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**Linking Childhood Emotional Neglect to Adolescents' Parent-Related Loneliness: Self-Other
Differentiation and Emotional Detachment from Parents as Mediators**

Abstract

Background

The detrimental role of childhood emotional neglect (CEN) on long-term affective and social development has received increasing attention in the literature. Individuals who were emotionally neglected during their childhood are more prone to feeling isolated and excluded by their parent during adolescence. However, little is known about the mediating processes underlying this association.

Objective

This study investigated whether self–other differentiation (SOD) and emotional detachment from parents mediate the link between CEN and parent-related loneliness.

Method and participants

A sample of 535 high school students aged 13–18 years (63.6% female; $M_{\text{age}} = 16.21$; $SD = 1.40$) completed questionnaires regarding demographics, CEN, SOD, emotional detachment, and parent-related loneliness.

Results

After controlling for demographic covariates, structural equation modeling (SEM) showed that (a) CEN was positively associated with parent-related loneliness ($\beta = .64$, $p < .001$), (b) SOD did not mediate the relationship between CEN and parent-related loneliness ($\beta = -.01$, $p = .142$), (c) emotional detachment partially mediated the relationship between CEN and parent-related loneliness ($\beta = .16$, $p < .001$), and (d) SOD and emotional detachment partially and sequentially mediated the link between CEN and parent-related loneliness, albeit with a small effect size ($\beta = .02$, $p = .027$).

Conclusions

The findings underscore the significance of the link between CEN and parent-related loneliness in adolescence. Moreover, our results suggest that some adolescents with a history of CEN have difficulties in establishing clear boundaries between “self” and “other” and tend to engage in

1 emotionally detached relationships with their parents, which may lead them to feel more parent-
2 related loneliness. Clinical implications and directions for future research are discussed.

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4 *Keywords:* parent-related loneliness, childhood emotional neglect, self–other differentiation,
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7 emotional detachment, adolescence

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Linking Childhood Emotional Neglect to Adolescents' Parent-Related Loneliness: Self-Other Differentiation and Emotional Detachment from Parents as Mediators

Loneliness refers to an unpleasant experience wherein a person suffers from feelings of exclusion or rejection related to deficiencies in the quantity or quality of their own network of social relations (McWhirter, 1990; Perlman & Peplau, 1981). People may feel lonely when isolated and even in the presence of or interacting with other people. Thus, loneliness is different from aloneness, which indicates the absence of communication or interaction with others (including online and phone communication), and from isolation, which refers to the objective state of being without company (Galanaki, 2004; Long & Averill, 2003). Moreover, people may constructively use their time alone (e.g., for concentration, self-reflection, and learning) without necessarily experiencing loneliness (Galanaki, 2013; Corsano et al., 2019). The search for solitude to engage in intrinsically motivated activities characterizes this “loneliness-free” form of a positive attitude to being alone (Thomas & Azmitia, 2019). Research has indicated that although the experience of feeling lonely might already be present in childhood (Newsom et al., 2013), it reaches its climax during adolescence, declines in adulthood, and then increases to some extent in old age (Barreto et al., 2021; Heinrich & Gullone, 2006). Adolescents might be particularly susceptible to loneliness for a variety of reasons, including instability in their social network ties associated with developmental changes, such as identity exploration, that can enhance young people’s vulnerability to exclusion (Laursen & Hartl, 2013; Qualter et al., 2013; Qualter et al., 2015). Specifically, risk factors for loneliness in youth include dysfunctional family relations (Zhu et al., 2019), peer victimization (Rönkä et al., 2014; Stickley et al., 2016), and school-related stress (Zhu et al., 2019). Although it is natural for adolescents to feel lonely occasionally (Csikszentmihalyi & Larson, 1984), a protracted and persistent sense of loneliness could be associated with maladjustment and psychopathology (Heinrich & Gullone, 2006; Qualter et al., 2013), and especially with an increased risk of depression, anxiety, and suicide ideation (Cui et al., 2011; Humenny et al., 2021; Lasgaard et al., 2011a; Santini et al., 2021). Thus, recent research has highlighted the relevance of advancing

1 our knowledge of loneliness to prevent or treat mental health problems in youths (Jenkins et al.,
2 2020; Pitman et al., 2018; Shovestul et al., 2020).

3 Loneliness has been conceptualized as either a unidimensional or multidimensional
4 phenomenon (McWhirter, 1990). The unidimensional model of loneliness suggests that loneliness is
5 a unitary phenomenon that varies first and foremost in its experienced intensity and affects all the
6 social domains of an individual's life (Russell, 1982). On the contrary, according to the hybrid
7 multidimensional model developed by Goossens et al. (e.g., Goossens et al., 2009; Marcoen et al.,
8 1987), loneliness is a multidimensional phenomenon varying across circumstances. Specifically, the
9 authors distinguished between two forms of loneliness, namely parent-related loneliness (i.e., a lack
10 of meaningful relationships with parents that implies feelings of rejection and abandonment) and
11 peer-related loneliness (i.e., feeling socially disconnected from peers), which can coexist or not in
12 the same adolescent (Goossens, 2006; Goossens & Marcoen, 1999a). Previous studies reported a
13 clear link between peer-related loneliness and adolescents' maladjustment (Schwartz-Mette et al.,
14 2020), and more complex findings for parent-related loneliness (e.g., Lasgaard et al., 2011b;
15 Musetti et al., 2020). In fact, peer groups become fundamental sources of social support during the
16 separation process from parents (Goossens & Marcoen, 1999b), while parent-related loneliness can
17 emerge as a result of the developmental changes in the attachment system and the associated
18 progressive distancing from parents (Goossens, 2006, p. 62). However, this developmental process
19 does not imply that adolescents no longer need any form of support from and bond with their
20 parents. Indeed, Ponappa et al.'s (2014) longitudinal findings showed that a healthy separation
21 process occurs in the context of a mutual sense of connection in the parent-adolescent relationship.
22 Furthermore, several studies found that adolescents' loneliness is a sign of poor family functioning
23 or communication (e.g., Favotto et al., 2019; Johnson et al., 2001) that may promote maladjustment.
24 For example, relying on a nationally representative sample of 1,009 adolescents, Lasgaard et al.
25 (2011b) found that only family-related loneliness was linked to deliberate self-harm and eating

1 disorders, and concluded that this form of loneliness required deeper investigation, on par with
2 peer-related loneliness.

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4 A sound theoretical framework to conceptualize this complex complementarity of separation
5 (i.e., exploration) and connection (i.e., attachment) needs during human development can be found
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7 in the attachment theory originated by John Bowlby (1969, 1973, 1980). According to this
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9 theoretical framework, early secure attachment relationships with parents provide a safe context for
10
11 children to learn reciprocity and trust, along with negotiating closeness, distance, and exploration
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13 (Ainsworth, 1991; Bowlby, 1973, 1980). When caregivers meet children's emotional and physical
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15 needs, infants are more likely to develop secure internal working models, which consist of positive
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17 expectations of others' availability and responsiveness in times of need or stress (Bowlby, 1988;
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19 Waters & Cummings, 2000). On the contrary, if care tends to be unpredictable, mistreating,
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21 rejecting, or neglectful, infants are more prone to negatively filter or distort their emotional
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23 experiences and develop various insecure internal working models of attachment.

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26 Although several studies have demonstrated that an early pattern of parent-child interaction
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28 impacted by maltreatment may negatively influence the subsequent parent-adolescent relationship
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30 (e.g., Alto et al., 2018), relatively little is known about the relationships between these adverse
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32 experiences and adolescents' loneliness (Ma et al., 2020). Given that different relationships are
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34 potential sources of loneliness (Goossens et al., 2009), specific attention to the antecedents of
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36 parent-related loneliness may advance our understanding in this important field (Mason, 2020).

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1 effects on child development at least as detrimental as those deriving from child physical or sexual
2 abuse (Flett et al., 2016; Smith et al., 2005). Nonetheless, neglect continues to receive less attention
3 in research than other forms of maltreatment (Logan-Greene & Semanchin Jones, 2018). Generally,
4 child neglect is defined as a caregiver's failure to provide for a child's basic needs, whether
5 physical or emotional (O'Hara et al., 2015). Specifically, childhood emotional neglect (CEN)
6 involves the insufficient satisfaction of a child's emotional needs, such as love, support, a sense of
7 belonging, and care (Cicchetti & Toth, 2005). Physical and emotional neglect do not necessarily
8 coexist: In some cases, parents may be unable to adequately meet physical needs because of
9 external circumstances (i.e., socioeconomic disadvantage) and simultaneously be emotionally
10 responsive to their children's needs (Gaudin, 1999). Thus, CEN is closely associated with the long-
11 term development of poor psychological mental health (Ney et al., 1994) and more specifically,
12 loneliness (Ma et al., 2020; Merz & Jak, 2013; Zonash & Arouj, 2019). Hyland et al.'s (2019)
13 recent study showed that childhood traumatization was associated with emotional loneliness (i.e.,
14 deficiencies of close attachments) but not with social loneliness (i.e., deficiencies of social
15 integration) in later life. Further, Loos and Alexander (1997) sampled 401 undergraduate students
16 and showed that parental physical and verbal abuse enhanced current anger, whereas CEN
17 increased feelings of loneliness and social isolation. These findings support the argument that
18 individuals with a history of childhood parental maltreatment are more likely to deal with feelings
19 of insufficient or inadequate close attachments later in life. Beyond these studies, further
20 developmentally informed research aimed at identifying pathways leading from CEN to parent-
21 related loneliness is needed.

22 **Mediating Role of Self–Other Differentiation**

23 Experiences of childhood parental maltreatment have been consistently associated with
24 difficulties in social relationships and negative self-view (Arslan, 2018; Iwaniec et al., 2007). For
25 example, Arslan (2018) found that psychological maltreatment negatively predicted social
26 connectedness and social acceptance among adolescents. Moreover, Wong et al. (2019) showed that

1 a more specific detrimental consequence of these adverse events is the development of an
2 impoverished sense of self, with a scarce sense of identity. This is because children shape
3 themselves and learn to regulate their own selves and boundaries with others in the context of their
4 attachment relationships with their parents (Fonagy & Target, 1997).
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6
7 With specific regard to CEN, the lack of parental sensitivity, attunement, and responsiveness
8 to children's emotional needs can enhance impairments in establishing clearly differentiated
9 representations of the self and others (Bateman & Fonagy, 2004). Consequently, CEN is a relevant
10 developmental factor linked with difficulties in self-definition and self-worth (Gladstone et al.,
11 2004). Achieving a separate sense of self in relationships with others is one of the primary
12 developmental tasks during adolescence (Ingoglia et al., 2018). This important developmental goal
13 is embodied in the construct of self–other differentiation (SOD), defined as the capacity to
14 experience a distinct and separate sense of self in relation with others (Olver et al., 1989). The
15 development of clear interpersonal boundaries is both an interpersonal and an intrapsychic (i.e.,
16 within individual) process that allows emotional closeness with another person without fearing
17 boundary dissolution (Kerig, 2005). On the contrary, poorly differentiated individuals are more
18 likely to engage in *fusion* or *emotional cutoff* in their relationships to maintain one's sense of self
19 (Kerr & Bowen, 1988; Nichols & Schwartz, 2000; Skowron, 2000). In the former case, individuals
20 tend to develop a high dependence on others for a sense of well-being (Skowron & Friedlander,
21 1998); in the latter case, individuals are inclined to react with emotional withdrawal and isolation
22 from others and display an exaggerated but baseless independence from parents (Nichols &
23 Schwartz, 1998). Although in the short term these two types of maladaptive affect regulations may
24 reduce uncomfortable feelings of rejection or isolation (Cassidy, 2000), their rigid and persistent
25 use can contribute to interpersonal problems, such as loneliness (Wei et al., 2005). Thus, SOD may
26 be a relevant mediating factor between CEN and parent-related loneliness.
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28 Although the specific link between SOD and parent-related loneliness has not yet been tested,
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1 previous research has already established an indirect link between childhood parental maltreatment
2 and loneliness via deficiencies in self-definition. For example, Wong et al. (2019) found that self-
3 concept clarity (i.e., having a clear, confident, and coherent sense of one's own personal identity)
4 mediated the associations between adverse childhood experiences and overall loneliness. However,
5 the specific link between SOD and parent-related loneliness has not yet been studied.

6 **Mediating Role of Emotional Detachment**

7 Research has also shown that childhood parental maltreatment negatively impacts the
8 individuation process (Kealy et al., 2020). This multifaceted developmental process is rooted in
9 early childhood (Mahler, 1971) and accomplished during adolescence when young people
10 renegotiate parental relationships and develop a sense of emotional autonomy (Blos, 1967;
11 Steinberg & Silverberg, 1986). According to Blos's (1979) individuation model, the transition from
12 adolescence to adulthood is considered as a "second individuation" which requires adolescents to
13 shed parental dependencies and become an individuated self in preparation to join adult society.
14 Although Blos's model relied on classical psychoanalytic theory, subsequent research has shown
15 that attachment and individuation are inextricably linked because well-adjusted individuation
16 requires a sense of support and emotional closeness with parents (attachment) (Lyons-Ruth, 1991;
17 Ryan & Lynch, 1989). According to Beyers et al. (2005), this is the case of *emotional separation*,
18 which implies an emotional distancing from childhood representations of parents that is not
19 associated with negative feelings toward them. This entails that, as the adolescent matures, they can
20 gain a more realistic view of their parents, become less emotionally dependent on them, and deal
21 with personal responsibilities (Lamborn & Steinberg, 1993). On the contrary, the unhealthy type of
22 individuation has been called *emotional detachment* from parents (Ryan & Lynch, 1989; Beyers et
23 al., 2005). It involves a more radical and conflictual distancing from family, characterized by
24 feelings of alienation from and distrust toward parents, and a loss of developmentally appropriate
25 attachments (Ryan & Lynch, 1989). Individuals with a history of emotional neglect are more prone

1 to detach from attachment bonds formed with caregivers and then rely on detachment as a defense
2 later on in life (Barach, 1991).
3

4 Several studies have established a relationship between emotional detachment and
5 maladjustment (e.g., Beyers et al., 2005; Pace & Zappulla, 2010), including parent-related
6 loneliness (Majorano et al., 2015; Musetti et al., 2020), suggesting this variable can provide a
7 pathway mediating the association between CEN and parent-related loneliness. However, this
8 pathway has not yet been evaluated.
9

10 **Multiple Mediating Role of Self–Other Differentiation and Emotional Detachment**

11 Previous research also indicated relevant associations between SOD and emotional
12 detachment. Indeed, while healthy individuation is characterized by clear SOD that allows
13 adolescents to experience both a sense of individuality and closeness (Kruse & Walper, 2008),
14 adolescents who did not establish clear boundaries between themselves and others tend to be more
15 emotionally detached from their parents. For example, Pace and Zappulla (2009) found a negative
16 association between identity exploration and emotional detachment, indicating that adolescents with
17 difficulties in establishing a more defined sense of identity tended to experience ambivalence and
18 conflict in regard to their relationship with their parents. Moreover, Ingoglia et al. (2011)
19 empirically confirmed that deficiencies in SOD led to higher emotional detachment in adolescents.
20 According to these authors, emotional detachment can be an emotional regulatory strategy that
21 poorly differentiated adolescents can adopt to compensate for boundaries diffusion through an
22 exaggerated emotional distance from their parents.
23

24 In light of these findings, SOD and emotional detachment possibly will have a role in
25 mediating the association between CEN and parent-related loneliness not only individually, but also
26 sequentially because lower levels of SOD may be associated with higher emotional detachment,
27 which in turn may be linked to higher parent-related loneliness. This is yet another unexplored
28 pathway that warrants further attention.
29

Study Purpose

Individuals who were emotionally neglected during their childhood are more prone to feeling they were isolated and excluded from their parents during adolescence (Ma et al., 2020). However, little is known about the mediating processes underlying this association. Building on the past literature, the current study aims to examine the potential role of SOD and emotional detachment in mediating the link between CEN and parent-related loneliness. We address our objectives by testing the model shown in Figure 1. Specifically, the following hypotheses were formulated:

H1: CEN would be positively associated with parent-related loneliness.

H2: SOD would mediate the association between CEN and parent-related loneliness.

H3: Emotional detachment would mediate the association between CEN and parent-related loneliness.

H4: SOD and emotional detachment would sequentially mediate the association between CEN and parent-related loneliness.

[INSERT FIGURE 1 ABOUT HERE]

Method

Participants

Participants were 535 Italian high school students located in Northern Italy from a convenience sample. The sample was drawn from 34 classrooms in two public high schools (specialized in different subjects, i.e., humanities, science, teacher training, and education) serving urban areas. Of the total participants, 63.6% ($n = 340$) were female, and 83.4% were of Italian origin. As for their ethnicity, 89.9% were European, 5.7% were African, 2.2% were Asian, 0.8% Latino-American, and 1.6% did not report their countries of origin. The adolescents' average age was 16.21 years ($SD = 1.40$), with a range from 13 to 18 years. With respect to the educational status of the participants' parents, the mothers of 285 (53.3%) and the fathers of 257 (48.0%) participants completed secondary upper education. Participants' socioeconomic status (SES) was

1 not evaluated directly for this study; however, this information was available on the Italian Ministry
2 of University and Research website. The students attending the two participating high schools were
3 mostly from a medium socioeconomic context, and consistent with our data, about 10% and 20% of
4 students had immigrant backgrounds.
5

6 **Procedure**

7 Data were collected with the permission of the school principal and school board. After
8 receiving formal approval, the proposed study was advertised to parents and adolescents (aged 12–
9 18 years) through flyers distributed at area schools. Prior to data collection, the parents or legal
10 guardians of each adolescent were informed about the study by a letter explaining the research
11 purpose and procedure. These parents or legal guardians gave their informed consent, and the
12 adolescents gave their assent. Data were collected anonymously using code numbers instead of
13 names on all the questionnaires. The questionnaires were administered in the participants’
14 classroom during ordinary class sessions and in the presence of teachers and researchers. Upon
15 completion, all participants were thanked, debriefed, and dismissed. Participants received no
16 remuneration for participation. Three respondents (0.56%) who did not complete the survey
17 questionnaires in full were excluded from the analyses. The study was designed and conducted in
18 line with the ethical norms laid down by the Italian Association of Psychology (AIP), the European
19 Code of Conduct for Research Integrity (ECCRI), and the 1964 Helsinki Declaration and its later
20 amendments. Data reported in the present study were part of a larger data collection session
21 (BLINDED FOR REVIEW PURPOSES).
22

23 **Measures**

24 *Parent-Related Loneliness*

25 The L-PART subscale of the Italian version of the Loneliness and Aloneness Scale for
26 Children and Adolescents (LACA; formerly known as the Louvain Loneliness Scale for Children
27 and Adolescents; Melotti et al., 2006; original version by Marcoen et al., 1987) was used to
28 measure participants’ parent-related loneliness. The L-PART subscale comprises 12 items (e.g., “I
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1 feel left out by my parents”) rated on a 4-point Likert scale from 1 (*never*) to 4 (*often*). A total
2 subscale score ranging between 12 and 48 could be obtained, with higher scores revealing higher
3 levels of loneliness in the participants’ relationships with their parents. In this study, the L-PART
4 subscale showed very good internal consistency (Cronbach’s $\alpha = 0.90$).

5 ***Childhood Emotional Neglect***

6 Participants’ overall perception of emotional neglect during childhood was evaluated with
7 the respective subscale of the Italian version of the Childhood Trauma Questionnaire: Short Form
8 (CTQ-SF; Sacchi et al., 2018; original version by Bernstein et al., 2003). The adolescents were
9 asked to recall their experiences within their family before the age of 12. The CEN subscale
10 comprises five items (e.g., “When I was growing up, *there was someone in my family who helped*
11 *me feel that I was important or special*”) rated on a 5-point Likert scale ranging from 1 (*never true*)
12 to 5 (*very often true*). The total subscale scores ranged from 5 to 25. Higher scores indicate higher
13 levels of CEN. Following previous research (e.g., Mørkved et al., 2018), CEN scores were
14 dichotomized into none- to- low levels of CEN (score range = 5–17) and moderate- to- severe
15 levels of CEN (score range = 18–25; Bernstein & Fink, 1998). In this study, the CEN subscale
16 showed very good internal consistency (Cronbach’s $\alpha = 0.85$).

17 ***Self–Other Differentiation Scale***

18 The Italian version of the Self–Other Differentiation Scale (SODS; Ingoglia et al., 2018;
19 original version by Olver et al., 1989) was used to assess the degree to which participants
20 experienced a separate sense of self in their relationships with others. The SODS comprises 11
21 items (e.g., “I find it difficult to feel good about myself when I don’t get affirmation from other
22 people”) rated in a true–false (0, 1) format. Participants were asked to read each statement and
23 decide whether it described them at the present time. Single items were summed up into one global
24 score (ranging from 0 to 11), with higher scores indicating higher levels of SOD. In this study,
25 Cronbach’s α was 0.70.

26 ***Emotional Detachment***

1 Participants' emotional detachment from their parent(s) was evaluated with 10 items of the
2 Italian version of the Emotional Autonomy Scale (EAS; Meleddu & Scalas, 2002; original version
3 by Steinberg & Silverberg, 1986). We used the alternative factor structure for the EAS Beyers et al.
4 (2005; in the Italian context, see Majorano et al., 2015) proposed to construct an emotional
5 detachment scale via the following subscales: perceived ignorance (two items, e.g., "My parents
6 would be surprised to know what I'm like when I'm not with them"), distrust (three items, e.g.,
7 "My parents probably talk about different things when I am around from what they talk about when
8 I'm not"), and perceived alienation (three items, e.g., "My parents act differently when they are
9 with their own parents from the way they do at home"). As Jager et al. (2015) suggested, we added
10 the privacy subscale (two items, e.g., "There are some things about me that my parents don't
11 know"), further improving the emotional detachment scale. Because the measure with these two
12 additional items had never been used with an Italian population before, we preliminarily tested the
13 expected one-dimensional factorial structure for emotional detachment in the measurement model
14 (see the Results section). Each item was measured on a 4-point Likert-type scale, ranging from 1
15 (*don't agree at all*) to 4 (*completely agree*). The total score could range from 10 to 40, with higher
16 scores indicating higher levels of emotional detachment from parents. In this study, Cronbach's α
17 for detachment was 0.69.

18 **Data Analytic Strategy**

19 SPSS software (version 24) was used to compute the means, standard deviations, and
20 intercorrelations for all the observed variables. Intercorrelations were analyzed using Pearson r ,
21 whose absolute values are considered to have a small effect size when they are close to 0.1, medium
22 effect size when close to 0.3, and large effect size when equal to or higher than 0.5 (Cohen, 1992).
23 The relationships between L-Part and various sociodemographic variables (i.e., gender, age,
24 maternal education level, paternal education level, and family status), were examined with linear
25 regression and analysis of variance (ANOVA) models. The normality of data distribution was
26 assessed by testing the skewness and kurtosis of all the observed variables and indicators. To test

1 the hypothesized effects, structural equation modeling (SEM) with Mplus software (version 8;
2 Muthén & Muthén, 1998–2017) was used. First, a measurement-only model was tested to assess
3 whether the measures’ expected factorial structure would obtain adequate goodness of fit. In this
4 phase, latent variables were computed for CEN, emotional detachment, and parent-related
5 loneliness from their respective observed indicators. Then, the measurement model was included in
6 a full structural equation model with latent variables where the mediation model presented in Figure
7 1 was tested. SOD, computed as the total sum of dichotomous items, was entered in the model as an
8 observed variable. Because previous studies have shown that female adolescents (Melotti et al.,
9 2006) and older adolescents (Maes et al., 2015) may experience more parent-related loneliness,
10 gender and age were included as control observed variables for all variables in the model. Several
11 indices were considered for evaluating the goodness of model fit: the root-mean-square error of
12 approximation (RMSEA), the comparative fit index (CFI), and the standardized root-mean-square
13 residual (SRMR). Hu and Bentler’s (1999) goodness-of-fit criteria were used to indicate acceptable
14 (CFI and TLI > 0.90, SRMR < 0.10, RMSEA < 0.08) and excellent fit (CFI and TLI > 0.95, SRMR
15 < 0.08, RMSEA < 0.06). As the chi-square value has been found to be sensitive to sample size
16 (Bentler and Bonnet, 1980), we did not consider its significance to assess our models’ goodness of
17 fit and relied instead on the χ^2/df ratio, which should be less than 3.0 to indicate good fit (Blunch,
18 2008; Brown, 2006). We defined an α value of .05 for the effects’ level of significance in the
19 model.

20 Results

21 Preliminary Analyses

22 Descriptive statistics for the full sample and differentiated by gender are reported in Table 1.
23 As expected for a nonclinical sample, the mean score of the CEN subscale of the CTQ-SF was in
24 the nonclinical range. Specifically, 90 participants (6.9%) showed a moderate- to- severe level of
25 CEN (CEN scores above 18).

[INSERT TABLE 1 ABOUT HERE]

Intercorrelations among the study variables are presented in Table 2. Parent-related loneliness was significantly and positively related to higher age, CEN, and emotional detachment, and significantly and negatively associated with SOD. With regard to relations between sociodemographic variables and L-Part, ANOVA indicated that gender and family status did not report a significant association (respectively $F(1,533) = .45, p = .503$ and $F(4, 522) = 2.32, p = .056$). Instead, maternal education was significantly associated with L-Part, albeit with a small effect size ($F(4, 519) = 3.10, p = .016, \eta^2 = .02$), with adolescents whose mothers had elementary education reporting higher L-Part than those whose mothers had upper secondary or college education. Similarly, adolescents with elementary-educated fathers reported higher L-Part than all others with higher paternal education ($F(4, 520) = 8.49, p = .000, \eta^2 = .06$). Lastly, a linear regression analysis indicated that age was positively associated with L-Part ($\beta = .09, p = .034$). No gender differences in relation to age were found [$t(533) = 1.34, p = 0.18$].

[INSERT TABLE 2 ABOUT HERE]

The Mediation Model

All the observed variables reported skewness and kurtosis values within the threshold of |2|, indicating the data distribution's normality (Gravetter et al., 2020). However, as a few items slightly exceeded these values (two items on CEN, i.e., "When I was growing up, I felt loved" [R] and "When I was growing up, people in my family looked out for each other" [R], and one item on L-PART, i.e., "At home I feel at ease" [R]), the robust maximum likelihood estimator (MLR) was used for the measurement and full models. The measurement model showed good fit to the data ($MLR\chi^2(312) = 631.37, p < .001, \chi^2/df = 2.02, RMSEA = .044, 90\% CI [.039-.049], CFI = .931, SRMR = .052$), and all the observed indicators significantly ($p < .001$) loaded on the factor they were expected to represent. Few item-level covariations were added only between indicators measuring the same factor. The full mediation model, including both the measurement and

1 structural components, also reported adequate indices of fit: $MLR\chi^2(386) = 799.38, p < .001, \chi^2/df$
2 = 2.07, RMSEA = .045, 90% CI [.040–.049], CFI = .917, SRMR = .055. The results of the
3 structural part of the model are represented in Table 3. The control variables were not included in
4 the table for clarity of representation. Age had no significant effect on any of the model variables,
5 while gender was significantly associated with SOD ($\beta = -.26, p < .001$) and emotional detachment
6 ($\beta = -.13, p = .006$), indicating that the female participants reported lower scores for both
7 mediators. Overall, the model accounted for a large part of the variance of the outcome variable, L-
8 PART (77%).

9 With regard to direct effects, the results indicated that higher levels of CEN were directly
10 associated with higher levels of emotional detachment ($\beta = .40, p < .001$) and with lower levels of
11 SOD ($\beta = -.11, p = .020$), albeit the latter effect was smaller. In turn, lower SOD scores were
12 associated with higher levels of emotional detachment ($\beta = -.35, p < .001$). Finally, the predictor
13 and mediator variables were all directly associated with the L-PART scores: higher levels of CEN
14 ($\beta = .64, p < .001$), SOD ($\beta = .08, p = .030$), and emotional detachment ($\beta = .40, p < .001$) were all
15 associated with higher L-PART. However, the direct effect of SOD on L-PART was rather small.

16 As for the indirect effects, the mediation path from CEN to L-PART through SOD was not
17 significant ($\beta = -.01, p = .142$), while the path including only emotional detachment as a mediator
18 reported a significant indirect effect ($\beta = .16, p < .001$). The full sequential mediation path,
19 including both SOD and emotional detachment as mediators, showed a small but significant indirect
20 effect ($\beta = .02, p = .027$).

21 [INSERT TABLE 3 ABOUT HERE]

22 Discussion

23 This study aimed to advance the understanding of the link between CEN and parent-related
24 loneliness among adolescents. Our findings enrich the existing literature because they reveal the
25 sequential mediating roles of SOD and emotional detachment in this relationship.

1 Consistently with our first hypothesis (H1), we found a significant and positive association
2 between CEN and adolescents' parent-related loneliness. This finding is consistent with the
3 attachment theoretical viewpoint that suggests such forms of early adversity can result in
4 subsequent feelings of deprivation and abandonment (Briere, 2002). Moreover, this finding
5 supports the argument that traumatic experiences other than parental physical or psychological
6 violence (i.e., sexual or emotional abuse) must be considered when exploring how feelings of
7 loneliness develop (Loos & Alexander, 1997). Namely, a lack of parental responsiveness to
8 emotional needs may lead some children to feel deprived of a sense of "internal company" (i.e., a
9 sense of connection with others, even when others are absent; Canham, 2006) and a positive
10 expectation of their parents' availability for support.

11 Surprisingly, and contrary to our expectations, SOD did not operate as a mediator in the
12 relationship between CEN and parent-related loneliness (H2). One possible reason for this finding
13 is that individuals with a history of CEN may develop different strategies to regulate self-other
14 boundaries (Reyome et al., 2010). For example, poorly differentiated adolescents may tend toward
15 excessive over-identification and inappropriate emotional involvement (fusion) with parents to
16 avoid loneliness. On the contrary, they may develop an avoidant relationship with their parents as a
17 result of CEN. Thus, they could alternately both aggravate and compensate their parent-related
18 loneliness, depending on these maladaptive strategies' pervasiveness. Further longitudinal studies
19 are needed to disentangle the relationships among these variables.

20 In accordance with our expectations (H3), the results showed that the link between CEN and
21 parent-related loneliness was partially mediated by emotional detachment from parents while
22 controlling for age and gender. In line with the attachment framework of adolescents' individuation
23 (Ryan & Lynch, 1989), disengagement from parents does not occur in a vacuum. Our results are in
24 line with the idea that developing a healthy individuation is rooted in close relationships with
25 parents and involves an active renegotiation of family relationships (Lapsley & Edgerton, 2002).
26 Indeed, our findings suggest that emotional detachment can develop as a result of difficulties in

1 attachment relationships related to experiencing emotional neglect, in turn leading adolescents to
2 view their parents as rejecting or unsupportive (Ryan & Lynch, 1989; Ryan et al., 2006). This
3 supports previous findings that showed this unhealthy form of individuation may be a sign of
4 serious emotional difficulties and may be linked with negative developmental outcomes (Corsano et
5 al., 2014; Ingoglia et al., 2011).

6
7 Although the role of SOD as a single mediator was not significant, the multiple mediation
8 analysis results showed that CEN was associated with lower SOD, which was, in turn, related to
9 higher emotional detachment and higher parent-related loneliness in adolescents, with a small but
10 significant indirect effect of the whole sequential path. Therefore, our hypothesis (H4) was partially
11 supported. In other words, some adolescents who felt lonely toward their parents had a history of
12 CEN, less clear self–other boundaries, and an increased emotional detachment from their parents. In
13 these cases, diffused boundaries between the self and others may interfere with experiencing
14 belonging and mutuality during the individuation process, making emotional separation from
15 parents more problematic, and as a result, SOD influence on parent-related loneliness becomes
16 more evident. Taken together, these results support that emotional detachment, rather than simply
17 reflecting an extreme type of emotional separation (Beyers et al., 2005, p. 147), could act as a
18 regulatory strategy to compensate weak SOD. As Ingoglia and colleagues (2011) observed,
19 emotionally detached adolescents may have self–other boundaries that are too weak to preserve an
20 adequate emotional separation from parents, thus resulting in a rigid avoidant attitude toward them.
21 In psychodynamic terms, this means that an emotional detachment that manifested in a pervasive
22 way may be a sign not of excess separation but its opposite, namely, a defensive expression of a
23 lack of self–other differentiation (Musetti, 2012).

24 **Strengths and limitations**

25 This study shows a number of strengths, including the relatively large sample size and the
26 large part of the variance of the outcome variable (77%) the proposed model accounted for. In

1 addition, this is, to the best of our knowledge, the first study investigating multiple psychological
2 mediators between CEN and parent-related loneliness. On the other hand, several limitations are
3 noteworthy. Most notably, statistical significance of the observed association should be interpreted
4 with caution because of the small effect size, the relatively large sample size, and the potential for
5 confounding and bias. Moreover, we had to rely on retrospective measures of childhood adverse
6 events. Thus, the multimethod assessment (e.g., clinical interview, psychometric data, collateral
7 information, and review of clinical records) of CEN might lead to more valid findings. However,
8 the CTQ-SF is widely used to assess the history of childhood abuse and neglect (Viola et al., 2015),
9 and evidence in childhood abuse and neglect research (cf. Hardt & Rutter, 2004) has shown that
10 bias does not significantly affect the validity of these retrospective tools. Similarly, as we relied
11 only on cross-sectional data, we cannot draw any conclusions on the effects. Moreover, we used the
12 term “mediation” only in the statistical sense. Given that experiences linked to CEN have taken
13 place chronologically before parent–adolescent relationships are established, longitudinal studies
14 are needed to disentangle the complex relationships among CEN, SOD, emotional detachment, and
15 parent-related loneliness in adolescence. Other limitations of this study include using a convenience
16 sample (rather than a probability sample), with low/minimal levels of CEN and the unequal
17 representation of gender. It is possible that participants who self-selected to participate may not be
18 representative of other people in this life stage. Finally, these findings may have been influenced by
19 other variables not examined here (e.g., insecure attachment, inter-parental conflict,
20 psychopathological symptoms).

21 22 **Conclusions**

23 Notwithstanding its limitations, this study provided new evidence of the role that CEN may
24 play in the multidetermined processes underlying adolescents’ parent-related loneliness.
25 Specifically, this paper presents the first known study examining the simultaneous mediating role of
26 SOD and emotional detachment in the relationship between CEN and parent-related loneliness. We

1 conclude that some adolescents with a history of CEN also seem to have difficulties in establishing
2 clear boundaries between the self and others, and tend to engage in emotionally detached
3 relationships with their parents, which may lead them to feel more parent-related loneliness. Such
4 feelings of loneliness may be the result of an attempt to regulate weak interpersonal boundaries
5 through a radical form of emotional distancing from their parents.

6 **Clinical Implications and Directions for Future Research**

7 Given the established association between protracted and chronic loneliness and increased
8 developmental risk, early detection of clinically relevant loneliness among adolescents is crucial for
9 planning appropriate interventions. Our findings can help clinicians understand the underlying
10 factors contributing to adolescents' loneliness within parent relationships. Thus, this study's results
11 might have relevant clinical implications in identifying targets for interventions, in designing
12 strategies to mitigate parent-related loneliness in adolescence, and in preventing internalizing and
13 externalizing behavior problems. For example, a tailored intervention for adolescents who feel
14 lonely in their relationships with their parents could be addressed to facing negative affect linked to
15 CEN to restore a sense of trust and mutual involvement with their parents instead of limiting the
16 extent of the intervention by endeavoring to lower loneliness. In this more comprehensive way, and
17 in line with trauma-informed principles, an adolescent with a history of CEN may experience a
18 safer and more supportive environment to rebalance the basic needs of differentiation and
19 connectedness.

20 Moreover, a specific intervention focus could be placed on adolescent difficulties with SOD
21 and individuation while taking into account their developmental level (e.g., emotional awareness
22 and cognitive maturity level). Ideally, adolescents individuate from parents while maintaining an
23 emotional connection to them. Counselors and clinicians should help adolescents understand some
24 possible reasons behind their parent-related loneliness, develop more adaptive strategies to regulate
25 self–other boundaries and promote emotional separation in the context of parent relationships.

1 While planning the intervention, a particular attention should be paid to the entire family
2 system in an effort to promote a more reciprocal sense of connection and belonging between
3 adolescents and their parents. In addition, deciding which individuals to involve in the intervention
4 should also be based on the severity of CEN the adolescent has experienced (e.g., statutory child
5 protection agencies should be involved in cases of severe maltreatment). For example, a
6 mentalization approach addressed to both adolescents and parents could act as a buffer against
7 psychopathology in adolescents with a history of childhood maltreatment (Sharp & Venta, 2012),
8 improve the quality of their attachments, and support their capacity to differentiate between their
9 own and others' mental states (e.g., feelings, wishes, and beliefs; Oehlman Forbes et al., 2020).
10 Moreover, given the well-known relationship between maltreatment and emotional dysregulation
11 (Hébert et al., 2018), the dialectical behavior therapy (DBT) approach could be targeted to
12 adolescents and their parents to enhance adolescents' emotion regulations skills and to lower trauma
13 symptoms (Geddes et al., 2013). In addition, this approach has been effective in fostering all family
14 members' contributions to build or promote a mutually validating environment (Hoffman et al.,
15 1999). In this direction, our findings on the association between CEN and loneliness toward parents
16 through emotional detachment may offer further insights on relevant areas of intervention.

17 Starting with our results, future studies should consider specific samples of adolescents. For
18 instance, whether the proposed model is replicable with adolescents who have a severe impairment
19 of self–other differentiation, such as borderline personality disorder (Musetti et al., 2021), can be
20 verified. Therefore, further clinical studies are needed to extend this line of research and provide
21 more definitive significance for public health. Another avenue for future research could focus on
22 the differences in loneliness toward different caregivers. In fact, previous research has reported
23 differences in the trajectories of maternal and paternal relations across adolescence (Levitt et al.,
24 2007). To gain supplementary insight into the role of emotional detachment as a regulatory strategy
25 to compensate weak SOD found in this study, future research using qualitative methods may be
26 helpful for understanding in depth the subjective experiences of adolescents with a history of CEN,

1 and for uncovering other factors involved in the complex relationships between the examined
2 variables. Most important, future longitudinal studies are needed to confirm these findings and to
3 investigate their stability and continuity from adolescence to early adulthood.
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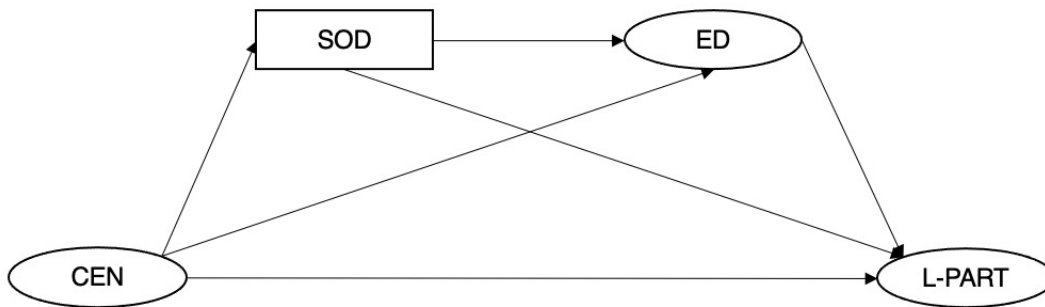
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Figure 1

Hypothesized mediation model



Note: CEN = Childhood Emotional Neglect; SOD = Self-Other Differentiation; ED = Emotional Detachment; L-PART = Parent-related loneliness. Age and gender are not shown but were included as control variables for all variables.

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Table 1
Descriptive Statistics for all investigated variables

	Overall M (\pm SD)	Ranges	Skewness	Kurtosis	Males (n = 195) M (\pm SD)	Females (n = 340) M (\pm SD)
CEN	8.98 (\pm 4.03)	5–25	1.37	1.62	8.88 (\pm 3.90)	9.04 (\pm 4.12)
SOD	6.26 (\pm 2.68)	0–11	-0.16	-0.72	7.16 (\pm 2.81)	5.74 (\pm 2.45)
ED	24.18 (\pm 5.12)	10–39	-0.18	-0.27	24.31 (\pm 5.06)	24.11 (\pm 5.16)
L-PART	21.59 (\pm 7.34)	12– 47	1.11	0.87	21.31 (\pm 6.13)	21.75 (\pm 7.95)

Note: 1. M = Mean; SD = Standard Deviation; CEN = Childhood Emotional Neglect; SOD = Self-Other Differentiation; ED = Emotional Detachment; L-Part = Parent-related loneliness.

Table 2
Correlations between Parent-related Loneliness, Childhood Emotional Neglect, Self-Other Differentiation and Emotional Detachment

	1.	2.	3.	4.	5.	6.
1. Age	-					
2. Gender	-0.06	-				
3. CEN	0.15**	0.02	-			
4. SOD	-0.02	-0.26***	-0.11*	-		
5. ED	-0.02	-0.02	0.31***	-0.29***	-	
6. L-PART	0.09*	0.03	0.69***	-0.16***	0.51***	-

Note: CEN = Childhood Emotional Neglect; SOD = Self-Other Differentiation; ED = Emotional Detachment; L-PART = Parent-related loneliness.

* $p < .05$

** $p < .01$

*** $p < .001$.

Table 3

Standard errors and confidence intervals for direct, indirect and total standardized estimates.

Variables	Estimate	SE	95% CI	
			Lower bound	Upper bound
<i>CEN</i>				
Direct effect on L-Part	0.64***	0.04	0.57	0.72
Indirect effect on L-Part through SOD	-0.01	0.01	-0.02	0.00
Indirect effect on L-Part through ED	0.16***	0.03	0.11	0.21
Indirect effect on L-Part through SOD and ED	0.02*	0.01	0.00	0.03
Total effect on L-Part	0.81***	0.03	0.76	0.86
Direct effect on SOD	-0.11*	0.05	-0.18	-0.03
Direct effect on ED	0.40***	0.06	0.31	0.50
<i>SOD</i>				
Direct effect on L-Part	0.08*	0.04	0.02	0.14
Direct effect on ED	-0.35***	0.05	-0.42	-0.27
<i>ED</i>				
Direct effect on L-Part	0.40***	0.05	0.31	0.49

Note: CEN = Childhood Emotional Neglect; SOD = Self-Other Differentiation; ED = Emotional Detachment; L-Part = Parent-related loneliness.