive. MD fantasy among adults exposed to childhood trauma may not only serve as mere coping mechanisms but potentially manifest a pathological preoccupation with unresolved childhood adversities.

Maladaptive daydreaming (MD) is a clinical condition characterized by a time consuming, compulsive mental habit involving vividly absorptive use of fanciful imagination. The intense fantasy activity in MD usually involves complex scenarios that impede important areas of functioning, such as learning, work, and relationships (Schimmenti, Somer et al., 2019). MD is related to Wilson and Barber's construct of Fantasy Proneness (Wilson & Barber, 1982; FP), a personality trait associated with high hypnotizability and characterized by vivid involvement not only in reading and play but also in mystical and religious experiences. Unlike MD, FP was purportedly linked with psychic capabilities and out of body experiences. While the constructs bear some

resemblance (Somer, Lehrfeld et al., 2016), they differ substantially, particularly because FP includes mystical and psychic abilities and its main measure has problematic psychometric qualities (Klinger et al., 2009; Sánchez-Bernardos et al., 2015).

MD is a disordered form of dissociative inner absorption characterized by daily fantasy activity that can last for hours, frequently consuming more than half of the individual's waking time (Bigelsen et al., 2016). Many individuals with MD report that listening to evocative music and performing stereotypical movements that facilitate their absorption in fantasy (Schimmenti, Somer et al., 2019). Regular daydreaming is a prevalent and widely researched mentation assumed to develop as an ordinary internalized form of play (Klinger, 1971; Singer, 1975). In contrast, MD is a clinical construct that has demonstrated robust validity, reliability, sensitivity, and specificity (e.g., Abu-Rayya et al., 2019) that is highly comorbid with several DSM-5 disorders (Somer, Suffer-Dudek et al., 2017). Furthermore, evidence suggests that this form of psychopathology is related to adverse childhood experiences (e.g., Abu-Rayya et al., 2019). While we are not aware of any empirical evidence on the causal role of childhood abuse in MD, we maintain that under continuous duress, children with innate dissociative capacities would activate their innate capabilities to create numbing, forgetting, identity alteration, or dissociative absorption experiences involving daydreaming about imaginary companions or alternate realities (Sanders, 1992; Somer, 2019).

The paper in which the term "maladaptive daydreaming" was first coined (Somer, 2002) was a small-scale qualitative study of six patients in treatment for psychological sequelae of childhood abuse and neglect. The presented clinical evidence intimated that not unlike other dissociative disorders, MD could be rooted in a coping mechanism developed among imaginative children under duress. Conversely, Bigelsen and Schupak (2011) presented evidence to show that childhood abuse and neglect were reported by only 27% of individuals with maladaptive daydreaming (MDers). Furthermore, Bigelsen et al. (2016) found no differences in histories of childhood trauma when self-identified MDers were compared to controls, implying that childhood abuse and neglect may not be a condition to the development of MD. Despite these inconsistencies, research on the role of MD in the aftermath of childhood trauma among some survivors continued to mount. For example, in light of countless anecdotal reports posted in MD cyber communities, Somer et al. (2016a) conducted in-depth interviews with individuals who were seeking online peer support and advice for MD. The interviewees described how and when childhood trauma and loneliness interacted with their inclination for absorptive daydreaming. Respondents explained how they scripted and directed their fantasy worlds to create soothing alternate realities. The same authors also conducted comprehensive interviews with 21 self-identified MDers to study their lived experiences. They discovered that the complex mental

scenarios in MD were often laced with emotionally compensatory themes involving competency, social recognition, and receiving support (Somer et al., 2016b). These qualitative findings were in line with the existing scant evidence on the role of MD in the lives of some survivors of childhood hardships.

To shed further light on the prevalence of MD among survivors of childhood trauma, E. Somer et al. (2019) showed that compared to a matched control group, recovering substance use patients with a history of childhood trauma tended to engage more intensely in MD. Furthermore, Abu-Rayya et al. (2019) demonstrated that survivors of child sexual abuse (CSA) with probable MD reported higher psychological distress, social phobia, and social isolation than survivors of CSA without suspected MD, suggesting that while MD might start as a coping strategy in the face of childhood adversities, later in life it becomes associated with exacerbated psychosocial problems.

Arguably, trauma is not a necessary condition in the etiology of pathological absorption. Immersive daydreaming is a highly rewarding experience in and of itself. However, when attachment needs are not met and the child is also traumatized, normal imaginative and wish-fulfillment play can attain the powers of both positive and negative reinforcement (the gratifying relief associated with the attenuation of distress). This process is conducive to the development of alternative inner worlds that may contain imaginary companions whose role is to distract, protect, empower, or soothe (Sanders, 1992; Somer, 2019).

Victims of trauma often experience intrusive recollections of their injurious experience (Ehlers, 2010). Moreover, many of them repetitively reenact the trauma, consciously, and voluntarily in their present lives (Herman, 1997). For example, a literature review concluded that two-thirds of those who were sexually victimized in childhood will be revictimized later on (Classen et al., 2005). The same paper found that multiple traumas, especially childhood physical abuse and sexual victimization, are also associated with higher revictimization risk. So, what is the meaning of this paradoxical behavior? The mechanism of revictimization among childhood trauma survivors was illuminated by Schimmenti's evidence-based "trauma factor" model (Schimmenti, 2018) in which he showed that traumatic injuries to childhood attachment relationships were linked with later traumatic events.

Decades ago, Van der Kolk and Greenberg (1985) claimed that severe child abuse can lead to ego deficits that render an individual susceptible to both reenactments and re-victimization. Chu (1998) understood this apparent addiction to trauma as an attempt to master it. However, this behavior seems to be a maladjusted manifestation of the traumatic injury rather than an effective coping mechanism. Indeed, evidence shows that reenactment is often associated with self-harm and risky behaviors (Noll et al., 2004). Another possible role of this voluntary exposure to aversive experiences could be

associated with the satisfaction involved with the apparent self-control of the trauma experience. In line with this idea, Van der Kolk and Van der Hart (1989) argued that trauma-related hyper-arousal activates opioid brain systems, a process associated with addiction. As scholars of MD, we wondered if traumatic reenactments could also play a role in the fantasies of MDers with a history of childhood trauma, and if so, what could their function be.

Members of the MD community have been in frequent communication with the first author about their experiences (Bershtling & Somer, 2018). Numerous correspondents who identified themselves as survivors of childhood abuse have shared that some of their self-scripted daydreaming scenes involved idealized family and partner relations, images of violence, and experienced pain. The design of the current study was inspired by the anecdotal and qualitative reports of reenactment fantasy themes and existing scientific evidence on the roles of reenactment and revictimization in the lives of trauma survivors.

The purpose of the present inquiry was to systematically investigate the relationship between a history of childhood trauma among individuals with MD and the content of their fantasies. While we assumed that some respondents would report the employment of MD as a means to regulate their trauma-related distress, we also assumed that others would engage in an apparent reenactment by voluntary immersion in aversive fantasy.

We hypothesized that MDers' heightened childhood trauma scores would be associated with increased odds to generate daydreaming fantasies:

H1: functioning as an emotion regulation of painful memories and a distraction from them;

H2: featuring an idealized version of their own family, an idealized different family, the life of another idealized family or, an idealized version of their current relationship;

H3: featuring emotional suffering and;

H4: featuring morbid imageries and trauma-related reenactment behaviors.

Method

Participants

A total of 630 adults completed our survey, 539 of whom were probable MDers[1] according to our employed maladaptive daydreaming measure, and thus comprised our actual sample. Participants in the actual sample aged 18 to 72 years

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[1]Probable MD = M ≥ 50 on the 16-item Maladaptive Daydreaming Scale (Somer, Soffer-Dudek et al., 2017).

old (*Mean* = 24.78, *SD* = 8.10) and they resided in 72 different countries (e.g., Australia, Canada, Egypt, France, Germany, Italy, Israel, Jordan, Japan, Lebanon, Malaysia, Mexico, The Netherlands, Norway, Philippines, Romania, Saudi Arabia, Singapore, Spain, Turkey, USA, UK). The most prevalent countries of residence in the sample were the USA (34.5%), UK (11.9%), and Canada (6.9%), reflecting the fact that we have sampled from an English-speaking population. The majority of the sample were female (77.6%), 19.1% identified as male, and 3.3% selected other gender categories. More than half of the sample (50.5%) had a bachelor's degree or were studying toward such a degree, 21.7% had a graduate degree or were studying toward such a degree, and 27.8% had high school education or less. Single participants composed 81.8% of the sample, the rest were married or cohabitants (15.9%), divorced (1.5%), separated (0.4%), or widowed (0.4%).

Study procedure

Ethics approval to conduct the study was granted by the University of Haifa (approval #2331). Participants were recruited mainly by (1) posting a call for participation in our study in online forums, blogs, and internet chat rooms devoted to maladaptive daydreaming; (2) sending electronic invitations directly to potential MDers who had taken part in previous maladaptive daydreaming studies and consented to be invited via e-mail to future studies; and (3) snowball sampling: asking actual participants to share the call with their peers and social networks. Participants' identities and that of the involved virtual groups were concealed to comply with the full confidentiality assured to them. Respondents completed an online self-report research questionnaire in English, which the authors created using Qualtrics.

Measures

Participants provided general demographic questions that sought information on their age, gender, education, marital status, and country of residence. They also responded to the following measures:

Maladaptive daydreaming

We measured maladaptive daydreaming with Somer, Lehrfeld et al.'s (2016) Maladaptive Daydreaming Scale. In the current study, we employed a later version of the original 14-item measure: the 16-item Maladaptive Daydreaming Scale (MDS-16), a measure that has demonstrated high internal consistency.

Confirmatory factor analyses on the Arabic (Abu-Rayya et al., 2019) and the Italian (Schimmenti, Sideli, et al., 2019) versions of the MDS-16 showed a good fit for a 2-factor solution representing the features of immersive

daydreaming and the maladaptation associated with it. An exploratory net-work analysis of the scale revealed three-item communities in the network: 1) kinesthesia and music-related, the unique features of immersive daydreaming and, two item communities representing maladaptation: 2) yearning, and 3) impairment (Greene et al., 2020). A sample item is "Some people feel dis-tressed or concerned about the amount of time they spend daydreaming. How distressed do you currently feel about the amount of time you spend day-dreaming?". Participants noted their responses on an 11-point Likert scale ranging from 0% to 100%, to indicate how recurrent the experience is. In the current study, the MDS-16 exhibited very good reliability, Cronbach's α = .83.

Daydreaming contents and functions

Research has shown that 77% of individuals with MD are also likely to suffer from ADHD-Inattentive type (Somer, Suffer-Dudek et al., 2017). Therefore, in this study, we decided to measure our dependent variable with a simple evaluation method that is quick to complete and allows the evaluation of the presence or absence of specific fantasy themes and functions with minimal burden on the respondents' attention resources. Daydreaming fantasies were, therefore, assessed with a list of 17 binary coded (Y/N) questions adopted from an extensive dreaming contents and functions questionnaire that the authors developed for a large-scale study from which we derived the current data. The items for the measure were based on the qualitative literature in the field (e.g., Somer et al., 2016b), the work of Wen Haliczer and Dixon-Gordon (2017), and an online focus group of three experts and three consumers in the field. Daydreaming contents and functions in the present study included two sets. One addressed the functions of daydreaming and was worded as follows: "Which of the following functions do your daydreaming fulfill?" Participants selected their responses from options including "Distraction from painful memories," "Distraction from an unpleasant current reality", or "Distraction from or regulation of painful feelings." The second set inquired about the themes in the participants' daydreaming and was worded as follows: "Which of the following themes characterizes your daydreams?" Participants selected from a list of options such as: "An idealized different family of origin," "An idealized version of a current relationship," "Taking revenge," "Being a captor" or "Sexual violence as a victim." Participants were allowed to select more than one option in each set of questions.

Childhood trauma

Childhood trauma was measured using the Childhood Trauma Questionnaire (CTQ; Fink et al., 1995). The CTQ is a self-report instrument covering 28 items ranked on a 5-point Likert scale (1 = "*never true*" to 5 = "*very often true*") to gauge the severity of *physical abuse* (e.g., "people in my family hit me so hard that it left me with bruises or marks"), *physical neglect* (e.g., "I did not

Table 1. Descriptive statistics and bivariate correlations among childhood trauma indicators and MD.

	2	3	4	5	6	Mean	SD	Cronbach's α
1. Physical abuse	.38*	.51*	.37*	.28*	.12*	1.53	.81	.79
2. Physical neglect		.54*	.57*	.28*	.11*	1.69	.68	.70
3. Emotional abuse			.66*	.26*	.18*	2.79	1.12	.84
4. Emotional neglect				.18*	.12*	2.99	1.02	.89
5. Sexual abuse					.05	1.54	.96	.93
6. MD						66.91	15.24	.83

$*p < .01$

have enough to eat"), *emotional abuse* (e.g., 'people in my family called me things like stupid, lazy or ugly), *emotional neglect* (e.g., "I felt loved", a reverse coded item), and *sexual abuse* (e.g., "someone molested me"). All of these childhood trauma components demonstrated very sound reliability in the present study except for the physical neglect measure, which had an acceptable α of .70, as shown in Table 1.

Results

Data analysis strategy

Before presenting our results, we would like to note a couple of considerations that guided our analyses. First, before examining the relationships between respondents' daydreaming fantasies (emotional suffering, distraction/regulation, compensation, morbid emotions, and reenactment behaviors) and their reported exposure to childhood trauma, a series of multivariate logistic regression models positing each daydreaming fantasy (Y/N binary-coded) as the dependent variable and respondents' sociodemographic characteristics (age, gender, education, and marital status) as the independent variables were carried out. The outcome of this set of analyses revealed null relationships between sociodemographic variables and daydreaming fantasies. Thus, sociodemographic variables were excluded from subsequent analyses to prevent statistical constraints in further logistics regression models. Second, since we were interested to explore the associations between each daydreaming fantasy and all sorts of childhood trauma (physical abuse, physical neglect, emotional abuse, emotional neglect, and sexual abuse), we selected to run a series of univariate logistic regression models where a particular childhood trauma component acted as the independent variable. Inserting all of the childhood trauma components in one model would otherwise conceal nuanced associations due to the inter-correlations between the trauma components themselves, as shown in Table 1. The data presented in Table 1 shows also significant but small correlations between MD and all forms of childhood trauma except sexual abuse.

H1: Trauma and distraction from and regulation of painful memories

About 69% of the MDers reported that their daydreaming fantasies distracted them from painful memories and 87% indicated that their fantasies helped regulate their painful emotions. As shown in Table 2, analyses revealed that distraction from painful memories through immersive daydreaming was consistently associated with each of the various forms of childhood trauma. As implicated by ORs, a one-point increase in each of the other childhood trauma components was associated with a 44%–102% increase in the utilization of MD fantasies for the distraction from painful memories. Besides, the regulation of emotional pain through MD fantasies was significantly associated with childhood exposure to physical neglect, emotional abuse, and emotional neglect. As ORs in Table 2 show, a one-point increase on these scales was associated with 41%–71% increase in the activation of daydreaming themes aimed to regulate painful emotions. Thus, our findings support the first hypothesis across multiple indicators of childhood trauma.

H2: Trauma and fantasies of an idealized family/relationship

Our sample of MDers indicated a range of themes that best described their daydreaming fantasy contents. Specifically, about 42% fantasized an idealized version of their own family, 45% imagined an idealized different family, about 37% fantasized the life of another idealized family, and about 29% fancied an idealized version of their current relationship.

Univariate logistic regression analyses revealed that MDers' fantasies about an idealized version of their own family was associated with exposure to childhood physical abuse, $\chi^2_{(1)}$ = 9.70, B = .35, SE = .11, p = .002, OR = 1.41 [95%CI = 1.14–1.76], and emotional abuse, $\chi^2_{(1)}$ = 10.72, B = .26, SE = .08, p = .001, OR = 1.30 [95%CI = 1.11–1.52]. An increase of 41% and 30% in the odds of involving an idealized version of their own family of origin was associated with a one-point increase on the childhood physical and emotional abuse scales, respectively.

Table 2. Univariate logistic regression associations between distraction from/regulation of painful memories and childhood trauma indicators.

	$\chi^2_{(1)}$	B	SE	p	OR	95%CI
Distraction from Painful Memories						
Physical abuse[a]	13.90	.59	.16	<.001	1.80	1.32–2.46
Physical neglect	18.20	.70	.16	<.001	2.02	1.46–2.78
Emotional abuse	27.31	.48	.09	<.001	1.61	1.35–1.93
Emotional neglect	14.30	.36	.09	<.001	1.44	1.19–1.73
Sexual abuse[a]	15.71	.54	.14	<.001	1.71	1.31–2.23
Regulation of Painful Memories						
Physical neglect	5.55	.54	.23	.018	1.71	1.10–2.66
Emotional abuse	7.89	.35	.12	.005	1.41	1.11–1.80
Emotional neglect	9.48	.41	.13	.002	1.50	1.16–1.94

B = regression coefficient; SE = standard error; p = p-value; OR = Odds Ration; CI = Confidence Interval.
[a]Physical and sexual abuse were not associated with regulation of pain, and thus excluded from the second part of the table.

Table 3. Univariate logistic regression associations between family/relationship themes and childhood trauma indicatorsa.

	$\chi^2_{(1)}$	B	SE	p	OR	95%CI
Idealized different family of origin						
Physical abuse	7.17	.30	.11	.007	1.35	1.08–1.67
Physical neglect	12.84	.48	.13	<.001	1.61	1.24–2.09
Emotional abuse	14.61	.31	.08	<.001	1.36	1.16–1.59
Emotional neglect	8.69	.26	.09	.003	1.29	1.09–1.54
Life of another idealized family						
Physical neglect	5.77	.32	.13	.016	1.37	1.06–1.78
Emotional abuse	6.18	.20	.08	.013	1.22	1.04–1.44
Emotional neglect	7.38	.24	.09	.007	1.28	1.07–1.52
Idealized version of current relationship						
Physical abuse	9.97	.35	.11	.002	1.43	1.14–1.78
Physical neglect	14.17	.52	.14	>.001	1.68	1.28–2.21
Emotional abuse	8.30	.25	.13	.004	1.28	1.08–1.52
Sexual abuse	10.51	.30	.09	.001	1.36	1.13–1.63

B = regression coefficient; SE = standard error; p = p-value; OR = Odds Ration; CI = Confidence Interval.
aOnly childhood trauma components that showed a statistically significant relationship with family/relationship themes are reported in the table.

As shown in Table 3, analyses revealed that daydreaming about an idealized different family of origin was consistently associated with each form of childhood trauma, except for sexual abuse. As the ORs imply, a one-point increase in physical abuse, physical neglect, emotional abuse, and emotional neglect was associated with a 29%–61% increase in daydreaming themes focusing on an idealized different family of origin. Additionally, 22%–37% increase in the chances of daydreaming about the life of another idealized family, as shown in Table 3, was associated with a one-point increase on the physical neglect, emotional abuse, and emotional neglect scales. Daydreaming about an idealized version of our respondents' current relationships was associated with exposure to childhood physical abuse, physical neglect, emotional abuse, and sexual abuse, with chances of fantasies about this theme increasing by 28%–68% for a one-point increase on each of these abuse scales. Therefore, our findings confirmed the second hypothesis across multiple indicators of trauma.

H3: Trauma and fantasies of emotional suffering

About 66% of MDers reported that their daydreaming fantasies fulfill a need for fantasy immersion in emotional suffering. Univariate logistic regression analyses revealed that the need to experience emotional suffering was specifically associated with exposure to childhood emotional abuse, $\chi^2_{(1)}$ = 5.78, B = .20, SE = .084, p = .016, OR = 1.22 [95%CI = 1.04–1.44]. A one-point elevation on the childhood emotional abuse scale was associated with a 22% increase in the odds of evoking fantasies of emotional suffering. Thus, our findings lend partial support to the third hypothesis, particularly in the area of emotional abuse.

H4: Trauma and fantasies involving morbid imageries and trauma-related reenactment behaviors

A range of dark themes and trauma-related reenactment behaviors were involved in MDers fantasies. As shown in Figure 1, daydreaming about death, violence (either as perpetrator or victim), revenge, and being captive, rescued or rescuer were most notable.

A series of univariate logistic regression analyses indicated that emotional abuse and sexual abuse had positive notable links with a variety of adverse fantasies. Specifically, an increase in emotional abuse scores was associated with an increase in the odds that MDers would fantasize about death, $\chi^2_{(1)} = 8.05$, $B = .23$, $SE = .08$, $p = .005$, $OR = 1.26$ [95%CI = 1.07–1.45], physical violence as a victim, $\chi^2_{(1)} = 5.01$, $B = .18$, $SE = .08$, $p = .025$, $OR = 1.19$ [95% CI = 1.02–1.39], being a captor, $\chi^2_{(1)} = 5.11$, $B = .18$, $SE = .08$, $p = .024$, $OR = 1.20$ [95%CI = 1.02–1.39], being rescued, $\chi^2_{(1)} = 7.08$, $B = .21$, $SE = .08$, $p = .008$, $OR = 1.23$ [95%CI = 1.06–1.44], and being a rescuer, $\chi^2_{(1)} = 4.49$, $B = .17$, $SE = .08$, $p = .034$, $OR = 1.18$ [95%CI = 1.01–1.38].

An increase in sexual abuse scores was associated with an increase in the odds of fantasizing about sexual violence as a victim, $\chi^2_{(1)} = 10.45$, $B = .30$, $SE = .09$, $p = .001$, $OR = 1.35$ [95%CI = 1.12–1.61], being a captive, $\chi^2_{(1)} = 8.31$,
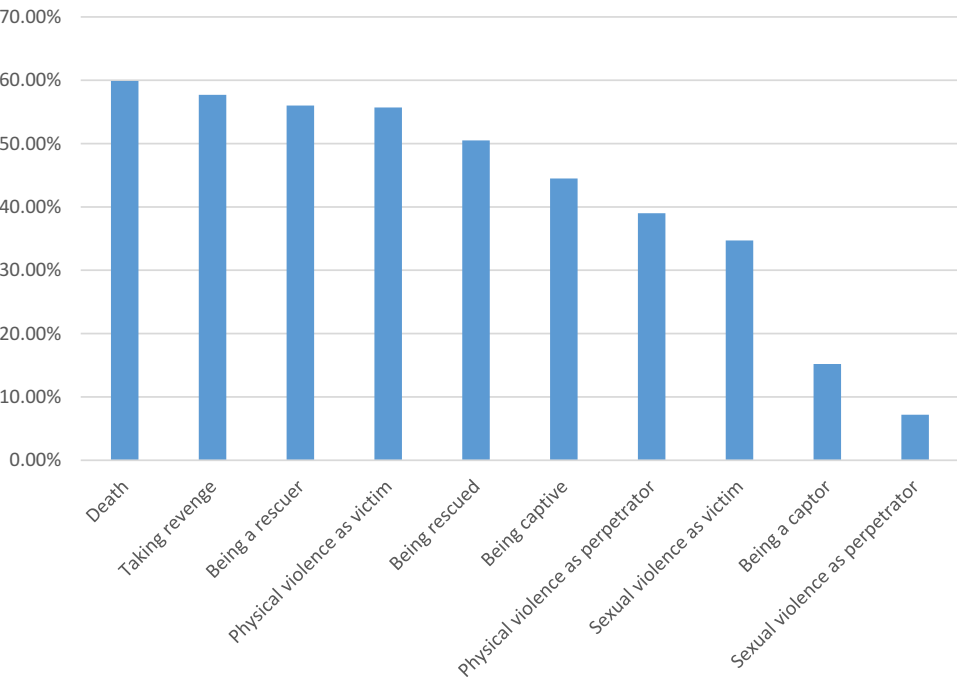

Figure 1. Prevalence of morbid imageries and trauma-related reenactment behaviors among MDers.

$B = .27$, $SE = .10$, $p = .004$, $OR = 1.32$ [95%CI = 1.09–1.59], and being rescued, $\chi^2_{(1)} = 8.31$, $B = .27$, $SE = .10$, $p = .004$, $OR = 1.32$ [95%CI = 1.09–1.59].

Lastly, emotional neglect scores were associated with increased odds of fantasizing about taking revenge, $\chi^2_{(1)} = 4.07$, $B = .18$, $SE = .09$, $p = .04$, $OR = 1.19$ [95%CI = 1.01–1.41], and physical abuse scores were associated with increased odds of engaging in fantasy about being captive, $\chi^2_{(1)} = 4.60$, $B = .24$, $SE = .11$, $p = .03$, $OR = 1.26$ [95%CI = 1.02–1.57].

Thus, these results lend support to the fourth hypothesis, particularly in the areas of emotional abuse and sexual abuse.

Discussion

We found that all forms of childhood trauma except sexual abuse are positively related to MD. However, the correlations were small, explaining 1.2%-3.2% of the MD variance and rendering support to the evidence that childhood trauma is reported by some MDers (Bigelsen & Schupak, 2011).

Our data also show that all the examined forms of childhood trauma were associated with the utilization of immersive fantasy to distract MDers from painful memories. Moreover, our findings indicate that adults with MD who report a history of physical and emotional neglect as well as emotional abuse in childhood seem to employ MD to regulate their emotional pain. While supporting the first hypothesis, these results highlighted the potential adaptive role of absorptive daydreaming in the lives of MDers with a childhood history of trauma. Butler (2006) regarded dissociative absorption as a distinct non-pathological form of dissociation. In a later paper, she proposed that having the predisposition to experience normative dissociation, or in other words, owning the capacity for dissociation, appears to be a necessary but not sufficient condition for pathological dissociation and that such adversities as an insecure attachment and childhood abuse in the context of this high dissociative capacity precipitate the shift toward more pathological forms of dissociation (Butler, 2011). Our findings suggest that individuals who have been endowed with the innate ability for absorptive daydreaming, probably have been utilizing this capacity to distract from and regulate their distress arising from childhood abuses by creating comforting inner experiences.

We also showed that exposure to childhood physical and emotional abuse was associated with later fantasies about idealized versions of the family of origin. Physical and emotional neglect and emotional abuse were all related to current daydreaming involving the life of another idealized family. Physical abuse and neglect and emotional and sexual abuse were associated with fantasies about an idealized version of the individuals' current relationships. These findings confirm our second hypothesis across multiple forms of trauma. While the first hypothesis addressed a post-abusive function of MD, the second confirmed hypothesis posited that MDers with a history of childhood abuse will soothe

their unmet needs for safe family and trusted relationships by creating compensatory fantasy worlds that fulfil such needs. Somer (2019) has previously suggested that "the interaction of chronic childhood adversity and the innate ability to dissociate into a more bearable experience encourages some children to immerse themselves more intensely in normal imaginative play" (p. 16) that sometimes involves interactions with imaginary friends (Taylor et al., 2004). We speculate that imaginary companions could form idealized families and relationships and become a source of comfort among MDers for missed developmental opportunities associated with childhood abuse and neglect.

The need to experience emotional suffering in fantasy was specifically associated with exposure to childhood emotional abuse. Thus, this finding lends partial support to our third hypothesis. Why survivors of painful childhood experiences would voluntarily engage in emotionally painful fantasies is a matter of speculation. Howell (1996) suggested that masochism is a post-traumatic dissociative defense mechanism and argued that the masochists actually have dissociated rage and aggression and often perceive themselves as aggressors, possibly parental introjects (Hailparn & Hailparm, 2004) that mimic the revered caretakers' behaviors. MDers with a history of childhood emotional abuse have presumably developed under the constant danger of assault on their self-esteem and sense of security. Self-generation of emotional suffering among MDers may represent an attempt to gain some mastery. A self-directed attack may aim at preempting the perpetrators, so they will not have to take action (McWilliams, 1994), and may also strive to protect the self from the unbearable anticipation of the inevitable emotional injury. Further research is needed to empirically support psychoanalytic conceptualizations on the roles of masochistic behavior and parent introjects in the fantasy lives of survivors of childhood abuse.

A range of morbid imageries and trauma-related reenacting behaviors were involved in the fantasies of our respondents. Childhood emotional abuse was associated with later daydreaming about death, physical violence as a victim, being a captor, being rescued, and being a rescuer. Childhood sexual abuse was related to fantasizing about sexual violence as a victim, being a captive, and being rescued. Childhood emotional neglect was correlated with current fantasizing about taking revenge. Childhood physical abuse was related to current fantasizing about being captive. The data were in line with our fourth hypothesis and were particularly pertinent to MDers with a childhood history of emotional or sexual abuse.

Ongoing entrapment in painful childhood memories during adulthood probably drives some MDers to utilize escape fantasies as sources of consolation, hope, control, self-directed aggression, and revenge. Our data suggest that reenactment themes are associated with a history of childhood abuse among MDers. We assume that reenacting past trauma under controlled conditions, be it in behavior or mentation, can provide an opportunity for survivors to process their torment, regain some sense of mastery, and ultimately integrate the trauma.

By repeating the scripted reenactments, survivors may slowly gain better control and eventual desensitization. Nevertheless, MD is psychopathological. It is associated with distress, comorbidity, and maladaptation, thus, manifesting a defense mechanism gone awry. Our respondents reported clinical levels of MD symptoms, suggesting the inefficacy of their fantasy reenactments. This observation is in line with accumulated clinical experience positing that actively reenacting adverse childhood circumstances is often reflective of dysfunctional defensive postures rather than adaptive processes (Levy, 1998), and this proclivity is also demonstrated among MDers. Furthermore, individuals with a history of childhood abuse often suffer from self-hatred and a belief they deserve to suffer because of their inherent badness (Kluft, 1990). Therefore, MDers with similar histories may repeat some of their trauma-related themes to perpetuate a deserved punishment.

Conclusions

This study set out to examine the relationships between reported childhood abuse, daydreaming themes, and perceived functions among individuals with an elevated level of MD symptoms. Our findings showed that emotion regulation of painful memories and a distraction from them emerged as important functions related to the experience of childhood adversities. Individual MDers with childhood adversities tend to employ fantasies that feature an idealized version of their own family, an idealized different family, the life of another idealized family, or an idealized version of their current relationship. Various forms of childhood abuse and neglect were associated with morbid imageries and trauma-related reenactment behaviors, and emotional abuse was associated with fantasies that feature emotional suffering. We believe these findings are important in the context of the scarce literature on the fantasy life of people with childhood adversities and the paucity of systematic research on the functions and themes of fantasy among MDers with such histories.

Several important limitations need to be considered. First, our findings are based on a sizable sample of MDers from a wide range of countries. Nonetheless, our sample was neither random nor representative, thus generalizability is limited. Second, this study employed a cross-sectional methodology to test childhood histories and current daydreaming fantasies among MDers. Since employing a longitudinal design was not realistic to address this question, the causality of the reported relationships cannot be ascertained. Third, the strengths of the reported relationships in the study, as measured by odds ratios, were moderate to small. Fourth, the present study is also limited by its self-report nature, particularly on childhood trauma. Future cross-sectional research in this field would benefit if corroborating evidence to self-reported trauma could be obtained. This would allow a more rigorous investigation of daydreaming functions and themes across forms of childhood adversity.

Furthermore, another source of uncertainty is the possibility of measurement errors of the MD themes and functions due to binary coding which might have reduced statistical power.

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