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# Childhood emotional maltreatment predicts social well-being beyond individual well-being: a daily diary study

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## ABSTRACT

Childhood emotional maltreatment can have a profound impact on well-being. However, past research has largely focused on individual well-being, making it noteworthy to examine whether childhood emotional maltreatment predicts social well-being beyond individual well-being. To fill this gap, the current study employed a daily diary approach to investigate the independent effect of childhood emotional maltreatment on social well-being, and examined gratitude's mediating role in the relationship. A total of 483 participants ( $M_{age} = 19.30$ ,  $SD_{age} = 2.12$ ) completed daily surveys for 14 consecutive days. The results of the multilevel regression analysis indicated that childhood emotional maltreatment negatively and independently predicted social well-being, even after controlling for individual well-being, other forms of maltreatment (i.e. physical and sexual maltreatment), age and gender. Moreover, multilevel mediation analysis elucidated that gratitude served as a mediating factor in this association. In summary, these findings underscore the adverse effects of emotional maltreatment on social well-being and suggest gratitude as a possible intervention focus.

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## KEYWORDS

Childhood emotional maltreatment; social well-being; gratitude; daily diary study

## 1. Introduction

Childhood maltreatment (CM) is a pervasive and detrimental experience that affects millions globally (World Health Organisation Producer, 2016). CM encompasses any intentional or unintentional harm or threat inflicted upon a child by their caregivers (Gilbert, Widom, et al., 2009b) and can manifest as physical, emotional, or sexual forms (Gibb et al., 2001). Childhood emotional maltreatment requires special attention due to its prevalence and subtlety, making timely intervention challenging (Stoltenborgh et al., 2012). According to Stoltenborgh et al. (2015), a recent meta-analysis found that 54.7% of people worldwide have experienced this form of maltreatment. Childhood emotional maltreatment is characterized by the act of demeaning, terrorizing, exploiting, or showing indifference toward the child's emotional needs (Bernstein, 2002). Numerous investigations have substantiated that experiencing emotional maltreatment during childhood has a detrimental impact on mental well-being, including symptoms such as distress (Wright et al., 2009), depression (Domke et al., 2023), as well as an increased likelihood of engaging in violent behavior and experiencing suicidal tendencies (Wang et al., 2022). Recent scholarly inquiries have further delved into the correlation between childhood emotional maltreatment and well-being (Cao et al., 2022; Wu et al., 2022).

### 1.1. Childhood emotional maltreatment and social well-being

Well-being serves as a microcosm of mental health (Huppert, 2005). Essentially, mental health is not merely defined by the absence of illness, but also significantly includes the presence of well-being (Keyes, 2004). In accordance with the positive mental health model, well-being encompasses a comprehensive state that includes individual well-being and social

well-being (SoWB) (Keyes, 2007). Individual well-being reflects one's satisfaction with their life and mental functioning, while SoWB emphasizes societal functioning, including social integration (i.e. quality relationships with society and communities), acceptance (i.e. positive views on human nature and trust in others), contribution (i.e. believing in one's valuable role in society), coherence (i.e. understanding and engaging with the social environment), and actualization (i.e. optimism for society's future potential) (Keyes, 1998).

Existing well-being models focus on personal factors, yet it is crucial to consider the role of social structures and communities (Keyes, 1998). SoWB is tied to relationships and community engagement, especially important during the university transition (Keyes & Shapiro, 2004; Ridner et al., 2016; Van Lente et al., 2012), with strong SoWB indicating better social

adaptation. However, one's connections and affiliations with other individuals and with society as a whole often begin to develop during early childhood (Ebbert et al., 2019; Lamphear, 1985). Bowlby (1973) suggested that interactions with caregivers during childhood shape an individual's internal working model, which subsequently influences their relationship with the external world. This can in turn influence the sense of SoWB (Keyes, 1998).

Specifically, attachment theory (Bowlby, 1969) suggests that secure attachment stems from emotionally available, sensitive, and responsive parenting, whereas behaviors like contempt, rejection, or unpredictability by caregivers can lead to insecure attachment (Zeanah et al., 2011). Moreover, the quality of early attachment influences one's internal working model of self and others, shaping perceptions and beliefs about relationships both now and in the future (Simpson & Rholes, 2010). However, families that engage in emotional maltreatment often exhibit inconsistent parenting styles, creating uncertainty for children in interpreting and anticipating their caregivers' actions (Cicchetti et al., 2003). This uncertainty extends beyond the parent-child relationship, leading to negative interpersonal interactions and unsuccessful social relationships, as children struggle to accurately understand and interpret emotions, perspectives, and intentions (Banerjee et al., 2011; Hughes, 2011; Luke & Banerjee, 2013). These dynamics often result in feelings of inadequate support and isolation, which can adversely affect their SoWB (Keyes, 1998).

Furthermore, previous research has shown that emotional maltreatment has severe and lasting effects on both social and cognitive development (Hart et al., 1996). For instance, emotionally maltreated children experience changes in brain function that impair their ability to understand others' emotions and respond to stimuli (Dye, 2020; Heim et al., 2013). This also leads to a more negative self-perception (Riggs, 2010). As a result, adults who were emotionally maltreated often face difficulties in processing social information and forming interpersonal relationships (Dykas & Cassidy, 2011; Ebbert et al., 2019), which can reduce their SoWB.

Until now, research on childhood emotional maltreatment and well-being has primarily focused on individual well-being (Cao et al., 2022; Wu et al., 2022). Only two cross-sectional studies have identified a relationship between childhood emotional maltreatment and SoWB (Arslan, 2023; Arslan et al., 2024). Specifically, Arslan (2023) found that emotional maltreatment was negatively associated with SoWB in Turkish college students. Using another Turkish sample, Arslan et al. (2024) replicated the relation and further found that the relation

was mediated by mindful awareness and self-transcendence.

While these studies enhance our understanding of this relationship, they also highlight several issues that still need to be addressed. First, considering that individual well-being and SoWB are closely related, the studies by Arslan (2023) and Arslan et al. (2024) did not control for individual well-being, therefore it is unclear whether childhood emotional maltreatment has an independent effect on SoWB. Second, these two studies on SoWB have used retrospective methods, asking participants to recall and evaluate their SoWB over extended periods, such as the past month. This approach, influenced by the most intense or recent memories, is prone to recall bias (Kahneman, 2001; Schneider & Stone, 2016). A daily diary method, where participants document daily events and emotions (Gunthert & Wenzel, 2011), can provide a more accurate view of their ongoing experiences and reducing bias in SoWB assessment. Furthermore, the daily diary method significantly reduces retrospective bias by minimizing the time interval between experiencing and reporting these experiences (Bolger et al., 2003) and has been widely used by researchers (Chiang et al., 2015; Li et al., 2023). Third, the samples for the two studies were collected in Turkey. Therefore, to enhance the generalizability of the findings, it is necessary to confirm them in different cultural contexts. Therefore, the current study used the daily diary method to evaluate SoWB and to examine whether childhood emotional maltreatment independently has a negative impact on SoWB in Chinese context.

## **1.2. Childhood emotional maltreatment, gratitude and social well-being**

Gratitude, defined as the positive emotion felt when receiving a favor and the desire to reciprocate, plays a crucial role in social bonding and SoWB (McCullough et al., 2002). The find-remind and bind theory suggests that gratitude enhances social relationships by altering one's perception of the benefactor, fostering appreciation for high-quality partners and strengthening interpersonal bonds (Algoe, 2012). This improved social functioning contributes to higher SoWB. Empirical evidence supports that gratitude not only fosters immediate connections but also sustains long-term relationships, significantly predicting SoWB over time (Bartlett et al., 2012; Ye et al., 2023). Hence, gratitude emerges as a vital predictor of SoWB.

Notwithstanding, experiencing childhood emotional maltreatment can hinder the development of gratitude, a process that unfolds over childhood and requires

supportive environments for full maturation (Coleman et al., 2016; Tudge et al., 2015). The primary role of the family is crucial in fostering gratitude, but children with inadequate caregivers may face obstacles in developing this trait (Hussong et al., 2018; Kwok et al., 2019). Such maltreatment may lead to the formation of an insecure internal working model, characterized by relationship uncertainty and anxiety, which in turn can diminish gratitude and result in less fulfilling interactions and SoWB (Dinh, 2016; Hewlett et al., 2000; Mikulincer & Shaver, 2008). Notably, recent findings by Kong et al. (2023) suggest that specifically childhood emotional maltreatment, more so than physical or sexual types, adversely affects gratitude. Therefore, it's hypothesized that gratitude may act as a mediating factor between childhood emotional maltreatment and SoWB.

Despite the theoretical foundation, the mediating role of gratitude in this context remains unexplored. Investigating how childhood emotional maltreatment affects SoWB through gratitude is essential for understanding and developing interventions. Thus, examining gratitude as a potential mediator warrants further research.

### 1.3. The present study

The current study aimed to explore the relationship between childhood emotional maltreatment and SoWB among undergraduates and examine the mediating role of gratitude. Specifically, we proposed the following hypotheses: (1) Childhood emotional maltreatment negatively predicts SoWB among undergraduates, even after controlling for individual well-being. (2) Gratitude mediates the relationship between childhood emotional maltreatment and SoWB among university students.

## 2. Methods

### 2.1. Participants

This research is part of an ongoing project which investigates the mental health of university students. In November 2022 and November 2023, we collected data from different subjects using the same procedure at a university in China, with a total of 521 university students participating in the study. Data that are unrelated to the theme of this study were not reported here and no articles have been published using this dataset yet. Out of the total, 38 participants who answered diaries fewer than 10 days were excluded. The sample size consisted of 483 participants ( $M_{age} = 19.30$  years,  $SD_{age} = 2.12$  years, range 16–30 years), with 90.06% being women ( $N = 435$ ).

In addition, the power analysis with Monte Carlo simulation using R package *simr* (Arend & Schäfer, 2019) demonstrated that to detect within-group effects in a 14-day diary study ( $\gamma_{10.std} = 0.10$ ,  $ICC = 0.50$ ,  $\alpha = 0.05$ ), at least 131 participants are required to achieve a statistical power of 0.80. Therefore, our sample size is sufficiently powered for the statistical tests.

### 2.2. Procedure

Our study used a secure online platform ([www.wjx.cn](http://www.wjx.cn)) to collect data from participants recruited from a local university. After agreeing to participate and being informed of the research procedure, participants filled out a questionnaire on CM and a 14-day gratitude/well-being diary. Participants received a daily questionnaire link via QQ, an instant messaging service, at 6 pm to report their day's feelings before midnight, accessible on both smartphones and computers. If they failed to do so, a follow-up link was sent the next morning to evaluate the previous day's state. The analysis included participants who completed their questionnaires before the following midday, with a minimum requirement of 10 days. We collected 6730 daily diaries, and each participant contributed an average of 13.93 days (with a range from 10 to 14 days). Upon task completion, participants were compensated 30 RMB. This research received ethical approval from the local university.

### 2.3. Measures

#### 2.3.1. Within-person level variables

**2.3.1.1. Gratitude.** To alleviate the burden on participants in the diary study, two items with the highest factor loadings were adapted from the Gratitude Questionnaire-Six Item Form (GQ-6) to assess gratitude (Garg et al., 2021; McCullough et al., 2002). The two items are: 'Today I have so much in life to be thankful for'. and 'Today I am grateful to a wide variety of people'. Participants rated the two items on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). The Chinese version of GQ-6 has shown satisfactory reliability and validity (Hao et al., 2022; Zhang et al., 2022). The GQ-6 displayed excellent between- and within-person Omega reliability coefficients of 0.99 and 0.87, respectively.

**2.3.1.2. Social well-being.** To evaluate SoWB, we utilized the five-item scale from the Mental Health Continuum-Short Form developed by C. L. M. Keyes et al. (2008). This self-report measure includes five dimensions: social integration, social acceptance, social contribution, social actualization, and social

coherence. Participants rated the items on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Examples include 'Today, I had something important to contribute to society' (social contribution) and 'Today, the way our society works makes sense to me' (social coherence). A recent study validated the Chinese version of the MHC-SF, demonstrating good reliability and validity (Ye et al., 2023). The MHC-SF between- and within-person Omega reliability coefficients were 0.92 and 0.72, respectively.

**2.3.1.3. Individual well-being.** Previous research has shown that individual well-being can influence SoWB (C. L. M. Keyes, 2006; M. Li et al., 2015). Therefore, we controlled for individual well-being in our model testing to explore whether childhood emotional maltreatment can independently predict SoWB. Individual well-being included two components: subjective well-being and psychological well-being.

Subjective well-being was assessed using indicators such as life satisfaction, positive affect, and negative affect (Ryan & Deci, 2001). To calculate subjective well-being scores, we subtracted negative affect from the combined total of life satisfaction and positive affect (Diener et al., 1999). They have demonstrated good reliability and validity at the item level in prior studies (Zhang et al., 2022). Two items with the highest factor loadings were adapted from the Satisfaction with Life Scale to assess life satisfaction (SWLS; Diener et al., 1985). The SWLS between- and within-person Omega reliability coefficients were 0.97 and 0.82, respectively. The Positive and Negative Experience Scale (SPANE) was employed to evaluate positive affect and negative affect (Diener et al., 2010). The SPANE consists of a 12-word list, with six labels measuring negative affect and six labels measuring positive affect. The positive affect subscale between- and within-person Omega reliability coefficients were 0.99 and 0.91, respectively. The negative affect subscale between- and within-person Omega reliability coefficients were 0.97 and 0.84, respectively.

We assessed psychological well-being using the 6-item psychological well-being subscale of the Mental Health Continuum-Short Form (C. Keyes et al., 2009; Yan et al., 2022). Participants rated each statement on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The psychological well-being subscale between- and within-person Omega reliability coefficients were 0.92 and 0.79, respectively.

## 2.3.2. Between-person level variables

**2.3.2.1. Childhood maltreatment.** We assessed exposure to abusive circumstances up to age 16 using the Childhood Trauma Questionnaire-Short Form (CTQ-SF; Bernstein et al., 2003). This self-report measure includes 28 items rated on a 5-point Likert scale, ranging from 1 (never true) to 5 (very often true), and covers five types of maltreatment: emotional abuse, emotional neglect, physical abuse, physical neglect, and sexual maltreatment. For our study, we focused on the 10 items specifically related to emotional abuse and emotional neglect from the CTQ-SF. Examples include 'People in my family called me things like "stupid", "lazy", or "ugly"' and 'People in my family looked out for each other'. Since emotional neglect and emotional abuse frequently co-occur, we created measures of childhood emotional maltreatment by combining scores of emotional abuse and emotional neglect (Van Harmelen et al., 2010). The Chinese adaptation of the CTQ-SF has exhibited reliability and validity among Chinese adolescents (Li et al., 2023). The Cronbach's alphas for the study sample were satisfactory, with values of 0.86 for emotional maltreatment, indicating good internal consistency of the measures.

## 2.4. Data analysis

We employed multilevel modeling (MLM) to analyze our multilevel data, which comprised within- and between-person level data. In the 14-day diary study, 18 participants missed a day, 3 participants missed two days, and 2 participants omitted responses for 4 days. To address the issue of missing data, we replaced the 32 missing entries with the value '999'. The full information maximum-likelihood (FIML) estimation technique was employed to address the missing data. Our dataset consisted of daily diary data from 6730 observations at level 1, nested within 483 participants at level 2.

We conducted multilevel analyses using Mplus 8 software (Muthén & Muthén, 2017), beginning with a null model for descriptive and correlational analyses. We then employed a multilevel regression model to examine the influence of childhood emotional maltreatment on SoWB. To ensure that the observed effects were specific to emotional maltreatment, we also tested how other forms of maltreatment influenced SoWB. Subsequently, we utilized a 2-1-1 multilevel mediation model (Preacher et al., 2010) to explore the mediating role of gratitude in this relationship. Emotional maltreatment was deemed as a level 2 between-person variable, whereas gratitude, SoWB was categorized as level 1 within-person variables. We grand-mean centered all

level 2 variables, and modeled the intercepts of gratitude and SoWB as random.

Additionally, we controlled for physical maltreatment, sexual maltreatment, individual well-being, age and gender to determine the independent predictive effect of childhood emotional maltreatment on SoWB. In this model, different forms of maltreatment (emotional, physical, sexual), age and gender were deemed as a level 2 between-person variable, while gratitude, SoWB, and individual well-being were categorized as level 1 within-person variables.

### 3. Results

#### 3.1. Preliminary analysis

Table 1 presents the descriptive statistics for the primary variables and individual well-being at the between-person level, including means, standard deviations, and intercorrelations. Among the 483 participants, 89.03% reported experiencing emotional maltreatment during childhood. As hypothesized, there existed interrelations among childhood emotional maltreatment, SoWB, and gratitude. We further calculated the intraclass correlation coefficient (ICC) and discovered that gratitude had an ICC of 0.59, while SoWB had an ICC of 0.70. These findings suggested that 41% of the variability in gratitude and 30% in SoWB was due to variations among

participants. Consequently, the data was appropriate for a multilevel analysis (Sonnentag et al., 2020).

#### 3.2. The multilevel regression analysis

First, we investigated whether childhood emotional maltreatment could predict SoWB. The results revealed that childhood emotional maltreatment significantly affected SoWB ( $\beta = -0.40, p < 0.001$ ). That is, individuals who have experienced a higher severity of childhood emotional maltreatment tend to exhibit lower levels of SoWB.

To rule out the effect of other forms of maltreatment, we conducted a multilevel multiple regression analysis to test how various forms of maltreatment affect SoWB. The results indicated that childhood emotional maltreatment is a significant predictor of SoWB ( $\beta = -0.44, p < 0.001$ ) after controlling for age and gender. In contrast, physical and sexual maltreatment during childhood did not significantly predict SoWB (Childhood physical maltreatment:  $\beta = 0.06, p = 0.55$ ; Childhood sexual maltreatment:  $\beta = 0.01, p = 0.92$ ) (see Table 2). These findings underscore the unique and substantial influence of childhood emotional maltreatment on SoWB.

In addition, we examined whether the impact of childhood emotional maltreatment on SoWB is specific to individual well-being. Consistent with previous results, after controlling for physical maltreatment, sexual maltreatment, individual well-being, age and gender,

**Table 1.** Descriptive results and correlations for all study variables.

Variables	M	SD <sub>b</sub>	SD <sub>w</sub>	1	2	3	4	5	6
1. Gender	–	–	–	1					
2. Age	19.30	2.12	–	.06	1				
3. Childhood emotional maltreatment	16.77	6.37	–	.03	.16**	1			
4. Gratitude	10.67	1.91	1.59	.03	–.03	–.31***	1		
5. Social well-being	26.68	4.25	2.77	.04	–.12*	–.40***	.74***	1	
6. Individual well-being	52.14	12.11	9.34	.06	–.08	–.41***	.76***	.81***	1

SD<sub>b</sub> and SD<sub>w</sub> reflect between-person and within-person level standard deviations; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 2.** Effect of different forms of childhood maltreatment on social well-being.

Predictor variables	$\beta$	SE	P
Model 1			
Childhood emotional maltreatment	–0.44	0.08	0.000
Childhood physical maltreatment	0.06	0.10	0.55
Childhood sexual maltreatment	0.01	0.07	0.92
Age	–0.06	0.05	0.16
Gender	0.06	0.04	0.12
Model 2			
Childhood emotional maltreatment	–0.44	0.08	0.000
Childhood physical maltreatment	0.06	0.10	0.54
Childhood sexual maltreatment	0.01	0.07	0.92
Individual well-being	0.58	0.02	0.000
Age	–0.06	0.05	0.16
Gender	0.06	0.04	0.12

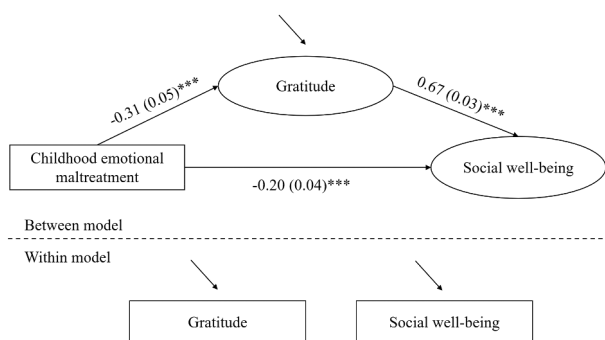
emotional maltreatment still significantly predicted SoWB ( $\beta = -0.44, p < 0.001$ ), while physical and sexual maltreatment during childhood did not significantly influence SoWB (Childhood physical maltreatment:  $\beta = 0.06, p = 0.54$ ; Childhood sexual maltreatment:  $\beta = 0.01, p = 0.92$ ).

In summary, after controlling for other forms of maltreatment, individual well-being, age and gender, the results were consistent with previous findings. This demonstrates that childhood emotional maltreatment independently predicts SoWB, unaffected by other forms of maltreatment, individual well-being, age and gender.

### 3.3. The multilevel mediation analysis

We employed a multilevel structural equation modeling (MSEM) to examine whether gratitude mediates the association between childhood emotional maltreatment and SoWB. In this model, emotional maltreatment was the predictor, gratitude the mediator and SoWB the outcome. Consistent with our hypothesis, the results revealed that emotional maltreatment significantly impacted gratitude ( $\beta = -0.31, p < 0.001, 95\% \text{ CI} = [-0.40, -0.22]$ ). This indicated that university students who have experienced emotional maltreatment may have lower gratitude. Furthermore, the results revealed gratitude positively related to SoWB ( $\beta = 0.67, p < 0.001, 95\% \text{ CI} = [0.60, 0.73]$ ). Therefore, when an individual's gratitude function is impaired, their SoWB is also likely to decrease.

As Figure 1 shows, even when considering the mediating role of gratitude, emotional maltreatment still significantly influenced SoWB directly ( $\beta = -0.20, p < 0.001, 95\% \text{ CI} = [-0.28, -0.12]$ ). Additionally, our findings revealed that gratitude acted as an intermediary in the



**Figure 1.** The multilevel 2-1-1 model with childhood emotional maltreatment as the independent variable, gratitude as the mediator, and social well-being as the dependent variable ( $N = 483$ ). The figure displays standardized multilevel regression coefficients. \*\*\* $p < .001$ .

connection between emotional maltreatment and SoWB ( $\beta = -0.20, p < 0.001, 95\% \text{ CI} = [-0.26, -0.14]$ ). We evaluated the effect size of the mediation effect by computing how much the indirect effect accounts for the total effect. In our analysis, the proportion mediated amounted to 54.31%.

Furthermore, after controlling for physical maltreatment, sexual maltreatment, individual well-being, age and gender, multilevel mediation analysis showed that gratitude played a mediating role in this relationship, with an indirect effect of  $-0.21 (p < 0.001, 95\% \text{ CI} = [-0.27, -0.14])$ , indicating that the mediating effect of gratitude is not influenced by other forms of maltreatment, individual well-being, age and gender.

## 4. Discussion

Although previous studies have emphasized the significant impact of childhood emotional maltreatment on SoWB, it is still not clear whether it independently predicts SoWB. Our findings indicated that, compared to other forms of maltreatment, only childhood emotional maltreatment independently predicted SoWB, even after controlling for individual well-being. Additionally, gratitude mediated this relationship, further influencing SoWB irrespective of individual well-being. These findings underscore the need to specifically focus on emotional maltreatment and its effects on gratitude and SoWB later in life.

### 4.1. Childhood emotional maltreatment and social well-being

Our results compared the effects of different forms of maltreatment on SoWB and found that only emotional maltreatment negatively predicted SoWB. This supports our hypothesis and extends previous retrospective and cross-sectional studies, which identified childhood emotional maltreatment as a significant factor affecting SoWB (Arslan, 2023; Arslan et al., 2024). This pattern can be interpreted through the framework of the attachment theory (Bowlby, 1977). In families where emotional maltreatment occurs, inconsistent parenting practices can make it challenging for children to understand and predict their parents' actions and future relationships. Emotional maltreatment may impair children's abilities to grasp the emotions, viewpoints, intentions, and beliefs of others (Dunn & Cutting, 1999; Hughes, 2011). This impairment can ultimately lead to interpersonal difficulties, failed social relationships, and a gradual decline in SoWB. Moreover, studies have shown that emotional maltreatment impairs the brain's ability to develop emotional functions, making it difficult for

individuals to recognize and express emotions (Heim et al., 2013). Compared to other forms of maltreatment, emotional maltreatment more significantly contributes to emotional dysregulation and the adoption of unhealthy emotional strategies, such as suppression and ambivalence towards emotional expression, in adulthood (Burns et al., 2010; Gratz et al., 2007). As a result, emotional maltreatment not only negatively impacts daily interpersonal interactions and relationship building but also hinders the development of emotional functioning and ultimately impairs SoWB.

In addition, our study found that even after accounting for individual well-being, emotional maltreatment remained a crucial predictor of SoWB. This suggests that its impact on SoWB is independent and specific, beyond general effects on individual well-being. On one hand, our results aligned with prior research that documents the influence of individual well-being on outcomes (Keyes, 2006). On the other hand, the findings seem to support the notion that individual well-being and SoWB are correlated but distinct construct (Gallagher et al., 2009). This also underscores the importance of separately examining these two types of well-being in future research.

#### **4.2. Childhood emotional maltreatment, gratitude, and social well-being**

In accordance with Hypothesis 2, gratitude served as a mediating factor in the connection between childhood emotional maltreatment and SoWB. Our study, utilizing an independent sample of undergraduates, replicated the findings of Kong et al. (2023) and aligned with previous research indicating that emotional maltreatment impairs emotional functioning (Dye, 2020). Specifically, negative interactions between parents and children affect the development of children's attitudes towards gratitude (Graham & Weiner, 1986), and may lead to the formation of negative beliefs about themselves and others. This culminates in negative mental portrayals and convictions about the motives of others, reducing the likelihood of feeling gratitude towards them (Bowlby, 1973; Mikulincer & Shaver, 2007).

Furthermore, aligning with prior research, our study found that gratitude predicts SoWB (Khanna & Singh, 2021; Ye et al., 2023). The predictive effect of gratitude on SoWB elucidated through the find-remind-and-bind theory (Algoe, 2012). This theory suggests that gratitude functions to facilitate the discovery of new connections, evoking memories of existing relationships, and subsequently fostering the establishment or reinforcement of these relationships. The strengthening of new friendships or existing connections leads individuals to

perceive a greater sense of connection with society or others, thereby experiencing an increased level of SoWB. In conclusion, our research provides preliminary evidence that emotional maltreatment may hinder the cultivation of gratitude, resulting in reduced SoWB.

#### **4.3. Limitations and future directions**

While our research provides valuable findings, it is essential to acknowledge that several limitations should be noted. Firstly, in our study, we used a retrospective measure to assess childhood emotional maltreatment. While prior research has affirmed the effectiveness of this approach and shown that such measures can reliably predict mental health outcomes (Garrusi & Nakhaee, 2009; Pinto Pereira et al., 2021), it would be beneficial for future studies to incorporate prospective measures of childhood maltreatment. Secondly, our study was conducted in China. The differences in child-rearing practices across cultures can lead to divergent perspectives on maltreatment (Gilbert, Kemp, et al., 2009; Liu et al., 2021). Hence, future research should explore the associations from a cross-cultural standpoint. Thirdly, our findings are based on a mainly female sample due to convenience sampling at universities with more female students, limiting the study's generalizability. To examine the generalization of our findings, future studies are recommended to employ random sampling from a larger population (Tan, 2004). Fourthly, in the definition, CM is described as harm or threat inflicted upon a child by their caregivers. However, our choice of the widely used and psychometrically sound CTQ focuses primarily on describing maltreatment experiences within the family context (by guardians or parents).

#### **4.4. Implication**

Despite the limitations of this study, it still holds considerable theoretical and practical value. In terms of theoretical innovation, our study employed a daily diary method to examine the relationship between childhood emotional maltreatment and SoWB, as well as the mediating role of gratitude. The findings indicated that emotional maltreatment during childhood can independently undermine SoWB. This highlights the severe impacts of childhood emotional maltreatment and the mechanisms through which it predicts SoWB. In practical terms, emotional maltreatment is highly prevalent and is more likely to cause harm to the emotion and social functioning of children (Berzenski, 2019; Garbarino et al., 1997; Scher et al., 2004). Moreover, our research findings also indicate that emotional



maltreatment independently affects gratitude and SoWB, after ruling out the effect of other forms of maltreatment. Thus, it is essential for caregivers to provide sufficient emotional support from the outset to avoid neglect and abuse.

Furthermore, our findings indicated that gratitude can serve as a mediating factor in the relationship between childhood emotional maltreatment and SoWB. Aligned with other studies, recent research has also shown that gratitude plays a role in mitigating the effects of childhood emotional maltreatment on various social-behavioral outcomes (Kong et al., 2023). These studies emphasize the importance of nurturing gratitude early in life for future social emotions and behaviors. If children are not adequately nurtured in gratitude during their early years, appropriate interventions should be introduced in adulthood. For instance, practices such as 'gratitude visits', where individuals write and read letters to those who have helped them (Seligman et al., 2005), may effectively enhance the SoWB and social behavior of children who have experienced emotional maltreatment.

## 5. Conclusion

This study is the first to employ a daily diary method to compare the effects of various types of childhood maltreatment on SoWB. It uniquely reveals that only emotional maltreatment during childhood has a detrimental effect on SoWB. Additionally, the research demonstrated that gratitude mediates the relationship between emotional maltreatment and SoWB, emphasizing the importance of creating a family atmosphere that fosters gratitude. These findings not only highlight the specific influence of emotional maltreatment on SoWB, distinct from individual well-being, but also explore the potential benefits of gratitude-focused interventions to improve SoWB, thereby increasing awareness of the negative impacts of emotional maltreatment in childhood.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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## Data availability statement

The data that support the findings of this study are available from the corresponding author, FK, upon reasonable request.

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