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The ripple effect: a cross-sectional study on the repercussions of child maltreatment among Egyptian college students



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Abstract

Background: Child maltreatment is a global risk factor for mental health. The burden of child maltreatment is heaviest in low- and lower-middle-income countries, where most of the world's children live. This study sheds light on the occurrence of child maltreatment within Egypt's upper social class stratum, countering a long-held belief that violence against children only occurs within low-income households. In addition, the study examines the association between exposure to child maltreatment and psychopathology, life satisfaction and resilience among emerging adults in Egypt, and whether emotion dysregulation mediates these relationships. Participants were 171 college students who were selected based on a series of questionnaires about exposure to child abuse and neglect, psychopathology, satisfaction with life, and resilience, as well as difficulties in emotion regulation.

Results: A rate of 48% of exposure to at least one type of child maltreatment before the age of 18 was found. Experiencing antipathy and/or sexual abuse was most strongly associated with PTSD and depression, while exposure only to antipathy contributed to lower life satisfaction and resilience. Emotion dysregulation mediated the associations between antipathy and PTSD, depression, life satisfaction, and resilience, as well as the associations between sexual abuse and PTSD and depression.

Conclusions: The present study hints at a comparably high rate of exposure to child maltreatment among the higher social class stratum, producing data that highlights the association between child maltreatment and mental health in emerging adults in Egypt. These findings emphasize that child maltreatment transcends social class, and that attempting to address the issue requires changing social and cultural belief systems that bolster violent behavior.

Keywords: Arab, Child maltreatment, Egypt, LMICs, Psychopathology, Satisfaction with life, Resilience

“The true character of a society is revealed in how it treats its children.” — Nelson Mandela at the launch of the Blue Train, Worcester Station, Worcester, South Africa, 27 September 1997 [1]

Background

In February 2019, a five-minute video of a mother forcing her 13-year-old son to climb the wall of their building in order to reach the balcony went viral on social

media. The boy had misplaced the key to their apartment. While he screamed in fear, his mother continued to beat and push him, pulling him back only when he was near falling (Daily News Egypt). In October of the same year, a 4-year-old girl died in hospital after being tortured by her grandmother and raped by her uncle (Ahram Online). These incidents, among many others, shed light on the social problem of violence against children in Egypt, a lower-middle income (LMIC) Middle Eastern country that sits in the north of the African continent.

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In this article, I first shed light on the cultural context that increases the prevalence of child maltreatment (CM) in Egypt. Second, I summarize the existing research on CM and its consequences in adulthood. I then justify the importance of studying emerging adulthood and choice of college students as a sample. Finally, I offer an overview of the present study, along with its findings, limitations and implications.

Shedding light on the Egyptian culture

The Arab culture is characterized by its collectivist nature, which gives precedence to the welfare of the group (i.e., family) over the welfare of the individual [2]. The family is the basic unit of social structure in traditional and contemporary Arab society [3]. The family structure is subject to a set of traditional norms, including protecting the family's privacy and protecting its reputation amongst the community, which may prevent family members from contacting welfare and health authorities for assistance [4]. Children are consequently raised to be obedient to certain authority figures, particularly those in the family unit. Furthermore, disciplining one's child by resorting to physical abuse is generally accepted in Egyptian society and because the reputation of the family is prioritized over individual good, children are expected to make sacrifices for the benefit of the family [3]. I argue that collectivism contributes to how individuals and communities justify forms of violence, especially that shame is fueled by the urge to avoid exposure.

Contextualizing child maltreatment

The WHO's 2014 global status report on violence prevention shows that 36% of Egyptian children were emotionally abused, 23% have been physically abused, 18% of girls and 8% of boys have been sexually abused, and 16% have experienced neglect. Although Egyptian law prohibits the emotional, physical, and sexual exploitation of children [5], exploitation remains prevalent. According to Elghossain et al. [6], Egypt had the highest rate of CM in the Arab region (91%). The deep-rooted cultural model of parental discipline, which includes physically chastising and yelling, legitimizes the use of violence against children [7]. According to the latest nationally representative population survey in Egypt, 93% of children between ages 1 and 14 were exposed to violent disciplinary practices at some point during their childhood. Among the sample ($N = 19,474$; age range = 15–49), 63% reported "calling the child dumb, lazy or a similar term" at least once during the month before the interview. As for physical punishment, 41.2% reported using severe physical punishment against their children, specifically "hitting or slapping the child on the face, head or ears," and 11.1% reported "hitting the child over and over and as hard as one can" at least once during the

month preceding the interview (Ministry of Health and Population, [8]).

Repercussions of child maltreatment in adulthood

The WHO defines CM as the abuse and neglect of individuals under the age of 18. This includes all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligence, and exploitation—commercially or otherwise—in the context of a relationship of responsibility, trust, or power that results in actual or potential harm to the child's health, survival, development, or dignity. Four types of CM are generally recognized: emotional abuse, physical abuse, sexual abuse, and neglect. CM disrupts the caregiver-child bond that is necessary for children's emotional development [9]. As maltreated children grow up, forming and maintaining bonds could become challenging; they are likely to deal with future emotional connections in a manner that mimics the style of attachment they grew up to learn through their relationship with those who maltreated them, increasing their chance of developing symptoms of psychopathology. Among the deleterious effects in adulthood, a history of antipathy (i.e., emotional abuse), physical and sexual abuse, and/or neglect is linked to risks of post-traumatic stress disorder (PTSD) [10], depression [11], lower satisfaction with life [12], and lower resilience [13]. One possible link between CM, PTSD, depression, life satisfaction, and resilience is difficulty in emotion regulation [14].

CM leaves children feeling terrorized [10], which potentially impairs the integration of the CM experience into memory, resulting in PTSD [15]. Although all forms of CM are associated with PTSD, effects are stronger for antipathy and sexual abuse [10]. The link between sexual abuse and PTSD has long been documented, having been demonstrated in a 30-year longitudinal study by Fergusson et al. [16]. Relating to negative evaluation by an attachment figure, antipathy is potent in causing emotion dysregulation and negative emotions, including shame, which can explain the link between antipathy and PTSD [17]. Antipathy negatively affects children's attachment style, which shapes individuals' internal working models [9]. Such negative working models, in turn, anticipate depression [11]. Sexual abuse disrupts children's sense of trust, which is also associated with depression [18] as well as their world view [19]. The current investigation suggests that sexual abuse is the strongest correlate to depression when compared to other forms of CM [10]. To summarize, both antipathy and sexual abuse, in comparison to physical abuse and neglect, are more strongly associated with PTSD and depression.

CM also affects adult individuals' subjective life satisfaction [20]. A 19-year longitudinal study by Mosley-

Johnson et al. [12] found a negative association between CM and life satisfaction. Fortunately, some who are maltreated as children overcome the adverse consequences and grow up to be resilient [13]. In this context, resilience is the potential to thrive despite having experienced severe stressors. It is therefore best studied longitudinally (e.g., [20]). Individuals with a history of CM tend to be less resilient to stressors later in life. Some traits and skills that contribute to resilience, such as psychological hardiness, ego resilience, and coping efficacy have been measured by self-reporting [21].

Furthermore, CM interferes with the development of the six strategies of emotion regulation abilities, namely acceptance, avoidance, problem solving, reappraisal, rumination, and suppression [22]. Emotion regulation is, in turn, associated with mental health [14]. On the one hand, emotion dysregulation predicts PTSD through thought suppression, avoidance and rumination, and it predicts depression through the inability to regulate affect [23]. Experiencing higher negative emotions due to low reappraisal and rumination [11], in turn, predicts lower life satisfaction [24]. On the other hand, resilient individuals use two emotion regulation strategies [25]: attentional control, to shift focus from negative experiences, and reappraisal, to focus on positive emotions. Since emotion regulation is instrumental for developing resilience—and because it is predicted by CM —[23] emotion regulation is shown to mediate the association between CM and resilience.

The right and duty to produce data about child maltreatment

The international community recognizes violence against children as a public health and human rights problem, both globally and within the 22 countries of the Arab League. Simultaneously, given the political events in the Middle East, Arabs have increasingly become the focus of media attention [26]. Thus, there is a growing need for accurate information regarding Arab culture in order to better aid assessment and treatment of CM in Arab countries. Egypt is currently undergoing political and economic turmoil due to the regime's implementation of a number of policies which led to unprecedented inflation rates that have reached 23.2% in 2016 compared to 9% in 2011 [27]—that directly impacts social and familial dynamics—which might lead to increased levels of violence, including community violence, and possibly CM. It has been established in the existing literature that economic hardships are associated with adverse changes in the parenting of children, including maternal child abuse and neglect [28]. In this regard, Le Minh et al. [29] argue that high rates of CM in LMICs exist in tandem with high rates of community violence. Evidence that violence increases the chances of

developing short- and long-term negative mental health issues has led to calls for greater attention to violence as a determinant of mental health, especially among young people [6].

Most research on CM in Egypt focuses on risk factors [30], external symptoms [31], and socioeconomic predictors [32]. Other studies that investigate the problem of CM focus on data from emergency or clinical departments, criminal records or autopsy reports (e.g., [33]). To the best of our knowledge, only three studies examined CM among Egyptian college students ($N = 450$; 52% females [34]; $N = 1270$; 100% females [35]; $N = 963$; 64% females [36]). While one of the three studies only reported prevalence of sexual abuse [34], Mansour et al. [36] and Mahrous et al. [35] found that CM correlated with negative outcomes using instruments that were only designed for these studies. The lack of use of existing and validated instruments hinders the comparison of findings with other studies. In addition, none of the three studies investigated the relations of interest here, namely the correlation of CM with PTSD, depression, life satisfaction, and resilience, nor did they examine the mediating role of emotion dysregulation. Thus, the existing literature leaves important questions regarding CM unanswered. Most importantly, most research done on CM in Egypt is based on samples from lower socioeconomic statuses (SES) (Mohammad & Samak, 2017), including the three aforementioned studies. While findings refer to low parental education as a positive predictor of CM [37], our research shows that CM transcends social class [38]. Therefore, this study contributes to the body of limited information on CM in emerging adults from middle and higher SES in Egypt. Emerging adulthood is a developmental stage marked by greater independence, exploration, and uncertainty [39]. It is understandably a period of vulnerability for psychopathology. There is a large body of research establishing CM as a risk factor for multiple negative outcomes in both adolescence and adulthood. Yet studies have relatively neglected emerging adulthood [38].

The present study

The present study aimed to replicate findings about associations between CM and PTSD, depression, life satisfaction, and resilience, as well as investigate the mediating role of emotion regulation in a sociocultural context not yet well studied: well-educated emerging adults in Egypt. This study was motivated by two objectives: (1) contributing to the literature on CM in Arab countries and (2) advancing the study of CM in higher SES in Egypt. I hypothesized a positive association between CM and psychopathology (H1) and a negative association between CM, life satisfaction and resilience (H3). Specifically, I hypothesized that antipathy and

sexual abuse contributed most to both associations (H2, H4). Second, I aimed at elucidating the mechanisms by which the forms of CM exerted their relative influence on psychopathology and life satisfaction. Specifically, I hypothesized that emotion dysregulation mediates the relationship between each CM form and psychopathology (H5), as well as life satisfaction and resilience (H6).

Methods

Participants

Students from various disciplines were recruited at a private English-speaking university in Cairo, using two strategies: (1) presenting the study inside classrooms (81.3%) and (2) advertising on Facebook groups used by students (18.7%). Recruitment materials explained that the study investigates how individuals' experiences with their families affected them. Using Cochran's formula, the sample size was set to 150 participants. Out of 505 students approached in 35 classes, 45.9% ($N = 232$) expressed interest in the study, of whom 79.3% ($N = 184$) participated, a rate that is consistent with similar studies [40]. Thirteen students were excluded because they fulfilled at least one of the three exclusion criteria: (1) risk for psychosis, (2) substance abuse, and (3) suicidality. The final sample included 171 emerging adults ($M = 20.46$ years, $SD = 1.87$; 74.9% females).

Procedures

Data was collected between April and November 2019. Participants were informed that if they expressed suicidal ideations, they would be referred to the student counseling center. Written informed consent was obtained. In a single 2-h session in an office on campus, self-report instruments were administered. The study was divided into three sections: (1) screening for CM and assessment of PTSD and resilience, (2) narrative interviews reported elsewhere [41], and (3) assessment of depression and emotion regulation. In compensation for their time, participants received vouchers for on-campus outlets worth 100 Egyptian pounds. A referral booklet that included contact information for mental health professionals in different geographical areas in Cairo was offered to all participants. Exclusion criteria were predetermined in order to avoid causing further distress to participants.

Measures

Exclusion criteria

The Prodromal Questionnaire-16 (PQ-16 [42];) includes 16 yes/no items about psychotic symptoms (cut-off = 9). The Drug Abuse Screening Test (DAST-10 [43];) and the Alcohol Use Disorders Identification Test (AUDIT [44];) each includes 10 items (cut-off = 6 and 16,

respectively). The Columbia-Suicide Severity Rating Scale (C-SSRS [45];) includes six yes/no items (cut-off = 2).

Child maltreatment

The Childhood Experience of Care and Abuse Questionnaire (CECA.Q [46];) is a retrospective assessment of antipathy, physical and sexual abuse, and neglect. Test-retest reliability over 2 years was reported for antipathy ($r = .71$), physical abuse ($r = .51$), sexual abuse ($r = .61$), and neglect ($r = .53-.84$). The cut-off scores recommended by the authors were used to categorize participants who were exposed to maltreatment [46]. Antipathy and neglect were each assessed using eight items, filled in separately for each parental figure. Physical abuse was probed with one question. If answered affirmatively, participants answered four additional questions (frequency of hitting, the type of implement used, resulting injuries, and whether the perpetrator was out of control). Sexual abuse was probed with three questions, e.g., "When you were a child or teenager, did you ever have any unwanted sexual experiences?" If at least one of them was answered affirmatively, seven more questions were asked (e.g., frequency of sexual abuse, relationship with the perpetrator, characteristics of experience).

Symptoms of PTSD and depression, life satisfaction, resilience, and emotion dysregulation

PTSD The Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5 [47];) includes 20 items assessing symptoms on a five-point scale. The questions are asked on a Likert scale from 0 (not at all) to 4 (extremely). There was a high internal consistency with Cronbach's $\alpha = .96$. Participants were asked to answer the scale in reference to the most stressful event in their family before age 18.

Depression The revised version of the Center for Epidemiological Studies Depression Scale (CESD-R [48];) includes 20 items assessing symptoms on a five-point scale. The questions are asked on a Likert scale from 1 (rarely or none of the time) to 4 (most or all of the time). The CES-D has been found to have adequate internal consistency (current study $\alpha = .74$) and test-retest reliability [49].

Life satisfaction The Satisfaction with Life Scale (SWLS [50];) includes five items assessing the overall quality of life on a seven-point scale. All items are scored by a seven-point Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree). According to Diener and co-workers, the SWLS has been demonstrated to have strong internal consistency and moderate temporal

stability with Cronbach's alpha of 0.87 and 2-month test-retest reliability of 0.82.

Resilience The Connor-Davidson Resilience Scale (CD-RISC-10 [51];) includes 10 items assessing tolerance of negative affect, ability to focus under pressure, and an action-oriented approach to problem solving on a four-point scale. Respondents rate items on a scale from 0 (not true at all) to 4 (true nearly all the time). A preliminary study of the psychometric properties of the CD-RISC in general population and patient samples supported its internal consistency, test-retest reliability, and convergent and divergent validity [21].

Emotion dysregulation The short version of the Difficulties in Emotion Regulation Scale (DERS-SF [52];) includes 18 items assessing emotion regulation strategies on a five-point scale from 0 (almost never) to 4 (almost always). The DERS demonstrated adequate factorial validity as well as internal consistency (.76–.87 and .85 to .94, respectively) [14].

Data analysis plan All data met assumptions of linearity, multicollinearity, homoscedasticity, and normally distributed errors. Two outliers were winsorized. Socio-demographic variables that correlated with the dependent variables were controlled in all tests of hypotheses: age, SES, and prior therapy experience. The hypotheses that CM is positively associated to psychopathology (H1) and negatively to life satisfaction and resilience (H3), and that antipathy and sexual abuse are the strongest correlates to the dependent variables (H2, H4) were tested in four multiple regressions, one for each dependent variable: PTSD, depression, and satisfaction with life and resilience. The control variables—age, SES, and therapy experience—were entered in step 1 and the continuous variables for the four CM (antipathy, physical abuse, sexual abuse, and neglect) forms were entered in step 2. The hypotheses that emotion dysregulation mediated the association between CM and psychopathology (H5) and life satisfaction and resilience (H6) were tested separately for each of the four dependent variables by using PROCESS Macro V3.5 [53] to determine whether emotion dysregulation predicted the dependent variables, and whether it reduced or eliminated the predictive value of CM forms. Control variables were included in the mediation analysis.

Results

Descriptive statistics

Sample characteristics and correlations between variables are reported for descriptive purposes (see Tables 1 and 2). With regard to social class, 18.1% (*n* = 31) of the participants classified themselves socially as being

Table 1 Sample demographic characteristics

	Control <i>n</i> (%)	Child maltreatment <i>n</i> (%)	Full sample <i>n</i> (%)
Age group			
18–21	63 (70.8)	59 (72.0)	122 (71.3)
22–25	26 (29.2)	23 (28.0)	49 (28.7)
Gender			
Female	70 (78.7)	58 (70.7)	128 (74.9)
Male	19 (21.3)	24 (29.3)	43 (25.1)
Mother's highest education degree			
None	2 (2.2)	1 (1.2)	1 (.6)
High school	68 (76.4)	3 (3.7)	5 (2.9)
Undergraduate	19 (21.3)	56 (68.3)	124 (72.5)
Postgraduate		22 (26.8)	41 (24.0)
Father's highest education degree			
High school	2 (2.2)	1 (1.2)	3 (1.8)
Undergraduate	52 (58.4)	50 (61.0)	102 (59.6)
Postgraduate	35 (39.3)	31 (37.8)	66 (38.6)
Mother's employment status			
Unemployed	49 (55.1)	46 (56.1)	95 (55.6)
Employed	40 (44.9)	36 (43.9)	76 (44.4)
Father's employment status			
Unemployed	15 (16.9)	10 (12.2)	25 (14.6)
Employed	74 (83.1)	72 (87.8)	146 (85.4)

N = 171 (*n* = 89 for the control group and *n* = 82 for the child maltreatment group)

middle class as middle social class, 59.6% (*n* = 102) upper middle class, or upper class (*n* = 38; 22.2%). Almost half of the sample (48%; *n* = 89) had experienced some form of CM before the age of 18. Of these 89 participants, 30.4% (*n* = 52) experienced physical abuse, 21.1% (*n* = 36) experienced sexual abuse, 14.6% (*n* = 25) experienced antipathy, and 9.4% (*n* = 15) experienced neglect during childhood. It is important to note that these types of CM are not mutually exclusive; 54.9% (*n* = 45) of those who have been exposed to CM experienced only one type of abuse or neglect, while 34.1% (*n* = 28) experienced two types, and 11% (*n* = 9) experienced three types of CM. With regard to perpetrators of CM, 48% (*n* = 12) of those exposed to antipathy indicated that it was by their father, 36% (*n* = 9) by their mother, and 16% (*n* = 4) by both parents. Moreover, 40.4% (*n* = 21) reported being physically abused by their father, 36.5% (*n* = 19) by their mother, and 23% (*n* = 12) by both. Of those having experienced neglect, it was reported that 75% (*n* = 12) experienced it from the father, 12.5% (*n* = 2) from the mother, and 12.5% (*n* = 2) from both parents. Finally, sexual abuse was reported to have been experienced by someone known to the person among 55.6% (*n* = 20) of participants, by a household

Table 2 Correlations for study variables

	1	2	3	4	5	6	7	8
1. Antipathy	—							
2. PA	.49**	—						
3. SA	.33**	.18*	—					
4. Neglect	.72**	.23**	.22**	—				
5. PTSD	.43**	.17*	.31**	.29**	—			
6. Depression	.39**	.22**	.31**	.29**	.56**	—		
7. SWL	-.34**	-.19*	-.11	-.18*	-.25**	-.30**	—	
8. Resilience	-.26**	-.22**	-.00	-.10	-.10	-.27**	.40**	—
9. ED	.51**	.33**	.29**	.33**	.54**	.59**	-.36**	-.35**

PA physical abuse, SA sexual abuse, SWLS satisfaction with life, ED emotion dysregulation. All variables are continuous
 ** $p < .001$, * $p < .05$

member or a relative by 41.7% ($n = 15$), and by a stranger among 2.8% ($n = 1$). It is important to note, however, that none of those who experienced sexual abuse reported that either parent was the perpetrator.

CM correlates with psychopathology in emerging adulthood

H1, that CM correlates with psychopathology, was confirmed for both PTSD ($F(4, 163) = 10.18, p < .001, R^2 = .24$) and depression ($F(4, 163) = 8.87, p < .001, R^2 = .24$), as was hypothesis 2, that CM correlates with both satisfaction with life ($F(4, 163) = 5.61, p < .001, R^2 = .16$) and resilience ($F(4, 163) = 4.40, p < .001, R^2 = .17$).

Antipathy and sexual abuse correlate the strongest with psychopathology, life satisfaction and resilience in emerging adulthood

Hypotheses 3 and 4—which predicted that amongst the four forms of CM, antipathy and sexual abuse have the strongest correlation to the outcome variables—were partially supported. Only antipathy, and not sexual abuse nor any other CM form, correlated with life satisfaction and resilience (see Table 3).

Emotion dysregulation

Hypotheses 5 and 6—which expected emotion dysregulation to mediate the association between CM and the outcome variables. Both the prediction of the mediator by antipathy and sexual abuse was significant, as were the correlations between emotion regulation and the four dependent variables (see Table 2). Antipathy correlated with all four variables, while sexual abuse only correlated with two (see Table 3). Therefore, six mediation models were run, four with antipathy as predictors and two with sexual abuse (see Table 4). For antipathy, emotion dysregulation reduced the predictive value of antipathy for PTSD and satisfaction with life (partial mediations), while eliminating those for depression and resilience (full mediations). For sexual abuse, emotion

dysregulation reduced the predictive value of sexual abuse for PTSD (partial mediation) and eliminated it for depression (full mediation).

Discussion

The overarching goal of this study was to examine the association between CM and psychopathology, life satisfaction and resilience among well-educated emerging adults. I hypothesized that antipathy and sexual abuse are the strongest correlates to psychopathology, life satisfaction, and resilience and that emotion dysregulation mediates these associations. The results partially supported the hypotheses. Antipathy and sexual abuse were associated with both PTSD and depression. However, only antipathy correlated negatively with resilience and life satisfaction. Emotion dysregulation mediated all these associations.

The present study reveals that 48% of the sample ($N = 82$) was exposed to at least one type of CM. Our findings are consistent with the literature on the effects of CM in adulthood. What the present study adds to this body of knowledge is an illustration of the impact of CM in emerging adults in Egypt, and that violence, and specifically parental violence against children, cuts through social and economic lines.

In earlier studies on Egypt, Mansour et al. [36] reported rates of 2.1% for antipathy, 3% for physical abuse, 5% for sexual abuse, and 7% for neglect among college students ($N = 963$; 63.9% females) using an Arabic version of the Childhood Trauma Questionnaire (CTQ [54];). Using a different translated version of the CTQ, Mahrous et al. [35] reported rates of 40.26% for antipathy, 40.28% for physical abuse, 33.05% for sexual abuse, and 49.73% for neglect among a sample of female college students ($N = 1270$). Aboul-Hagag and Hamed [34] reported a rate of 29.8% for sexual abuse among a sample of college students ($N = 450$; 51.8% females) using the Finkelhor’s [55] questionnaire.

Table 3 Multiple regressions with covariates and CM predicting PTSD, depressive symptoms, resilience, and life satisfaction

Outcome variables	Regression models					
	Step 1			Step 2		
	B	SE	95% CI	B	SE	95% CI
PTSD						
Constant	47.219*	15.730	[17.737, 78.322]	26.618	– .338	[– 2.637, 56.203]
Age	– 1.470*	.669	[– 2.789, – .171]	– .985	.597	[– 2.227, .227]
SES	– 1.794	3.204	[– 8.051, 4.384]	– 2.630	3.128	[– 9.042, 3.503]
Therapy	6.102*	– .034	[.868, 11.109]	3.424	2.427	[– 1.216, 7.957]
Antipathy				.569**	.142	[.284, .836]
PA				– .457	.551	[– 1.521, .597]
SA				1.605*	.665	[.395, 3.030]
Neglect				– .123	.182	[.485, .288]
R ²	.055			.244		
ΔR ²	.055			.189		
Depression						
Constant	56.227**	11.811	[32.455, 80.742]	41.482*	12.339	[17.252, 63.964]
Age	– 1.586*	.547	[– 2.673, – .596]	– 1.303*	.534	[– 2.426, – .253]
SES	– 5.464	2.962	[– 11.464, .361]	– 5.856*	2.853	[– 11.384, – .251]
Therapy	4.224	2.262	[– .050, 8.504]	1.803	2.173	[– 2.363, 5.896]
Antipathy				.295*	.137	[.031, .578]
PA				.286	– .024	[– .693, 1.273]
SA				1.661*	.356	[.356, 3.084]
Neglect				.040	.173	[– .284, .405]
R ²	.076			.241		
ΔR ²	.076			.165		
Satisfaction with life						
Constant	9.426	5.620	[– 1.185, 19.843]	15.172*	5.928	[4.013, 25.653]
Age	.535*	.231	[.069, 1.014]	.389	.226	[– .071, .880]
SES	2.000	1.451	[– .828, 4.933]	2.214	1.354	[– .467, 4.928]
Therapy	– .983	.952	[– 2.802, .933]	– .478	.906	[– 2.266, 1.390]
Antipathy				– .214**	.058	[– .336, – .104]
PA				– .016	.196	[– .407, .361]
SA				.011	.263	[– .540, .520]
Neglect				.114	.078	[– .038, .278]
R ²	.047			.163		
ΔR ²	.047			.115		
Resilience						
Constant	14.160*	6.038	[2.798, 26.487]	17.735*	5.875	[6.765, 29.219]
Age	.514*	.257	[– .020, 1.010]	.419	.245	[– .080, .880]
SES	2.619	1.448	[– .238, 5.447]	2.733	1.371	[– .093, 5.517]
Therapy	– 2.193*	.972	[– 4.233, – .236]	– 2.022*	.956	[– 3.948, – .134]
Antipathy				– .184*	.072	[– .319, – .049]
PA				– .234	– .214	[– .667, .162]
SA				.356	.278	[– .207, .848]
Neglect				.145	.087	[– .028, .329]

Table 3 Multiple regressions with covariates and CM predicting PTSD, depressive symptoms, resilience, and life satisfaction (Continued)

Outcome variables	Regression models					
	Step 1			Step 2		
	B	SE	95% CI	B	SE	95% CI
R ²	.076			.166		
ΔR ²	.076			.090		

PA physical abuse, SA sexual abuse. The confidence interval for the coefficient is a BCa Bootstrapped CI based on 5000 samples

Among survivors of CM, our results showed increased PTSD and depression in emerging adulthood, lower life satisfaction and lower resilience. The present study confirms evidence that CM increases the risk for psychopathology. Consistent with other studies (e.g., [10]), antipathy and sexual abuse had the strongest association to PTSD, in comparison to physical abuse and neglect. As hypothesized, antipathy was strongly associated with lower life satisfaction, paralleling recent findings in China, a similarly collectivistic culture [24], as well as those in western countries [12]. These findings confirm that CM is an important environmental factor that leads to lower life satisfaction in adulthood in middle to high socioeconomic classes in Egypt. Moreover, it corroborates findings that CM, especially parental antipathy, reduces resilience in adulthood [24].

Sexual abuse did not correlate with resilience or satisfaction with life, contradicting earlier findings, which could be understood through examining two main factors. First, in the current sample, sexual abuse was not found to be perpetrated by any of the parents, but rather by other persons of trust (55.6% by someone known to the family, 41.7% by a household member or a relative, and 2.9% by a stranger). While these findings call for an exploration as to why no sexual abuse by a parent was reported, survivors might have benefited from individual and environmental protective factors that moderated their experience, possibly lessening its long-term effect. In a meta-analysis by Ventus et al. [56], intrafamilial sexual abuse was associated with an earlier age of onset,

which results in more serious sequelae due to an expectedly longer duration of abuse. When sexual abuse is inflicted by a trusted adult, it may be hard for children to view the perpetrator in a negative light, thus pushing them to blame themselves for the event [57]. Second, 65.7% of those who were sexually abused (*n* = 23) experienced it more than once. The remaining 34.3% were abused only once. Prolonged maltreatment has been studied in comparison to singular events in childhood [13]. Conversely, cumulative trauma over the course of a lifetime correlated with higher levels of psychological distress [58].

Therefore, the finding of a significantly negative association between antipathy and life satisfaction and/or resilience concurs with the literature. As for sexual abuse, the results reflect the fact that many of those exposed to this form of CM only experienced it once, which might have not affected their satisfaction with life and resilience as much as cumulative stress during childhood would (i.e., antipathy). Prolonged stress has been shown to be the strongest contributor to symptom complexity, which is often marked by difficulties with emotion regulation [58]. Longitudinal studies show that emotion dysregulation is a connecting factor between CM, PTSD, and depression [10, 59]. The study highlights this correlation, confirming earlier results [23].

This study has two main limitations. First, the design of the study does not exclude a retrospective bias in its assessment of CM. In addition, it does not allow us to draw conclusions about causal relations between CM and the outcomes. Second, the findings have limited generalizability as the selected sample is nonrepresentative of the Egyptian population. Further research can help us to better understand cultural norms regarding discipline, especially physical punishment and abuse. Conducting research among a more representative sample of the general population would allow for a better understanding of the repercussions of CM in emerging adulthood across Egypt as a whole. A potential inquiry for future research is to examine people’s knowledge, attitudes and reporting behavior of CM in order to address deep-rooted

Table 4 Indirect effects in mediation analysis models

Outcome variable	Independent variable	B	SE	95% CI
PTSD	Antipathy	.22	.04	[.14, .30]
	Sexual abuse	.14	.04	[.08, .22]
Depression	Antipathy	.26	.05	[.17, .35]
	Sexual abuse	.16	.04	[.08, .23]
Satisfaction with life	Antipathy	-.12	.05	[-.21, -.02]
Resilience	Antipathy	-.14	.05	[-.23, -.05]

Completely standardized indirect effects are shown. The confidence interval for the indirect effect is a BCa Bootstrapped CI based on 1000 sample

cultural beliefs that contribute to the prevalence of violence against children.

Conclusions

The findings of this study are useful for stakeholders in Egypt, specifically families as well as policymakers working in the field of childcare, particularly as it challenges the assumption that CM is only comorbid among families in lower SES. A comprehensive understanding of the negative impacts of CM on individuals throughout their lifespan can provide support for awareness and advocacy initiatives on the indelible effects of violence against children across all social strata. While the findings are consistent with evidence from Western countries with regard to the particularly detrimental effect of antipathy and sexual abuse, this study has important implications for practitioners as it shows that CM has diverse and complex sequelae that extend over time in the Egyptian culture. Without undermining the negative consequences of physical abuse in adulthood, this data highlights the importance of examining the characteristics of childhood physical abuse, its perception among youngsters, as well as the potential ramifications it has, whether on the individual (e.g., other forms of psychopathology) or family (e.g., domestic violence) or on society (e.g., social violence) as a whole. These findings are essential to parents, health planners, and policy makers in proposing strategies to help prevent mental health problems that can persist into adulthood. Finally, the study's findings call for a stronger enforcement of the existing children's rights and protection laws in place.

Abbreviations

CM: Child maltreatment; LMIC: Lower-middle income country; PTSD: Posttraumatic stress disorder; WHO: World Health Organization

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Author's contributions

MF is the sole author of this work. The author read and approved the final manuscript.

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Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

The study was approved by the American University in Cairo's Institutional Review Board (#2018-2019-109).

Consent for publication

The study has received consent for publication from the Institutional Review Board as well as from all participants who signed the consent form stating this purpose.

Competing interests

The author declares that she has no competing interests.

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