



UNIVERSITÀ
DEGLI STUDI
FIRENZE

PhD in
Educational Sciences and Psychology

CYCLE XXXIV

COORDINATOR Prof. Boffo Vanna

Childhood neglect experiences and well-being in young
adulthood

Academic Discipline (SSD) MPSI/04

Doctoral Candidate

Dr. Di Paola Ludovica

(signature)

Supervisor

Prof. Nocentini Annalaura

(signature)

Coordinator

Prof. Boffo Vanna

(signature)

Years 2018/2021

Abstract

The general aim of the present dissertation was to investigate the association between childhood neglect experiences and psychological well-being in young adults using an “individual by context” framework (Cicchetti, 1993; Rutter, 2014; Sameroff, 2014), understanding the individual and contextual characteristics that amplify or attenuate the response to childhood neglect experiences and contribute to young adulthood well-being.

There is consistent evidence for consequences of the childhood maltreatment and neglect in terms of psychopathology (Comacchio et al., 2019; Vonderlin et al., 2018), but there is more to learn about how this form of early adversity affects later psychological health and well-being (Greenfield & Marks, 2010; Kia-Keating et al., 2011). A growing body of research indicates variability in psychological functioning following trauma, with some individuals exhibiting substantial psychopathology (Humphreys et al., 2020) and displaying a particularly low level of quality of life (Weber et al., 2016), and others appearing relatively unaffected (e.g., Cicchetti, 2010; McNally, 2003), nor necessarily developing psychiatric disorders. Therefore, studying the association between childhood neglect experiences and adult psychological well-being is important to analyse the processes of adaptation and to guide the development of treatment and prevention programs (Guterman, 2004; Herrenkohl, 2011; Klika & Herrenkohl, 2013).

In particular, the dissertation attempts to understand the interplay between specific dimensions of childhood emotional neglect (e.g., severity), individual characteristics (e.g., emotional characteristics and environmental sensitivity trait), and contextual environments (e.g., family, community and friends as supportive and enriching context factors) in order to understand pathways of adults’ adaptation and psychological well-being after neglectful experiences during childhood.

Overall, the thesis is composed by four studies which covering the following main issues: 1) the multi-dimensional measurement of the childhood maltreatment construct; 2) the magnitude of

association between childhood neglect forms and well-being in adulthood; 3) the mediational role of emotional mechanisms involved in the association between childhood emotional neglect severity and psychological well-being; 4) the moderation role of the individual trait of sensory processing sensitivity and contextual resilience factors in the association between childhood emotional neglect and adults' psychological well-being.

In particular, the First Chapter focused on the psychometric definition of the childhood maltreatment construct. The study has the general aim of analyzing the psychometric properties of the revised version of *Childhood Trauma Questionnaire* including the Witnessed Family Violence construct in a sample of 733 Italian university students (86,2% females) (M age=19,75; SD=1,76).

We have identified the second-order structure as the most appropriate model to define the factorial structure of the revised CTQ scale in the Italian context. The high-ordered construct of childhood maltreatment resulted defined by the 6 specific forms that are: witnessed family violence, emotional neglect, emotional abuse, sexual abuse, physical abuse, physical neglect.

In the second, third and fourth chapters we decided to focus our attention on childhood neglect, which is the forms of childhood maltreatment with the highest prevalence (Clément et al., 2016; Stoltenborgh et al., 2013; Vanderminden et al., 2019). Although childhood neglect is the most prevalent form and involves also, but not only, chronic and severe situations, remains the form of childhood maltreatment that has received the least attention among researchers (Mennen et al., 2010; Stoltenborgh et al., 2013). This is because, over the years, empirical studies on the topic have focused much more attention on the more direct forms of sexual and physical abuse.

In particular, in the Second Chapter we presented a systematic review and meta-analysis about the association between childhood neglect experiences and well-being in adolescence and adulthood, evaluating how this can vary according to the forms emotional, physical, and in relation to the age of participants. The current study was conducted following the PRISMA guidelines (Moher, Liberati, Tetzlaff, Altman, & PRISMA Group, 2009) across five databases (Scopus, Web of

Science, PsycINFO, PubMed, ERIC), from 1930 to October 2021. Starting from 5116 articles, we excluded duplicates from subsequent searches and settled on 2286 articles. By reviewing the titles and abstracts, and following exclusion criteria, we omitted another 2158 articles. The full text articles assessed for eligibility were 128. 106 articles were further excluded according to exclusion criteria. Finally, 27 effects were included in the meta-analysis, resulting from 16 articles. The meta-analysis showed a negative medium effect size $d = -0.51$, (95% CI [-0.62, -0.41]), $p < .001$ meaning that the more a person suffered of neglect the less he/she perceived well-being. Findings revealed the moderator role of age ($QM = 18.84$, $p < 0.001$), showing that young adults report stronger effect size ($d = -0.69$, $p < 0.001$) as compared to studies with adults ($d = -0.34$, $p < 0.001$). Besides, results showed that emotional neglect seems to have a higher impact on well-being ($d = -0.6$, $p < 0.05$) than physical ($d = -0.51$, $p = 0.1$) or childhood neglect ($d = -0.35$, $p < 0.01$).

In the Third Chapter we presented a mediational study. Starting from the findings of the systematic review and meta-analysis, we decided to focus on the emotional neglect form, in order to better understand the processes involved in the association between emotional neglect and psychological well-being. In particular, the study analysed the role of individual differences in the use of emotion regulation strategies in the relationship between emotional neglect and relational well-being, considering the severity level of these traumatic childhood experiences. We think crucial considering neglect severity rather than simply dichotomizing samples into neglected and non-neglected when examining the impact of these experiences on development, health and well-being. This because the processes involved for those who have experienced neglect at a severe level are different from those who have experienced low levels of such experiences. Furthermore, the current study was aimed to understand whether the results are uniquely associated with emotional neglect experiences, controlling for multi-type maltreatment experiences. Participants were 375 Italian university students (84% females) (age: $M=19.87$; $SD=1.92$). Findings underlined that reduced self-awareness and lack of emotional confidence are the core mechanisms of emotion

regulation that specifically mediate the relationship between childhood emotional neglect experiences and low levels of relational well-being in young adulthood. However, they act differently with respect to the levels of severity of such experiences. Emotional confidence is the most compromised mechanism among those who have experienced low levels of emotional neglect and emotional awareness is the most compromised mechanism among those who have experienced more severe levels of these traumatic experiences.

In the Fourth chapter we presented a moderation study. Specifically, the study aims to investigate the moderating role of environmental sensitivity and contextual resilience in the association between childhood emotional neglect and psychological well-being in 737 university students ($M=19.81$; $SD=1.91$, 87% female). Results provided support for a three-way interaction model, with environmental sensitivity and contextual resilience moderating the impact of childhood emotional neglect on relational well-being in young adulthood ($B = .37$, $SE = .11$, $p < .001$). Among those who experienced severe levels of childhood emotional neglect, young adults high in environmental sensitivity were more susceptible to the positive impact of supportive contexts, presenting higher levels of relational well-being compared to those low in environmental sensitivity.

In the Final chapter we discuss about the main results, strengths and limits of the four studies and we will discuss implications and future directions.

Keywords: childhood neglect, childhood maltreatment, confirmatory factor analysis, well-being, systematic review, meta-analysis, severity, emotion regulation mechanisms, sensory processing sensitivity, resilience.

TABLE OF CONTENTS

Abstract	1
Theoretical frame.....	10
CHAPTER 1	14
THE DEFINITION OF CHILDHOOD MALTREATMENT CONSTRUCT.....	14
Psychometric properties and structural validation of Childhood Trauma Questionnaire with Witnessed Family Violence: a revised Italian version	14
Introduction	14
<i>Definitions of childhood maltreatment</i>	15
<i>Multi-Type Maltreatment: the co-occurrence of childhood maltreatment forms</i>	18
<i>The Measurement of Childhood Maltreatment and Witnessed Family Violence</i>	20
1.1 Aims	25
1.2 Materials and Method	25
1.2.1 <i>Participants and procedure</i>	25
1.2.2 <i>Measures</i>	25
1.2.3 <i>Overview of the Analyses</i>	27
1.3 Results	32
1.4 Discussion and Conclusions	37
1.4.1 <i>Limitations and future directions</i>	39
CHAPTER 2.....	40
THE IMPACT OF CHILDHOOD NEGLECT EXPERIENCES ON WELL-BEING IN ADOLESCENCE AND ADULTHOOD	40
Childhood neglect experiences and well-being in adolescence and adulthood: a systematic review and meta-analysis	40
Introduction	40
Long-term consequences of childhood neglect experiences	41
<i>Childhood neglect and well-being</i>	43
<i>The moderator role of age</i>	45
2.1 Research aim	46
2.2 Method	46
2.2.1 <i>Research strategy</i>	46
2.2.2 <i>Search strategy</i>	46
2.2.3 <i>Study inclusion and exclusion criteria</i>	47
2.2.4 <i>Statistical Analysis</i>	50
2.2.5 <i>Moderators</i>	50
2.3 Results	50

2.3.1 <i>Characteristics of included studies</i>	50
2.3.2 <i>Overview of effects' distribution</i>	52
2.3.3 <i>Meta-analysis of the effect of neglect on well-being</i>	54
2.3.4 <i>Moderators' role</i>	55
2.4 Discussion and conclusions	57
2.4.1 <i>Limitations and strengths</i>	59
CHAPTER 3	61
MEDIATIONAL EFFECTS IN THE RELATIONSHIP BETWEEN CHILDHOOD NEGLECT AND WELL-BEING IN YOUNG ADULTHOOD	61
Difficulties in emotion regulation mediate the relationship between childhood neglect severity and well-being in young adults	61
Introduction	61
<i>Effects of childhood emotional neglect experiences on adult relational well-being</i>	62
<i>Childhood maltreatment and neglect severity</i>	64
<i>Emotion regulation as a mediation mechanism</i>	66
<i>The role of multi-type maltreatment as a covariate</i>	69
3.1 The current study	71
3.2 Method	72
3.2.1 <i>Participants and procedure</i>	72
3.2.2 <i>Measures</i>	72
3.2.3 <i>Data analyses</i>	75
3.3 Results	77
3.3.1 <i>Descriptive and prevalence rates</i>	77
3.3.2 <i>Effects of childhood neglect severity on relational well-being</i>	77
3.3.3 <i>Effects of childhood neglect severity on relational well-being through specific mechanism of emotion regulation</i>	78
3.4 Discussion and conclusions	88
3.4.1 <i>Strengths and limitations</i>	93
CHAPTER 4	94
MODERATION EFFECTS IN THE RELATIONSHIP BETWEEN CHILDHOOD NEGLECT AND WELL-BEING IN YOUNG ADULTHOOD	94
Environmental sensitivity and contextual resilience as moderators of the relationship between childhood emotional neglect severity and current psychological well-being in young adulthood.	94
Introduction	94
<i>Environmental sensitivity as a candidate moderator</i>	96
<i>The role of contextual resilience</i>	97
4.1 The current study	98
4.2 Method	99

4.2.1 Participants and procedure.....	99
4.2.2 Measures	100
4.2.3 Overview of the analysis	102
4.3 Results	103
4.3.1 Association between variables and prevalence rates.....	103
4.3.2 Generalized Linear Model: interactions effects of emotional neglect experiences, environmental sensitivity and contextual resilience on relational well-being.....	104
4.4 Discussion.....	108
4.4.1 Limitations, Strengths and future directions.....	110
CHAPTER 5.....	112
GENERAL DISCUSSION AND CONCLUSIONS	112
Dissertation’s contribution to the literature	112
Limitations and strengths.....	117
Future research directions.....	120
References	122

TABLES OF FIGURES

Figure 1.1- Factor loadings and the intercorrelations between latent factors of the six factors model.....	35
Figure 1.2- Factor loadings of the second order factor model.....	36
Figure 2.1- PRISMA Flow Diagram-Flow-chart of identification, screening, eligibility, and inclusion of studies.....	49
Figure 2.2- Box Plots: Cohen’s d distribution among age categories. Adults (AD), young adults (YA). The horizontal line in the box indicates the median values, respectively Med = - 0.38 for AD and Med = - 0.77 for YA.....	54
Figure 2.3- Box Plots: Cohen’s d distribution among type of neglect. Child Neglect (CN), Emotional, Neglect (EN), Physical Neglect (PN).	54
Figure 2.4- Funnel plot obtained with the Trim-and-fill analysis. Black dots are the observed Cohen’s d as a function of standard error. White dots represent missing studies.	55
Figure 3.1-Direct and Indirect effects of emotional neglect severity (low vs none) on relational well-being, through mechanisms of emotion regulations.....	83
Figure 3.2-Direct and Indirect effects of emotional neglect severity (low vs none) on relational well-being, through mechanisms of emotion regulations, controlling for multi-type maltreatment.....	83
Figure 3.3-Direct and Indirect effects of emotional neglect severity (moderate and severe vs none) on relational well-being, through mechanisms of emotion regulations.....	84

Figure 3.4-Direct and Indirect effects of emotional neglect severity (moderate and severe vs none) on relational well-being, through mechanisms of emotion regulations, controlling for multi-type maltreatment.....	84
Figure 3.5-Direct and Indirect effects of emotional neglect severity (moderate and severe vs low) on relational well-being, through mechanisms of emotion regulations.....	85
Figure 3.6-Direct and Indirect effects of emotional neglect severity (moderate and severe vs low) on relational well-being, through mechanisms of emotion regulations, controlling for multi-type maltreatment.....	85
Figure 4.1- Interaction patterns between emotional neglect severity, environmental sensitivity groups and contextual resilience.....	107

INDEX OF TABLES

Table 1.1- Items frequencies.....	29
Table 1.2- Fit Indices of Confirmatory Factor Analysis.....	34
Table 1.3- Cronbach's Alphas.....	34
Table 2.1- General characteristics of included studies.....	52
Table 2.2- Sample size, Correlation, type of neglect investigated, age category of participants, Cohen's d effect size and variance for the included studies.....	53
Table 2.3- Moderating variables: Cohen's d effect size (d) and its associated 95% Confidence Interval (CII and CIu), Q statistic test of Moderators (and associated p value).....	56
Table 3.1- Bivariate correlations between study variables, mean and standard deviation.....	76
Table 3.2-Estimated linear regression coefficients of the direct path between severity level of childhood neglect and relational well-being.....	86
Table 3.3-Estimated regression coefficients of the mediation model.....	86
Table 3.4-Estimated linear regression coefficients of the direct path between severity level of childhood neglect and relational well-being, controlling for multi-type maltreatment.....	87
Table 3.5-Estimated regression coefficients of the mediation model, controlling for multi-type maltreatment.....	87
Table 4.1- Bivariate correlations between study variables, mean and standard deviation.....	104
Table 4.2- AIC and Akaike weights for compared models.....	105
Table 4.3- Model 3 regression coefficients.....	106

Theoretical frame

Childhood maltreatment and childhood neglect constitute some of the most deleterious and stressful challenges for children, representing the greatest failure of the caregiving environment to provide opportunities for positive development (e.g., Cicchetti & Lynch, 1995). Traditionally, childhood maltreatment has been treated as a unique type of child abuse/neglect despite the heterogeneous nature of maltreatment (Crouch & Milner, 1993; Manly et al., 1994; Paget et al., 1993; Silverman et al., 1996; Tebbutt et al., 1997). Later, more attention was paid to the multidimensional nature of childhood maltreatment (Cicchetti & Manly, 2001; Kinard, 1994), distinguishing physical abuse, sexual abuse, neglect, emotional abuse forms (Cicchetti & Toth, 2005; Crouch & Milner, 1993), and more recently also witnessed family violence (Lev-Wiesel et al., 2019; Price-Robertson et al., 2013; Sedlak et al., 2010).

Among the different forms of childhood maltreatment, childhood neglect is the form most frequently reported to youth protection systems in the USA (Vanderminden et al., 2019), with 61% of all children who received a child protection response in 2019 experiencing neglect (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2021); Child Maltreatment 2019). In Italy, national data showed that 9 out of 1,000 children and adolescents taken into social services had been victims of some form of violence. Overall, data showed that childhood emotional neglect is the most frequently reported by children and adolescents, with 40,7% taken in care by the Social Services (Autorità Garante per l'Infanzia e l'Adolescenza, CISMAI, & Terre des Hommes, 2021), but it is the least studied in the scientific literature (Mennen et al., 2010; Stoltenborgh et al., 2013).

Childhood neglect is defined as parental omission of response to children's needs and includes forms of physical and emotional neglect (Bernstein & Fink, 1998; Bernstein et al., 2003; DeLong-Hamilton et al., 2016; Dubowitz et al., 2005; Gilbert et al., 2009; Ferrara et al., 2018; Stoltenborgh,

et al., 2013; Turner et al., 2019). Specifically, physical neglect refers to the failure to meet children's physical needs, for example, the failure to provide adequate nutrition, clothing, personal hygiene, supervision, and medical attention. Emotional neglect refers to the failure to meet children's emotional needs, by failing to provide adequate nurturance and affection (Ferrara et al., 2018; Stoltenborgh et al., 2013; Turner et al., 2019). More recent literature underlined that a neglectful caregiver shows in children a lack of affection and empathy due to alterations in emotional empathy-related areas and in frontal areas associated with poor mother-child interactive bonding (Rodrigo et al., 2020). Therefore, victims of early-life neglect may fail to develop coping and emotion regulation strategies that protect against the development of psychosocial problems due to decreased exposure to healthy examples of coping and increased exposure to maladaptive stress response processes, such as violence and impulsive behaviors (Kim & Cicchetti, 2010; Miragoli et al., 2020).

Nevertheless, neglect remains the form of childhood maltreatment that has received, by far, the least attention among researchers (Hildyard & Wolfe, 2002; Mennen et al., 2010; Stoltenborgh et al., 2013). Although childhood neglect involves chronic and higher risk situations, physical and sexual abuse are more easily identified (Hildyard & Wolfe, 2002; Mayer et al., 2007; McSherry 2007; Mennen, et al., 2010; Stoltenborgh et al., 2013).

In light of these considerations, this dissertation focuses on the forms of childhood neglect, checking for the influence of multiple maltreatment experiences. Overall, this dissertation focuses on the study of the correlation between childhood experiences of neglect, and psychological well-being in adulthood, by studying which individual and contextual factors have an impact on psychological health and well-being.

For years, researchers on clinical psychology focused on how stressful life conditions, such as childhood maltreatment and neglect experiences, led to psychopathology. With the growth of interest in positive psychology (Seligman et al., 2005; Seligman, 2010), the focus shifted, instead,

to the concept of thriving through adversity and to concepts such as resilience and well-being. The positive psychology perspective aimed to supplement what is known about human suffering, weakness, and disorder, in order to have a more complete and balanced scientific understanding of the human experience (Seligman et al., 2005; Seligman, 2010). A complete science of psychology should include an understanding of suffering and happiness, as well as their interaction, and validated interventions that both relieve suffering and increase happiness and well-being (e.g., Seligman et al., 2005). Therefore, research on well-being following childhood neglect experiences is needed for an in-depth analysis of the associated mechanisms and to guide the development of treatment and prevention programs.

The current PhD project aims to expand our knowledge of the indirect mechanisms occurring between retrospectively measured childhood experiences of emotional neglect, and young adulthood well-being in a community sample of university students. In particular, the project aimed to shed light onto the interplay between the nature of the event (severity of one's neglectful experiences), individual characteristics acting as mediational mechanisms (emotional regulation mechanisms) or as moderators of the impact (environmental sensitivity trait), and supportive and resilient contexts.

The thesis will adopt a "individual by context" framework (Cicchetti, 1993; Rutter, 2014; Sameroff, 2014), understanding the individual and contextual characteristics that amplify or attenuate the response to emotional childhood adverse experiences during one's life span. Individual characteristics and environment dynamically interact over time to shape the course of development. Literature about the developmental psychopathology paradigm emphasized that children are not only passive recipients of experience, but also play an active role in selecting, shaping, and constructing their environments, resulting in feedback loops that stimulate continuous structural reorganization and change (Cicchetti, 1993; Rutter, 2014; Sameroff, 2014). The theoretical perspective of developmental psychology relating to the individual by context

(Cicchetti, 1993; Rutter, 2014; Sameroff, 2014), guided us in the study of the impact of childhood neglect experiences, taking into account the individual and contextual characteristics that can influence the ability to cope with such experiences.

Overall, the thesis is composed of four studies which analyze different levels of the phenomenon, i.e., the measurement level, the meta-analytic definition of the association between neglectful experience and psychological well-being, and the study of the mediational and moderation mechanisms able to explain this link.

In particular, the first study of the present dissertation covered the issue of measurement of childhood maltreatment as a multilevel construct defined by the different forms, including physical abuse, sexual abuse, emotional neglect, physical neglect, emotional abuse and witnessed family violence. The second study will investigate the meta-analytic association between childhood neglect and well-being by distinguishing the physical and emotional forms and how this can vary in relation to the age of participants. The third study will analyze emotional regulation mechanisms through which the severity of childhood emotional neglect impacted the level of relational well-being during adulthood. Finally, the fourth, will investigate whether an individual trait relating to environmental sensitivity and contextual resilience can moderate the impact of childhood emotional neglect on current psychological well-being.

CHAPTER 1

THE DEFINITION OF CHILDHOOD MALTREATMENT CONSTRUCT

Psychometric properties and structural validation of Childhood Trauma Questionnaire with Witnessed Family Violence: a revised Italian version

Introduction

More than half of all children worldwide are exposed to violence, in all its forms, per year (e.g., Boothby, 2017). Childhood physical, sexual, and psychological abuse as well as witnessing domestic violence and neglect are the forms of maltreatment of which children are often victims (Slep et al., 2015).

The 2019 data reported to youth protection systems in USA, showed more than four-fifths (84.5%) of victims suffer a single type of maltreatment. 61% are neglected, 10.3% are physically abused, and 7.2% are sexually abused; 15.5% are victims of two or more maltreatment types (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2021); *Child Maltreatment 2019*).

In Europe childhood maltreatment affects over 55 million children. The 2013 European report on preventing child maltreatment documented a high prevalence of child maltreatment, from 9.6% for sexual abuse, 16.3% for physical neglect, 18.4% for emotional neglect, and 22.9% for physical abuse, to 29.6% for emotional abuse (Sethi et al., 2013). More recently a prevalence rates of 24 per 1,000 children were victims of childhood maltreatment: 0.75 per 1,000 for sexual abuse; 2.90 per 1,000 for physical abuse; 3.84 per 1,000 for emotional abuse; 9.66 per 1,000 for physical neglect and 18.69 per 1,000 for emotional neglect, based on cases reported to social services in Netherlands, in 2017 (van Berkel et al., 2020).

Another form of childhood maltreatment to which children are often exposed is that of witnessed family violence (Bellis et al. 2014; Merrick et al., 2018). As reported by the *National Survey of*

Children's Exposure to Violence (Finkelhor et al., 2015a; Finkelhor et al. 2015b; Hamby et al., 2010), 7% of children have been exposed in the prior year to a parent being the victim of physical violence (parent being assaulted, pushed, hit, kicked, choked, or beaten up by the partner), and 18% report ever being exposed to such physical violence. When asked about both physical violence and emotional/psychological violence (verbal threats and displaced aggression, such as an object being thrown or broken or a wall being punched), 11% of all children reported exposure to parental intimate partner violence in the past year, and 26% reported ever being exposed to this form of violence. Among all children exposed to parental victimization, 90% reported witnessing the incident directly (Finkelhor et al., 2015a; Finkelhor et al. 2015b; Sharkey, 2018).

In Italy, national data showed that 9 per 1,000 children and adolescents taken over by social services were victims to some form of violence during childhood. In particular, data showed that childhood emotional neglect and witnessed family violence are the forms most frequently reported by children and adolescents, with 40,7% for emotional neglect and 32,4% for witnessed family violence (Autorità Garante per l'Infanzia e l'Adolescenza, Cismai, & Terre des Hommes, 2021).

Definitions of childhood maltreatment

In the past, maltreatment has typically been treated as a unique type of child abuse/neglect despite the heterogeneous nature of maltreatment (Crouch & Milner, 1993; Manly et al., 1994; Paget et al., 1993; Silverman et al., 1996; Tebbutt et al., 1997). Later, some attention has been paid to the multidimensional nature of childhood maltreatment (Cicchetti & Manly, 2001; Kinard, 1994).

In general, four categories of childhood maltreatment have been distinguished: (1) physical abuse, which involves the infliction of bodily injury on a child by nonaccidental means; (2) sexual abuse, which includes sexual contact or attempted contact between a child and a caregiver or other adult for purposes of the caregiver's sexual gratification or financial gain; (3) neglect, which pertains to both the failure to provide minimum care and the lack of supervision; and (4) emotional maltreatment, which involves persistent and extreme thwarting of a child's basic emotional needs

(Cicchetti & Toth, 2005; Crouch & Milner, 1993). Other authors defined the construct of childhood maltreatment classified into five different forms of abuse (emotional, sexual or physical) and two different forms of neglect (emotional or physical) (Bernstein & Fink, 1998; Bernstein et al., 2003; Gilbert et al., 2009).

None of these early definitions includes the form of witnessed family violence as a dimension of childhood maltreatment. Researchers have used several different terms to define children's exposure to adult domestic violence. The terms “witnesses” or “observers” of violence have been frequently used (Fantuzzo & Mohr, 1999; Kitzmann et al., 2003). In particular, Edleson et al., (2007) defined witnessed family violence not only by including witnessing or seeing violence, but also hearing the violence and observing the aftermath of abuse, for example, bruises on their mother's body or movement to a shelter. Specifically, witnessed family violence is defined as indirect exposure to inter-parental violence and/or parental assault of a sibling; as well as the direct exposure to the aftermath of said assault (Euser et al., 2010; Jouriles et al., 2014; Teicher & Vitaliano 2011). Moreover, these acts also include hitting or threatening a child while in his mother or her mother's arms, taking the child hostage to force the mother returns to the home, forcing the child to watch assaults (Ganley & Schechter, 1996).

Almost all the scales assess the dimension of witnessed family violence referring to the exposure of the child to violence between partners and/or parents, without taking into account the possible presence of brothers and sisters and therefore the violence assisted within the entire family system and the importance of the climate of violence that it creates, which the definition includes. As family violence means “any act or omission by persons who are cohabiting that results in serious injury [physical or emotional] to other members of the family” (Adams, 2006; Wallace, 2002) and also “as violent or aggressive behavior that involved family members or intimate partners” (Osofsky, 1998), it is important to consider the family as a system in the definition of the measurement scale of witnessed family violence. Started from the CTQ-SF scale (Bernstein et al.,

2003) we created a new version of this scale that also included the dimension of witnessed family violence, which considers the family as a system and therefore as a form of context violence.

A reason that highlights the importance of including in the definition of childhood maltreatment the form of witnessed family violence is the fact that childhood maltreatment and domestic violence frequently co-occur in the same families (Appel & Holden, 1998; Edleson, 1999; Hamby, et al., 2010), therefore it is very likely that a child is, at the same time, the victim of direct forms of child maltreatment and witnessed violence within the same family (Devries et al., 2017).

The first authors focused on multi-type maltreatment and who included witnessed family violence among the forms of child maltreatment were Higgins and McCabe (1998), Hamby et al., (2010) and Price-Robertson et al., (2013). Multi-type maltreatment refers to the coexistence of one or more of the following types of child maltreatment: sexual abuse, physical abuse, psychological maltreatment, neglect, witnessing family violence. Higgins and McCabe (1998) noted that a distinction should be made between individuals who have experienced only one maltreatment type (single-type maltreatment) and those who have experienced more than one type of abuse and neglect (multi-type maltreatment). When referring to multiple forms of child maltreatment, most literature studies on the issue take into account the definition of multi-type maltreatment developed by Higgins and McCabe (1998), Hamby et al., (2010) and Price-Robertson et al., (2013), which consider witnessed family violence as a childhood maltreatment dimension.

Moreover, the growing awareness of the negative outcomes associated with child exposure to domestic violence has led to an expansion among some child welfare jurisdictions to define domestic violence exposure as a form of child maltreatment (Edleson, 2004; English et al., 2005a; Henry, 2017; Nixon et al., 2007; Weithorn, 2001). Therefore, when we define childhood maltreatment, we refer to direct forms as physical and sexual abuse and as well as indirect forms of abuse, as neglect and witnessing domestic and family violence (Sedlak et al., 2010).

Multi-Type Maltreatment: the co-occurrence of childhood maltreatment forms

A substantial proportion of maltreated individuals experience multi-type maltreatment, being exposed to at least two of the following inter-personal traumas: physical abuse, sexual abuse, psychological abuse, neglect, witnessing domestic violence, and/or the recurrent incidences of any of these types of child maltreatment (Hamby et al., 2010; Higgins & McCabe, 1998; Lev-Wieselet al., 2019; Price-Robertson et al., 2013). Concerning the prevalence of multi-type maltreatment, Sesar et al., (2010) showed that multi-type maltreatment in childhood was reported by 172 out of 233 (74%) participants. Specifically, emotional and physical abuse was reported by 39 (17%) participants. Thirty (13%) participants were not only emotionally and physically abused but also neglected, while 18 (8%) participants were emotionally and physically abused, neglected, and witnessed family violence before the age of 14. More recently, Mwakanyamale et al., (2018) showed that out of the 1000 participants 20.3% reported two forms of child maltreatment; 18.2% three, 14.7% four and 9.2% over five types of maltreatment.

Considering the strong degree of overlap between maltreatment types, Wolfe and McGee (1994) suggested that 'pure' forms of maltreatment are atypical. Higgins and McCabe (2000) in their study found that more than half of those with scores above the mean on a maltreatment scale were classified as having experienced multi-type maltreatment. The results indicate that there is a high degree of overlap between adults' reports of sexual abuse, physical abuse, psychological maltreatment, neglect and witnessing family violence (Higgins & McCabe, 2000).

A consistent part of the literature highlights the association between the different forms of childhood maltreatment and witnessed violence in the family. Childhood maltreatment and domestic violence have been widely acknowledged as social problems, but they were historically regarded as distinct problems with different causes, service systems, and policy contexts (Banks et al., 2009; Fleck-Henderson, 2000; Henry, 2017; Kaufman et al., 2003; Moles, 2008; Shlonsky, et al., 2007). Research indicates that child maltreatment and domestic violence frequently co-occur

in the same families (Appel & Holden, 1998; Edleson, 1999; Hamby et al., 2010). Co-occurrence refers to the overlap of domestic violence with other forms of child maltreatment, such as physical abuse, sexual abuse, or neglect. Research finds that child maltreatment occurs in up to 60% of homes where domestic violence occurs (Appel & Holden, 1998; Hamby et al., 2010), and that more frequent and severe domestic violence is associated with a higher likelihood that there is also child maltreatment (Devries et al., 2017; Hartley, 2004; Kaufman et al., 2003; Osofsky, 2003). In particular, Devries et al., (2017) hypothesized that those who witnessed IPV would be at increased risk of various forms of violence from parents. They specified that girls and boys who witnessed shouting and who witnessed both shouting and physical IPV were at increased risk of emotional and combined emotional and physical violence from parents.

Multi-type maltreatment was associated with significantly higher levels of trauma symptomatology and self-depreciation than single-type maltreatment. Family factors, particularly low family cohesion and adaptability, predicted adults' retrospective reports of multi-type maltreatment in childhood (Higgins & McCabe, 2000). The impact in youth exposed to both intimate partner violence (IPV) and maltreatment include lower sense of well-being (Carlson, 1991), more depressive symptoms (Kaslow & Thompson, 2008; Moylan et al., 2010), more trauma symptoms and dissociation (Kaslow & Thompson, 2008), increased exhibition of aggressive behaviors (O'Keefe, 1995), and greater engagement in delinquency (Arata et al., 2005; Moylan et al., 2010).

Starting from this complex literature, when we want to investigate experiences of childhood maltreatment, it is necessary to use measurement scales that assess multiple forms of childhood maltreatment that include the more contextual form of witnessed family violence together with other forms of physical abuse, sexual abuse, emotional abuse, physical neglect and emotional neglect.

The Measurement of Childhood Maltreatment and Witnessed Family Violence

So far, few measures consider witnessed family violence as a form of childhood maltreatment.

There are some scales that evaluate multiple forms of child maltreatment, such as the most used retrospective scale Childhood Trauma Questionnaire (CTQ) (Bernstein & Fink, 1998), but it does not include the form of witnessed family violence as a dimension of childhood maltreatment.

Witnessed family violence, in most cases, has been measured as an independent construct.

Among the most used scales that evaluate witnessed violence and exposure to domestic violence we find the Conflict Tactic Scale (CTS, Straus, 1979). The CTS originally consists of a list of actions which a family member might take in a conflict with another member. The scale is composed by 3 levels of the first factor: reasoning, verbal aggression, and violence, and also to the 8 levels factor that corresponds to the nuclear family role structure: husband-to-wife, wife-to-husband, father-to-child, child-to-father, mother-to-child, child-to-mother, child-to-sibling, and sibling-to-child. In particular, witnessed family violence was measured with a modified version of the Conflict Tactic Scale (CTS, Straus, 1979) adapted for Italian youngsters by Baldry (2003). The scale consists of 10 items measuring different levels of violence: 5 refer to the father's violence against the mother and 5 to the mother's violence against the father. Types of violence include verbal (name calling), physical (hitting and throwing objects at the person), and emotional (threatening) as well as a question on harm inflicted by one parent on the other. Answers could be given on a 5-point Likert scale ranging from 1 = 'never happened' to 5 = 'always happened.'

Another fairly recent scale that measure witnessed family violence is the Conflict Properties Scale (19 items) (Camisasca et al., 2017) adapted from the Children's Perceptions of Inter-parental Conflict Scale (CPIC; Grych, Seid, & Fincham, 1992), which reflects conflict that occurs regularly, involves higher levels of hostility, and is poorly resolved and is composed of three subscales: Frequency, Intensity, and Resolution. Children rated each item, using a 3-point scale ("true", "sort of true", "false"). Sample items include: "I often see my parents arguing"

(Frequency), “My parents get really mad when they argue” (Intensity), and “Even after my parents stop arguing, they stay mad at each other” (Resolution).

Among other scales that assess witnessed family violence, we also find The Children’s Exposure to Domestic Violence scale (CEDV) composed by 42-item child self-report scale with three sections (Edleson et al., 2008). Section 1, items 1–10, asks the child is to rate exposure to 10 different types of adult domestic violence; examples of items are: “Mom and her partner argued about you”, “Mom's partner hurt her feelings”. Responses for items range from 0 (never) to 3 (almost always). Section 2 asks a series of 23 questions related to community exposure, involvement in violence, risk factors, and other forms of victimization. Section 3 consists of nine questions related to demographic information.

However, in the literature we find some studies that have attempted to include the form of witnessed family violence among forms of childhood maltreatment in a single scale of measurement.

Specifically, we find Child Abuse and Trauma (CAT) scale developed by Sanders and Becker-Lausen (1995), that assesses negative home environment, neglect, sexual abuse and punishment dimensions. In particular items related to witnessed family violence are included in the dimensions of negative home environment, neglect and sexual abuse, therefore no specific measurement of the dimension of witnessed family violence was present in this scale, because a single specific sub-scale has not been defined for the dimension of witnessed family violence. CAT scale shows good structural validity and strong internal consistency and test-retest reliability. Then, Higgins and McCabe develop the Comprehensive Child Maltreatment Scale (CCMS) (Higgins & McCabe, 2001) that is a 22-item retrospective self-report measure of adults' perceptions of their childhood experiences of potentially abusive and neglectful behaviour and include five subscales: sexual abuse, physical abuse, psychological maltreatment, neglect, witnessing family violence. In this study the authors consider witnessed family violence as a dimension related to the construct of

childhood maltreatment. In particular witnessing family violence sub-scale has only two items, rated on a 5-point scale (0 = *never or almost never* to 4 = *very frequently*). Unlike the other four scales, these two items require a global response concerning family violence that was witnessed (behaviour of mother, father, and others adult/ older adolescent). The two items are: “How frequently do you believe you [your child] witnessed any of the behaviour in the list below, directed towards others in the family?” [*physically punished for wrongdoing (e.g., smacking, grabbing, shaking); other use of violence (e.g., hitting, punching, kicking); severely hurt you [your child] (requiring medical attention)*]; “How frequently do you believe you [your child] witnessed any of the behaviour in the list below directed towards others in the family?” [*yelled at you [your child]; ridiculed, embarrassed, used sarcasm (made you [your child] feel guilty, silly or ashamed); provoked, made you [your child] afraid, used cruelty*]. Results of the exploratory factor analysis indicate that the witnessed family violence factor is measured by two forms in particular: witness physical abuse and witness psychological maltreatment. Four factors were extracted from the analyses: the first factor, interpreted as "Non-sexual Maltreatment" combined all the items from the Physical Abuse, Psychological Maltreatment, and Neglect scales of the CCMS, all with loadings above .60. Items from the Physical Abuse and Neglect scales loaded more strongly than the items from the Psychological Maltreatment scale. The two items from the CCMS Witnessing family violence scale (concerned with witnessing physical abuse and witnessing psychological maltreatment of other family members) were the only items that loaded highly on Factor 4 ("Witnessing Family Violence"). There is no information on the relationship between the different latent factors.

A more recent scale is the Computer Assisted Maltreatment Inventory (CAMI) (DiLillo et al., 2010), which measure five subtypes of maltreatment: sexual, physical, psychological abuse, neglect and exposure to IPV. In particular exposure to IPV subscale starts with 17 pairs of screener statements describing physically aggressive acts that can occur between parents or parental figures

and verbal/emotional abuse occurring between parents. An additional item assessing verbal/emotional abuse occurring between parents is also included. To assess level of exposure to violence, participants select one of four options for each item: 1 = *I was in the room or area and saw this happen*; 2 = *I was close by and heard this happen but did not see it*; 3 = *I was gone when this happened but heard about it later*; 4 = *This activity never occurred between my parents*. Those who respond with a 1, 2, or 3 to any item are considered to have been exposed to violence and are directed to questions assessing the age at which the exposure to violence began and ended, the frequency of witnessing IPV, recollection of whether alcohol was a factor, whether injuries resulted from the acts, and, if so, whether medical attention was sought. The authors considered necessary to include the dimension of exposure to IPV (also called “witnessing domestic violence”) within the scale, because this form of violence often co-occurs with other abuse types (Appel & Holden, 1998) and it is considered part of the constellation of abusive experiences that predict long-term psychosocial problems (Kitzmann et al., 2003). The main results of the study show short-term test–retest reliability of the CAMI subscales was good to strong, as was internal consistency on applicable scales.

In this study we decided to evaluate the factorial structure of the Italian revised version of Childhood Trauma Questionnaire (CTQ-SF) where a subscale of Witnessed Family Violence has been integrated. We chose to start from the Childhood Trauma Questionnaire (CTQ) because it is the most used retrospective scale to assess multiple forms of childhood maltreatment within a single scale. Moreover, the structure of the CTQ–SF allows for the study of the most common types of maltreatment while being sensitive to maltreatment severity (Bernstein & Fink, 1998) and several studies investigating psychometric features of the CTQ–SF have demonstrated its good reliability and validity across countries and samples. In particular, internal consistency and the five-factor structure have been confirmed for the CTQ–SF in the United States (Bernstein et al., 2003), Canada (Paivio & Cramer, 2004), the Netherlands (Thombs et al., 2009), Brazil (Grassi-

Oliveira et al., 2014), Spanish (Hernandez et al., 2013) and Italy (Sacchi et al., 2018). As regards the Italian context, the study of Sacchi, Vieno and Simonelli, (2018) assessed construct validity of the CTQ–SF Italian version, using confirmatory factor analyses, testing for four different theoretical models. First, they tested the five-factor, intercorrelated model originally proposed by the authors (Bernstein et al., 2003); second, they examined a four-factor model, where items of Physical Neglect and Emotional Neglect loaded on a single factor (Neglect); third, they tested a one higher order model, with five dimensions and a common high-order factor. Finally, a single-factor model was also performed to test for possible unidimensionality of the scale. The study confirmed that the 5-factor solution (Emotional Neglect, Physical Neglect, Emotional Abuse, Physical Abuse and Sexual Abuse) represents the model that best fits Italian data of nonclinical samples. Additionally, internal consistency reliability was good across the 5 scales and in line with the original version.

Moreover, studies investigating the psychometric properties of CTQ in nonclinical samples (Scher et al., 2001) reported the five-factor structure as the best model for nonreferred groups, confirming the original results on the community sample of Bernstein and colleagues (2003). Finally, the second-order factorial structure of the CTQ was confirmed by the studies of Grassi- Oliveira et al., (2014) and Spinhoven et al., (2014).

Considering that there are few measures that assess the childhood maltreatment including the form of witnessed family violence and starting from the fact that there is no validation of the CTQ-SF scale with witnessed family violence dimension in the factorial structure, the goal of this study is to analyze the psychometric properties of the revised Italian version of CTQ-SF scale where the dimension of witnessed family violence has been included as a dimension of childhood maltreatment.

1.1 Aims

The aim of the present study is to analyze the psychometric properties of the revised version of CTQ-SF scale in a sample of Italian university students where the dimension of witnessed family violence has been included as a dimension of childhood maltreatment. First, we tested the six-factor model where the dimension of witnessed family violence has been included together with the other forms of childhood maltreatment, already present in the original five-factor model tested by the authors (Bernstein et al., 2003): physical abuse, physical neglect, sexual abuse, emotional abuse and emotional neglect. Then, a second order structure will be tested where the childhood maltreatment latent construct is defined by the six first order dimensions of childhood maltreatment: witnessed family violence, emotional neglect, emotional abuse, physical neglect, physical abuse, sexual abuse.

1.2 Materials and Method

1.2.1 Participants and procedure

The participants are 733 students from the University of Florence with an age ranging from 18 to 29 years ($M=19,75$; $SD=1,76$). Of these 733 students, the majority are female ($n=632$) and 99 male, two students did not provide the answer. 361 students (49%) participated in the research during the first semester of university lessons between October and December 2019; 372 students (51%) participated between October and December 2020. The questionnaire has administered via the google form platform was anonymous, respecting the processing of personal data and included an informed consent form.

This study was approved by University Ethics Committees for Research of University of Florence (Prot. n. 0027513 of August 9, 2019).

1.2.2 Measures

Childhood Trauma Questionnaire (CTQ-SF) with Witnessed Family Violence: a revised Italian version

Starting from the literature indicating co-occurrence of experiences of childhood maltreatment and experiences of witnessed family violence during childhood (Devries et al., 2017; Edleson, 1999; Hazen et al., 2006; Kitzmann et al., 2003; Wolfe et al., 2003; Osofsky, 2003), it was created the Italian revised version of CTQ-SF scale which includes the dimension of witnessed family violence.

The items that constitute the dimension of witnessed family violence were created from the modified version of the Conflict Tactic Scale (CTS, Straus, 1979) adapted for Italian youngsters by Baldry (2003). The scale consists of 10 items measuring different levels of violence: 5 refer to the father's violence against the mother and 5 to the mother's violence against the father. Types of violence include verbal (name calling), physical (hitting and throwing objects at the person), and emotional (threatening) as well as a question on harm inflicted by one parent on the other.

In the revised version of the Italian CTQ-SF the subscale of witnessed family violence consists of 5 items measuring different forms of family violence: 3 refers to verbal and emotional violence between mother and father and within the family context, one refers to parent's physical violence and punishment against brothers and sisters, one refers to negative and violent family climate. The original version by Straus (Straus, 1979) has been modified because the items tapping verbal and physical violence are extended to all members of the family context such as brothers and sisters. Finally, one item evaluates the general family climate of terror perceived within a violent family. This revised version consists of six scale which correspond to six forms of childhood maltreatment: physical, emotional and sexual abuse, physical and emotional neglect and witnessed family violence. As the original version of the scale CTQ-SF (Bernstein et al., 2003) was maintained the Minimization/Denial (M/D) scale: any score from 1 to 3 on the M/D scale suggests the possible underreporting of maltreatment (false negatives).

Each of the six scales consists of five items and each item was evaluated on a 5-point Likert scale from 1 "Never True" to 5 "Very Often True", with a score ranging from 5 to 25.

The scale is composed of 33 items including those of the Minimization/Denial scale.

The scales are composed as follows:

- 5 items (6,11,17,21,28) regarding Witnessed Family Violence (e.g. “I have witnessed frequent fights and attacks between my parents”; “In my family insults and verbal violence were banned”)
- 5 items (5, 8, 15, 23, 33) regarding Emotional Neglect (e.g. “There was someone in my family who made me feel important or special”; “The people in my family took care of each other”)
- 5 items (1, 2, 4, 7, 31) regarding Physical Neglect (e.g. “I didn’t have enough to eat”; “I knew there was someone who took care of me and protected me”)
- 5 items (3, 9, 16, 22, 30) regarding Emotional Abuse (e.g. “I thought my parents wished I was never born”; “People in my family used to tell me insulting things that hurt me”)
- 5 items (10, 13, 14, 18, 20) regarding Physical Abuse (e.g. “The people in my family beat me so hard I left bruises or marks.”; “I was punished with a belt, a stick, a rope or other objects of this type”)
- 5 items (24, 25, 27, 29, 32) regarding Sexual Abuse (e.g. “Someone tried to touch me or get touched for sexual purposes”; “Someone tried to make me do or show me sex stuff”)
- 3 items (12,19,26) regarding Minimization/Denial scale (“There was nothing I wanted to change in my family”; “I had a perfect childhood”; “I had the best family in the world”).

Items 2, 5, 8, 15, 23, 28, 31, 33 are reverse score.

1.2.3 Overview of the Analyses

Confirmatory factor analysis

All the analyses were conducted via Mplus 7.0 (Muthén & Muthén, 1998-2010). Referring to the categorical nature of the data, the estimator used in the Confirmatory Factor Analyses was a mean and variance-adjusted least-squares estimator WLSMV (weighted least squared mean variance).

All analyses of the data were conducted on 731 participants out of 733, because two participants did not answer to the CTQ questionnaire.

Analyses were conducted in two steps. Firstly, Confirmatory Factor Analysis has been conducted, testing a six-factor model with 30 items and 6 factors (witnessed family violence: 6,11,17,21,28; emotional neglect: 5,8,15,23,33; emotional abuse: 3,9,16,22,30; sexual abuse: 24, 25, 27,29,30; physical abuse: 10, 13, 14, 18,20; physical neglect: 1, 4, 7, 2, 31). Then, we tested a second-order factor model (CTQ) with 30 items, 6 first order factors (witnessed family violence: 6,11,17,21,28; emotional neglect: 5,8,15,23,33; emotional abuse: 3,9,16,22,30; sexual abuse: 24, 25, 27,29,30; physical abuse: 10, 13, 14, 18,20; physical neglect: 1, 4, 7, 2, 31).

The models were evaluated by means of the following overall indices: the chi-square test χ^2 (statistic), the root-mean square error of approximation (RMSEA), the comparative fit index (CFI), and the weighted root mean square residual (WRMR). Recommended cutoff points for these measures are: for RMSEA the cutoff is .08 (Brown & Cudek, 1993) or .06 (Hu & Bentler, 1998); for CFI the cutoff is .90 (Bollen, 1989) or .95 (Hu & Bentler, 1998). Finally, for WRMR the cutoff of 1.0 has moderate to strong power to detect misspecified models with acceptable Type I error (Yu, 2002). Yu (2002) reported that WRMR, similar to χ^2 might be too powerful for trivial misspecification on factor covariance when sample size was large.

In order to evaluate the reliability of the scales, we analysed the internal consistency of the all dimensions (Cronbach's alpha). The cut off are the follows: $\alpha > .90$ is excellent; $.90 > \alpha > .80$ is good; $.80 > \alpha > .70$ is acceptable; $.70 > \alpha > .60$ is questionable and $\alpha < .50$ is poor.

Table 1.1 *Items frequencies*

Item	N	%
<i>1. I didn't have enough to eat</i>		
1	688	94,1
2	24	3,3
3	9	1,2
4	7	1,0
5	3	,4
Total	731	100
<i>2. I knew there was someone who took care of me and protected me. *</i>		
1 (5)	531	72,7
2 (4)	126	17,3
3 (3)	48	6,6
4 (2)	14	1,9
5 (1)	11	1,5
Total	730	100
<i>3. The people in my family used to call me names like, uh, stupid, stupid, lazy, ""or ugly, uh, ugly.</i>		
1	492	67,3
2	134	18,3
3	51	7,0
4	41	5,6
5	13	1,8
Total	731	100
<i>4. My parents were too drunk or on drugs to take care of the family.</i>		
1	709	97,0
2	8	1,1
3	10	1,4
4	2	,3
5	2	,3
Total	731	100
<i>5. There was someone in my family who made me feel important or special. *</i>		
1 (5)	433	59,2
2 (4)	177	24,2
3 (3)	81	11,1
4 (2)	26	3,6
5 (1)	14	1,9
Total	731	100
<i>6. I have witnessed frequent quarrels and attacks between my parents.</i>		
1	226	31,1
2	211	29,0
3	115	15,8
4	83	11,4
5	92	12,7
Total	727	100
<i>7. I had to wear dirty clothes.</i>		
1	707	96,8
2	14	1,9
3	5	,7
4	3	,4
5	1	,1
Total	730	100
<i>8. I felt loved. *</i>		
1 (5)	439	60,1
2 (4)	178	24,4
3 (3)	73	10,0
4 (2)	31	4,2
5 (1)	10	1,4
Total	731	100

<i>9. I thought my parents wanted me never to be born.</i>		
1	555	76,0
2	79	10,8
3	37	5,1
4	38	5,2
5	21	2,9
Total	730	100
<i>10. I was beaten so hard by someone in my family that I had to go to the doctor or hospital.</i>		
1	708	97,0
2	11	1,5
3	6	,8
4	3	,4
5	2	,3
Total	730	100
<i>11. I have witnessed violent punishments against my brothers/sisters.</i>		
1	613	84,0
2	62	8,5
3	25	3,4
4	17	2,3
5	13	1,8
Total	730	100
<i>13. The people in my family beat me so hard that I left bruises or marks.</i>		
1	645	88,4
2	45	6,2
3	17	2,3
4	12	1,6
5	11	1,5
Total	730	100
<i>14. I was punished with a belt, a wand, a rope or other objects of this kind.</i>		
1	655	89,8
2	41	5,6
3	13	1,8
4	15	2,1
5	5	,7
Total	729	100
<i>15. The people in my family took care of each other. *</i>		
1 (5)	334	45,8
2 (4)	209	28,7
3 (3)	111	15,2
4 (2)	59	8,1
5 (1)	16	2,2
Total	729	100
<i>16. People in my family used to tell me insulting things that hurt me.</i>		
1	444	61,0
2	150	20,6
3	67	9,2
4	36	4,9
5	31	4,3
Total	728	100
<i>17. In my family there was a climate of terror and fear.</i>		
1	590	80,7
2	73	10,0
3	32	4,4
4	25	3,4
5	11	1,5
Total	731	100
<i>18. I think I was physically abused.</i>		
1	685	94,2
2	16	2,2
3	9	1,2
4	10	1,4

5	7	1,0
Total	727	100
<i>20. I was beaten so hard that others, a neighbor, a teacher or a doctor, noticed.</i>		
1	713	97,7
2	8	1,1
3	4	,5
4	5	,7
5		
Total	730	100
<i>21. After a family fight, my mother cried and was worried for a long time.</i>		
1	373	51,2
2	150	20,6
3	93	12,8
4	67	9,2
5	45	6,2
Total	728	100
<i>22. I felt like someone in my family hated me.</i>		
1	591	81,2
2	64	8,8
3	26	3,6
4	23	3,2
5	24	3,3
Total	728	100
<i>23. The people in my family were close. *</i>		
1 (5)	265	36,4
2 (4)	226	31,0
3 (3)	114	15,7
4 (2)	71	9,8
5 (1)	52	7,1
Total	728	100
<i>24. Someone tried to touch me or get touched sexually</i>		
1	671	92,4
2	18	2,5
3	14	1,9
4	13	1,8
5	10	1,4
Total	726	100
<i>25. Someone threatened to beat me or say false things about me if I hadn't done sexual acts with them.</i>		
1	712	97,9
2	5	,7
3	4	,6
4	4	,6
5	2	,3
Total	727	100
<i>27. Someone tried to get me to do or to show me sex stuff.</i>		
1	684	94,0
2	19	2,6
3	13	1,8
4	7	1,0
5	5	,7
Total	728	100
<i>28. In my family insults and verbal violence were banned. *</i>		
1 (5)	204	28,1
2 (4)	181	24,9
3 (3)	120	16,5
4 (2)	121	16,6
5 (1)	101	13,9
Total	727	100
<i>29. Someone's been harassing me.</i>		
1	684	94,3
2	11	1,5
3	14	1,9

4	7	1,0
5	9	1,2
Total	725	100
<i>30. I think I was emotionally abused.</i>		
1	540	74,7
2	86	11,9
3	37	5,1
4	27	3,7
5	33	4,6
Total	723	100
<i>31. There was someone who would take me to the doctor if I needed them. *</i>		
1 (5)	613	84,1
2 (4)	75	10,3
3 (3)	21	2,9
4 (2)	9	1,2
5 (1)	11	1,5
Total	729	100
<i>32. I think I was sexually abused.</i>		
1	693	95,6
2	10	1,4
3	11	1,5
4	3	,4
5	8	1,1
Total	725	100
<i>33. My family has been a source of strength and Support. *</i>		
1 (5)	367	50,3
2 (4)	178	24,4
3 (3)	106	14,5
4 (2)	55	7,5
5 (1)	23	3,2
Total	729	100

Note: * reverse score

1.3 Results

Confirmatory Factor Analysis and Internal Consistency

Descriptive analyses about items frequencies are reported in Table 1.1.

The preliminary results of the confirmatory factor analysis showed a warning related to the residual variance of the PA (physical abuse), in particular in the second order model. Besides, the MI (Modification Indices) indicated a high correlation between ctq_18 (*I think I was physically abused*) and SA (sexual abuse). Therefore, the final models do not include the item ctq_18 as an indicator of PA (physical abuse).

Table 1.2 shows the fit indices of the tested models. Fit indexes of the two tested model were within the expected range. Specifically, the six-factor model shows the following fit indexes: $\chi^2(362) = 857.790, p < .0001$, CFI = .978, RMSEA = .043, confidence interval [CI] 90% = .040;.047;

WRMR = 1.199; the second order model reports the following fit indexes: $\chi^2 (371) = 1049.529$, $p < .0001$, CFI = .969, RMSEA = .050, confidence interval [CI] 90% = .046; .054, WRMR = 1.424. All factor loadings of the two tested models are significant. For the six-factor model the estimates range from .61 to .98 and the intercorrelations between the six latent factors ranged between .43 and .89 (Figure 1.1). For the second order model the estimates range from .60 to .98. Besides, the second order factor loadings reported significant and high estimates, ranging from .64 to .98 (Figure 1.2). In particular, the estimates between CTQ and the first order latent factors are .83 for PA, .91 for PN, .64 for SA, .98 for EA, .87 for EN and .90 for WFV (Figure 1.2).

Reliability coefficients

Cronbach's alphas were from good to excellent for Witnessed Family Violence (.79), Emotional Abuse (.86), Sexual Abuse (.88), Emotional Neglect (.91) and for CTQ second order factor (.93). Cronbach's alpha was acceptable for Physical Abuse (.71) and unsatisfactory for Physical Neglect Scale (.62) (see Table 1.3).

Table 1.2 *Fit Indices of Confirmatory Factor Analysis*

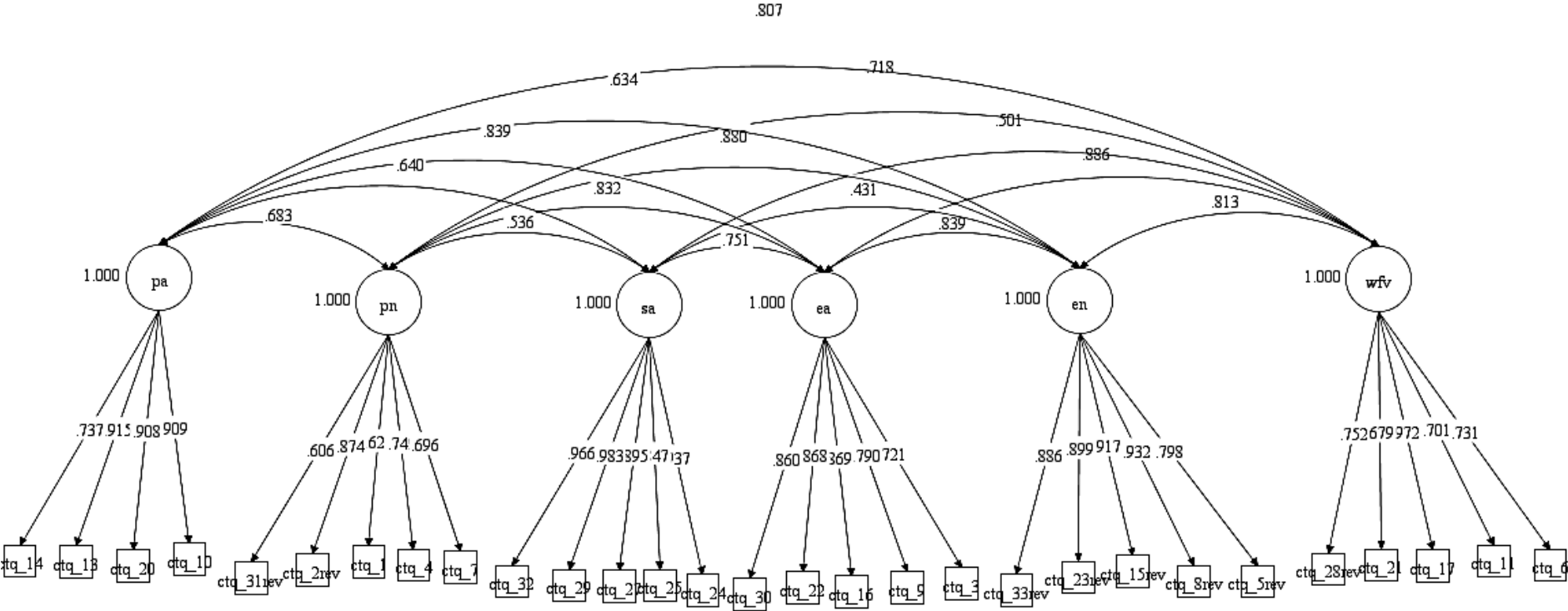
<u>Model</u>	χ^2	Df	<i>P</i>	RMSEA [90%CI]	CFI	WRM R	N
Six-Factor Model	857.790	362	.0000	.043 [.040;.047]	.978	1.199	731
Second-Order Model	1049.529	371	.0000	.050 [.046;.054]	.969	1.424	

Note: Six-Factors Model: 29 items, 6 factors (witnessed family violence: 6,11,17,21,28; emotional neglect: 5,8,15,23,33; emotional abuse: 3,9,16,22,30; sexual abuse: 24, 25, 27,29,30; physical abuse: 10, 13, 14, 20; physical neglect: 1, 4, 7, 2, 31). Second-Order Model: high order factor (CTQ), 29 items, 6 first order factors (witnessed family violence: 6,11,17,21,28; emotional neglect: 5,8,15,23,33; emotional abuse: 3,9,16,22,30; sexual abuse: 24, 25, 27,29,30; physical abuse: 10, 13, 14, 20; physical neglect: 1, 4, 7, 2, 31).

Table 1.3 *Cronbach's Alphas*

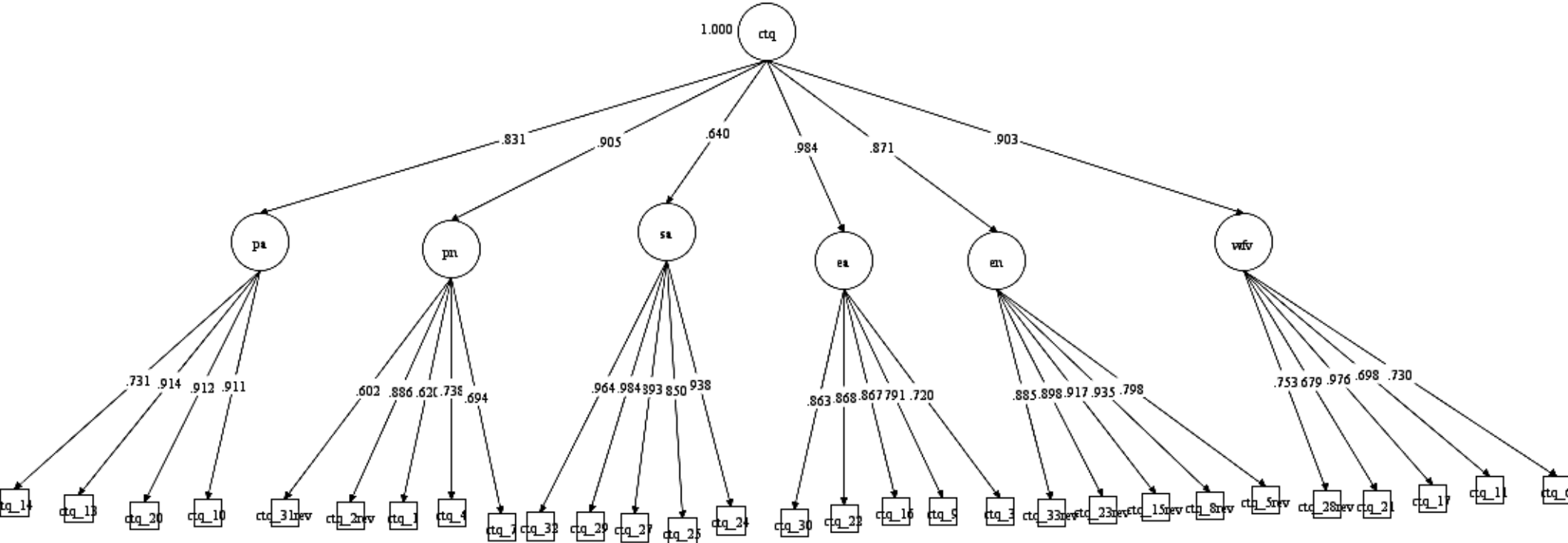
CTQ SCALES	
WFV	.79
EN	.91
EA	.86
SA	.88
PA	.71
PN	.62
CTQ	.93

Figure 1.1 Factor loadings and the intercorrelations between latent factors of the six factors model



Note: All parameters are significant at $p=.001$

Figure 1.2 Factor loadings of the second order factor model



Note: All parameters are significant at p=.001

1.4 Discussion and Conclusions

The present study attempted to analyze the factorial structure of Italian revised version of CTQ-SF scale in which the dimension of witnessed family violence has been included.

In order to analyze the factorial structure of this new Italian version of CTQ-SF with the dimension of witnessed family violence, we conducted a confirmatory factor analysis, testing six-factors and second order factor models.

Fit indexes of the two tested models were within the expected range and the values of fit indexes are not very different; even if the six-factors model showed slightly better fit indices than the second-order factor model. Nevertheless, the six-factors model reported high intercorrelations between latent factors: in particular, between emotional abuse and witnessed family violence .89; physical neglect and emotional neglect .88; physical abuse and emotional abuse .84; emotional abuse and emotional neglect .84 and physical neglect and emotional abuse .83. Similar results emerged in many studies about the psychometrics properties of CTQ-SF, which analyzed the original five factors model (Bernstein & Fink, 1998), showing high intercorrelations between latent factors (Scher et al., 2001; Bernstein et al., 2003; Thombs et al., 2009; Spinhoven et al., 2014). However, results of the six factors model indicate that some forms of childhood maltreatment seem to measure similar indicators. The reason can be linked to the definition of the childhood maltreatment as a multilevel construct and to the co-occurrence between child maltreatment forms, particularly related to the overlap of witnessed family violence with physical and emotional abuse or neglect (Appel & Holden, 1998; Edleson, 1999; Hamby et al., 2010; Higgins & McCabe, 1998; Lev-Wiesel et al., 2019; Price-Robertson et al., 2013; Sesar et al., 2010). Therefore, we have identified the second-order model as the most appropriate to define the factorial structure of the revised CTQ-SF scale in the Italian context, in which the high-ordered construct of childhood maltreatment is defined by the 6 specific forms that are: witnessed family violence, emotional neglect, emotional abuse, sexual abuse, physical abuse, physical neglect.

The final model resulted a second order factorial structure (CTQ) with 29 items and 6 first order factors that are: witnessed family violence (items 6,11,17,21,28); emotional neglect (items 5,8,15,23,33); emotional abuse (items 3,9,16,22,30); sexual abuse (items 24, 25, 27,29,30); physical abuse (items 10, 13, 14, 20); physical neglect (items 1, 4, 7, 2, 31).

First of all, the factorial structure maintains the five factors of original CTQ -SF scale by Bernstein et al., (2003). In addition, it includes the dimension of witnessed family violence among forms of childhood maltreatment. The results of the analysis show that the witnessed family violence dimension saturates the childhood maltreatment construct (CTQ) at the same strength that the other latent factors (estimate value of .90). This result seems to be consistent with the literature that highlights the fact that the form of witnessed family violence is one of the forms of maltreatment that can be experienced during childhood and not as an isolated form compared to others, but rather that often co-occur with others (Appel & Holden, 1998; Devries et al., 2016; Edleson, 1999; Hamby et al., 2010; Lev-Wiesel et al., 2019). Moreover, these results are in line with the recent definition of childhood maltreatment construct that considers witnessed family violence as one of the forms of childhood maltreatment (Lev-Wiesel et al., 2019; Price-Robertson et al., 2013; Sedlak et al., 2010).

As for the scale's reliability, results have shown high Cronbach's alpha levels for the total revised version CTQ scale, similar to that shown by others multi-type maltreatment scales that also considered witnessed family violence as a form of childhood maltreatment, such as Higgins and McCabe (2001), Sanders and Becker-Lausen (1995). Moreover, the results show a good Cronbach's alpha level for Witnessed Family Violence, Emotional Abuse and Sexual Abuse, an excellent Cronbach's alpha level for Emotional Neglect and acceptable for Physical Abuse. It was instead unsatisfactory for the Physical Neglect scale and this result is in line with some studies present in literature such Sacchi et al., (2018); Thombs et al., (2009); Bernstein et al., (2003); Sher et al., (2001); Paivio and Cramer (2004) and the first original CTQ validation study by Bernstein

and Fink (1998), showing a lower Cronbach's alpha level of the PN factor than other latent variables. Therefore, we can say that new version of CTQ-SF scale shows a good internal consistency.

Overall, this study has brought an integration to the literature on structural validation of the CTQ-SF scale, through the inclusion of the dimension of witnessed family violence as a dimension of childhood maltreatment. At national level the study has been considered a contribution to the definition of the childhood maltreatment as multilevel construct in which the dimension of witnessed family violence is defined as indirect exposure to interparental-violence and/or parental aggression towards a brother/sister; as well as direct exposure to the consequences of such aggressions. Then, we can also consider this study a contribution at an international level because there is no validation of the CTQ-SF scale in which the dimension of witnessed family violence is included in the factorial structure.

1.4.1 Limitations and future directions

Our study has some limitations to be considered. First of all, our study population was comprised of majority of females; it would be necessary to increase number of the sample to make it more homogeneous and more representative of the general population.

Besides, results of the factorial structure did not include item_18 (*I think I was physically abused*), which originally was an indicator of physical abuse (PA). Therefore, it would be important to test other data, with further surveys, in order to maintains it within the factorial structure.

Future studies could test the invariance in time and between groups in order to investigate whether the second order factorial structure with witnessed family violence remains invariable over time (for example between two different generations) and between different groups, such as males and females. Given the numerous of studies about the psychometric properties of the CTQ-SF scale in different countries, it would be interesting to test cross-cultural invariance of the second order model in which the dimension of witnessed family violence is included in the factorial structure.

CHAPTER 2

THE IMPACT OF CHILDHOOD NEGLECT EXPERIENCES ON WELL-BEING IN ADOLESCENCE AND ADULTHOOD

Childhood neglect experiences and well-being in adolescence and adulthood: a systematic review and meta-analysis

Introduction

Childhood neglect is defined as parental omission of response to children's needs and includes forms of physical and emotional neglect (Bernstein & Fink, 1998; Bernstein et al., 2003; DeLong-Hamilton et al., 2016; Dubowitz et al., 2005; Gilbert et al., 2009; Ferrara et al., 2018; Stoltenborgh, et al., 2013; Turner et al., 2019). In particular, physical neglect refers to the failure to meet children's physical needs, for example, the failure to provide adequate nutrition, clothing, personal hygiene, supervision, and medical attention. Emotional neglect refers to the failure to meet children's emotional needs, by failing to provide adequate nurturance and affection (Ferrara et al., 2018; Stoltenborgh et al., 2013; Turner et al., 2019).

Childhood neglect is the form of maltreatment most frequently reported to youth protection systems in the USA (Vanderminden et al., 2019), with 61% of all children who received a child protection response in 2019 experiencing neglect (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2021); Child Maltreatment 2019). Its estimated annual prevalence rates vary between 16 and 25% depending on the research design, the child's age, and the type of neglect (Clément, Bérubé & Chamberland, 2016; Stoltenborgh et al. 2013). Specifically, estimations of the incidence of child neglect are from 16.3% for physical and 18.4% for emotional neglect (Stoltenborg et al. 2013) up to 20.6% and 29.4% depending on age (Clement et al. 2016). More recently, a prevalence rate of 9.7 per 1,000 for physical neglect and 18.7 per 1,000 for emotional neglect have been reported, based on cases reported to 'Safe at Home' organizations and

observations of professionals working with children in the Netherlands in 2017 (van Berkel et al., 2020). In Italy, national data showed that 9 per 1,000 children and adolescents taken into social services were victims to some form of violence during childhood. From the data relating of the Italian Social Services as of 31 December 2018, four hundred and two thousand minors taken in care by the Social Services, 77.493 are so for some form of maltreatment: therefore 193 minors for every 1,000 in charge of the Services appear to be maltreated. In particular, data showed that childhood emotional neglect is the form most frequently reported by children and adolescents, with 40,7% taken in care by the Social Services (Autorità Garante per l'Infanzia e l'Adolescenza, Cismai, & Terre des Hommes, 2021). Nevertheless, neglect remains the form of childhood maltreatment that has received, by far, the least attention among researchers (Hildyard & Wolfe, 2002; Mennen et al., 2010; Stoltenborgh et al., 2013). This is because, over the years, empirical studies on the topic have focused much more attention on the more direct forms of sexual and physical abuse. Although childhood neglect involves chronic and higher risk situations, physical and sexual abuse are more easily identified (Hildyard & Wolfe, 2002; Mayer et al., 2007; McSherry 2007; Mennen et al., 2010; Stoltenborgh et al., 2013).

Long-term consequences of childhood neglect experiences

Most literature on childhood neglect correlates considers childhood neglect together with other forms, such as sexual and physical abuse, emotional abuse and witnessed family violence, as defining experiences of childhood maltreatment (Cicchetti & Toth, 2005; Crouch & Milner, 1993; Hamby et al., 2010). Besides, the two forms of physical and emotional neglect are rarely studied as different, albeit correlated, forms of childhood neglect (Bernstein & Fink, 1998; Bernstein et al., 2003; Gilbert et al., 2009). These study designs limit the knowledge and understanding of the long-term consequences of emotional and physical neglect type.

Researchers have documented that childhood maltreatment and neglect are associated with adverse long-term consequences for mental health, including increased risk of depression (Humphreys et

al., 2020), development of psychosis (Bailey et al., 2018; Green et al., 2019; Varese et al., 2012), alcohol related problems, delinquency, teenage pregnancy, and general victimization (Naughton et al., 2017).

Previous works have stressed the association between childhood neglect and psychopathology (Comacchio et al., 2019; Humphreys et al., 2020; Infurna et al., 2016; Vonderlin et al., 2018). In particular, recent systematic review underlined the correlation between childhood neglect experiences and dissociative symptoms in adulthood (Vonderlin et al., 2018). Specifically, evidences showed the association between emotional neglect and general psychopathology, and physical neglect and dissociative symptoms (Comacchio et al., 2019). Results of the meta-analysis by Norman et al., (2012) reported statistically significant associations between childhood maltreatment (physical abuse, emotional abuse, and neglect) and depressive disorders, drug use, and suicidal behavior.

More recent meta-analysis pointed out on the specific effects of various types of childhood abuse/neglect on psychological health, especially on depressive symptoms (Infurna et al., 2016; Humphreys et al., 2020; Nelson et al., 2017). In particular, results of Nelson et al., (2017) revealed that the highest increase for developing depressive symptoms in adulthood is for those who experienced childhood emotional abuse (odds ratio (OR) = 3.73) and emotional neglect (OR= 3.54); whereas the smallest increase was observed for those who experienced childhood physical neglect (OR = 2.45). Recently, Humphreys et al., (2020) highlighted the significant association between childhood maltreatment experiences and depression, particularly larger with forms of emotional abuse [$g = 0.85 (0.77-0.94)$] and emotional neglect [$g = 0.96 (0.85-1.08)$] compared to physical neglect [$g = 0.65 (0.53-0.78)$], physical abuse [$g = 0.47(0.37-0.57)$] and sexual abuse [$g = 0.44 (0.36-0.53)$]. Further results from Infurna et al., (2016) revealed that psychological abuse and neglect were most strongly associated with the outcome of depression, respectively $d=.932$

(95%CI =.930–.934) and $d=.813$ (95%CI =.609–1.017) compared to sexual abuse form, although significant, but less strongly related $d=.500$ (95%CI =.224–.776).

Childhood neglect and well-being

Although studies focused on the consequences of childhood maltreatment in terms of psychopathology are important, there is more to learn about how this form of early adversity affects later psychological health and well-being (Greenfield & Marks, 2010; Kia-Keating et al., 2011).

For years, researchers on clinical psychology focused on deepening how stressful life conditions, such as childhood maltreatment and neglect experiences, led to psychopathology. With the growth of interest on positive psychology (Seligman et al., 2005; Seligman, 2010), the focus shifted to thriving through adversity and to concepts such as resilience and well-being. Positive psychology perspective had the intent to supplement what is known about human suffering, weakness, and disorder in order to have a more complete and balanced scientific understanding of the human experience (Seligman et al., 2005; Seligman, 2010). As Seligman et al., (2005) emphasized, a complete science and a complete practice of psychology should include an understanding of suffering and happiness, as well as their interaction, and validated interventions that both relieve suffering and increase happiness and well-being.

A growing body of research indicates variability in functioning following trauma exposure, with some individuals exhibiting substantial psychopathology or showing low level of quality of life (Weber et al., 2016), and others appearing relatively well-adjusted (e.g., Cicchetti, 2010; McNally, 2003), not necessarily developing psychiatric disorders.

Therefore, it is important to underline that well-being is not only the absence of symptoms but, as clearly underlined in a theoretical work by Seligman (2010), is composed by following core elements: positive emotion, engagement, relationships, meaning, and accomplishment.

In regard to the conceptualization of well-being, literature includes different approaches to define the well-being construct. Some researchers covered hedonic view (e.g., the experience of pleasure), defining well-being as the presence of positive emotions, such as happiness (Diener et al., 1998; Kahneman & Krueger, 2006; Layard, 2011). Another conceptualization according to the eudaimonic approach (e.g., the experience of meaning) (McMahan & Estes, 2011; Ryan & Deci, 2001) considers well-being as containing a number of different components, instead of reducing well-being to either happiness or life satisfaction (Huppert & So, 2013), emphasizing the multidimensional nature of the well-being construct (Giangrasso 2021; Huppert & So, 2013; Marsh et al., 2020). This includes Ryff's (1989, 2014) psychological well-being, which describes six dimensions of personal and social functioning: autonomy, environmental mastery, personal growth, positive relationships, purpose in life, and self-acceptance. For instance, Vaingankar et al., (2012) stresses that the concept of well-being in regard to mental health is a multidimensional construct constituted by positive affect, satisfaction, and psychological functioning. Hernandez et al., (2018) summarizes recent evidence of the link between psychological well-being (including positive affect, optimism, life meaning and purpose, and life satisfaction) and physical health.

In regard to the consequences of childhood neglect in terms of well-being, literature mainly focused on general childhood maltreatment without specifically considering forms of childhood neglect.

Evidence has shown that experiences of childhood maltreatment were associated with lower scores on adult psychological well-being (Dale et al., 2009; Greenfield & Marks; 2010). Other studies and systematic reviews underline that, children who experienced maltreatment by parents show a lower quality of life (Bruskas & Tessin, 2013; Weber et al., 2016), in particular in terms of physical health, psychological health, interpersonal relationships and social roles (Hoefnagels et al., 2020; Vink et al., 2019). Furthermore, recent retrospective works underlined that childhood neglect

experiences, in particular emotional neglect, were associated with low level of psychological well-being (Beilharz et al., 2020; Hagborg et al., 2017; Talmon & Ginzburg, 2017).

Studying the magnitude of the association between childhood neglect experiences and current well-being dimensions is important to analyze which mediational mechanisms act to mitigate the response following adverse experiences during childhood and possible resilience processes (Guterman, 2004; Herrenkohl, 2011; Klika & Herrenkohl, 2013). Research on well-being following childhood adverse experiences is needed for an in-depth analysis of the associated mechanisms and to guide the development of treatment and prevention programs.

The moderator role of age

Recent literature revealed that, among people who had experienced childhood maltreatment experiences, adolescents have a greater risk of developing later psychopathology than adults (e.g., Dunn et al., 2013; Moretti & Craig, 2013).

Recent meta-analysis emphasized the moderation role of age of assessment in the association between childhood maltreatment and neglect and psychological health, underlying that the effects of specific childhood maltreatments were not equally large across adult and adolescent samples (e.g., Infurna et al., 2016). The evaluation of the role of age allows us to reflect on the stages of development in which people are most vulnerable to adverse experiences, and consequently on which are the windows of opportunity for reaching a more consistent change.

Results of Infurna et al., (2016) revealed that the types of samples (adult or adolescent) moderated the effect sizes between childhood maltreatment forms and depression, confirming a stronger association in adolescent samples ($d = .766$) than in adult samples ($d = .399$). Similar results were also found in Yu et al., (2017) showing that the age of the participants (adolescence, early adulthood, middle adulthood) was a moderator between childhood maltreatment and depression, particularly that childhood maltreatment experiences were more strongly associated with depression in adolescence than adulthood. A further meta-analysis also found a stronger effects of

childhood maltreatment on difficulties in emotion regulation in particular for younger rather than older age groups, confirming the moderation role of age (Luke & Banerjee, 2013).

Overall, evidence suggested that the risk of lower psychological health, after childhood maltreatment experiences, seem to be higher in adolescents and young adults than adults. Based on this consideration, the current meta-analyses will address whether the association between childhood neglect experiences and well-being is moderated by the age.

2.1 Research aim

Given the prevalence of childhood neglect across the world and the negative long terms consequences of childhood maltreatment experiences in terms of mental health and well-being, it is necessary to devote relevant attention to this topic.

Although some studies have documented the association between childhood maltreatment and well-being (e.g., Weber et al., 2016), no meta-analysis has been published on childhood neglect forms and well-being. This meta-analysis aims to address this gap, distinguishing the physical and emotional forms of childhood neglect. In particular, this meta-analysis aims to assess the magnitude of the association between childhood neglect and well-being and how this can vary according to the different forms of neglect and in relation to the age of participants.

2.2 Method

2.2.1 Research strategy

The current study was conducted following the PRISMA guidelines (Moher, Liberati, Tetzlaff, Altman, & PRISMA Group, 2009). The stages are summarized in the flow-chart in Figure 2.1.

2.2.2 Search strategy

We conducted a systematic review of the literature published from 1930 to October 2021 on the association between childhood neglect and dimensions of well-being later on in adolescence and adulthood. The following 5 electronic databases were searched: Scopus,

PsycINFO, ERIC, PubMed, Web of Science. The following keywords were used ‘child*’, ‘neglect*’, ‘well-being’ and ‘wellbeing’. The search was conducted combining Abstract, Title, Keywords in PsycINFO and Scopus databases. The search through PubMed and Web of Science was conducted combining Title/Abstract and the search through Eric was conducted on the whole text, as there was no other option.

2.2.3 Study inclusion and exclusion criteria

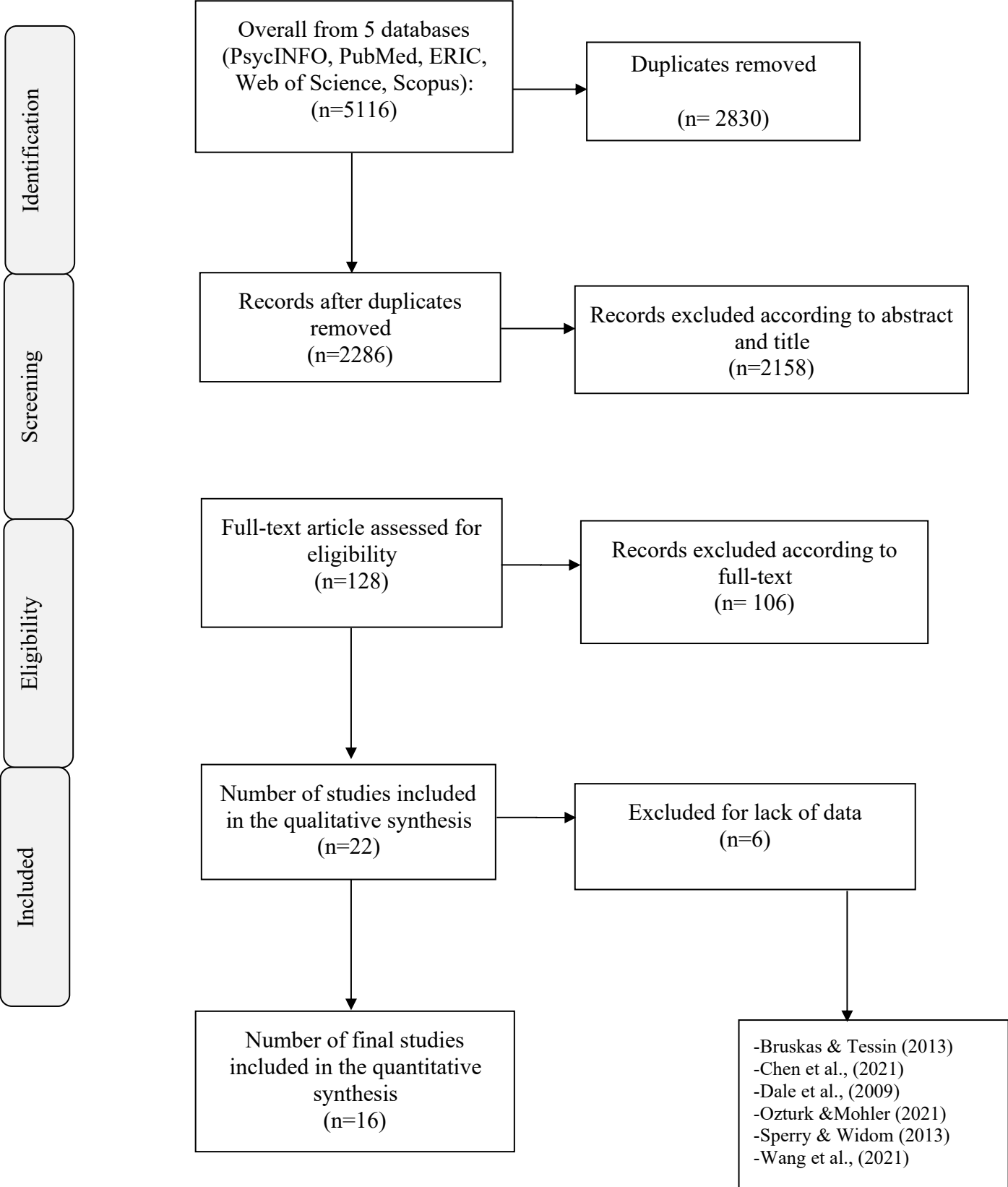
Studies were included when: 1) childhood neglect and well-being was the focus theme; 2) well-being was considered an outcome; 3) the targets were adolescents or adults; 4) the sample was normative; and 5) the language of publication was in English or Italian. Longitudinal, cross sectional and retrospective quantitative studies were considered. Studies were excluded when: 1) the study was not focused on childhood neglect and well-being as an outcome; 2) the study considered symptom reduction as an outcome measure of well-being; 3) the target were children; 4) the sample was clinical; 5) the language of publication was in a language other than English or Italian; 6) studies used the qualitative research method. Dissertation theses, congress abstract, review and meta-analyses were excluded.

Overall, the search in all five databases uncovered 5116 articles. There was an overlap of 2830 articles. Duplicated articles were excluded from subsequent searches. Other duplicates were excluded manually, and the final literature search was comprised of 2286 articles (see Fig. 1). We reviewed the titles and abstracts of all the articles found (N=2286) and excluded 2158 following the exclusion criteria reported above (see Fig.1). The full text articles assessed for eligibility were 128. A total of 106 articles were further excluded according to our exclusion criteria. Finally, 27 effects were included in the meta-analysis, resulting from 16 articles. For article ID = 9 (Giovanelli, 2020) we inserted one effect obtained from the average of the four correlations in the article, since they investigated similar dimensions of social well-being in adults related to childhood neglect. Authors of the studies with missing information were contacted asking for an

integration of data. Six studies were subsequently excluded due to the lack of correlation data between the variables considered: Bruskas and Tessin (2013); Chen et al., (2021); Dale et al., (2009); Ozturk and Mohler (2021); Sperry and Widom, (2013); Wang et al., (2021).

Figure 2.1. PRISMA Flow Diagram

Flow-chart of identification, screening, eligibility, and inclusion of studies.



2.2.4 Statistical Analysis

Statistical analysis has been carried out using the statistical software R (R Core Team, 2021). The package *compute.es* (AC Del Re, 2013) was used for computing effect size, transforming correlation coefficients (r and ρ) into Cohen's d through the formula $d = \frac{2r}{\sqrt{1-r^2}}$. Since the large sample of some studies Cohen's d variance was computed using 3 digits to avoid possible zeros in the results. According to Cohen's (1992) values of d under $|0.20|$ represent a small effect, values between $|0.20|$ and $|0.50|$ a medium effect, and $|0.80|$ and above a high effect. The package *metafor* (Viechtbauer, 2010) was used to compute meta-regressions. Finally, Trim-and fill analysis was performed to evaluate the presence of a possible publication bias. For the interpretation of the results negative d indicates a negative effect of neglect on well-being (i.e., the more a participant experience neglect the worst his/her perceived well-being is).

2.2.5 Moderators

Type of neglect and age of participants have been tested as moderators in the meta-regression analysis. We divided the different forms of neglect into three different categories. Regarding childhood neglect, we focused on the main forms, the emotional (EN) and physical (PN), whenever possible. Otherwise, we considered childhood neglect as a general factor (CN).

Age of participants was dichotomized to create a categorical variable dividing studies with adults' participants (AD) for age > 30 , and young adults (YA) for age ≤ 29 .

2.3 Results

2.3.1 Characteristics of included studies

Table 2.1 summarize the characteristics of all articles selected for the meta-analysis.

The 16 articles we found on the association between childhood neglect and well-being were all published between 2004 and 2021.

Sample sizes ranged from 111 to 4696 participants, out of which the frequency of females ranged between 71 and 2513 and of males ranged between 40 and 2183 (one article did not report the gender of the sample and four only have a female sample). The overall average age ranged between 12.7 and 68.3 years (one study did not report the age of the participants but specified that they are university students). As for the context of the studies, 37.5% of data were collected in America (USA) (6 articles); 12.5% in Japan (2 articles); 18.75% in various European countries (1 article in Sweden; 1 in Switzerland and Germany; 1 in Malta) and the five remaining articles collected data respectively in Vietnam, Israel, Turkey, China and Australia. Regarding the study design, we decided to include both cross-sectional and longitudinal studies: seven studies have longitudinal data and nine are cross-sectional.

Table 2.1. General characteristics of included studies

Article N.	Reference	Year	Study design	Informant	Country	Participants			
						Number of participants	Females N	Males N	Age M and SD; age range
1	Galea, M.	2012	C-S	Young adults	Malta	800	214	98	M= 20.45; SD=2.37
2	Hagborg, J.M	2017	L	Adolescents	Sweden	1134	/	/	M (1st wave) = 12.7; M (2nd wave) = 13.4
3	Kanai, Y.	2016	C-S	Adults	Japan	415	193	222	M= 42.3; SD= 12.0
4	Lin, H., H.	2018	L	Adults	USA	338	338	/	M= 52.4; SD= 2.6
5	Oshio, U.	2013	C-S	Adults	Japan	3292	1693	1599	M= 37.4; SD= 7.1
6	Talmon, A.	2017	C-S	Young adults	Israel	531	531	/	M= 25.28; SD= 4.82
7	Tran, N., K.	2017	C-S	Adolescents	Vietnam	1851	975	876	M= 14.2; SD= 1.4
8	Beilharz, J., E.	2020	C-S	Young adults	Australia	111	71	40	M (CT Cases) = 22.31; M (not CT Cases) = 21.65; SD (CT Cases) = 4.9; SD (not CT Cases) = 4.4
9	Giovanelli, A.	2020	L	Adults	USA	1341	707	634	M=35.29; SD=.28
10	Herrenkohl, T., I.	2012	L	Adults	USA	357- reports 181	CM 171-CM reports 83	186-CM reports 98	Age range= 31–41
11	Kong, J.	2018	L	Adults	USA	1371	751	620	Age range= 64-67
12	Kong, J.	2019	L	Adults	USA	4696	2513	2183	M _(RM) = 54.13; SD _(RM) = .49;
13	Martsof,D., S.	2004	C-S	Adults	USA	159	159	/	M= 46.7; SD= 17.2
14	McGee, S., L.	2018	L	Adults	Switzerland and German	238	175	63	M= 68.3; SD= 8.96
15	Wu, Q.	2021	C-S	Young adults	China	358	226	132	M= 19.18; SD= 1.46
16	Koçturk,N.	2021	C-S	Young adults	Turkey	450	450	/	/

Note: CT *child trauma*; CM *child maltreatment*; C-S *Cross-Sectional*, L *Longitudinal*, RM *Relation mother*; / *not reported*

2.3.2 Overview of effects' distribution

In table 2.2 are reported correlation of studies and the effects size computed. Specifically, the effect of neglect on well-being ranged from -.12 to -.95. The 11% of the reported effects (k = 3) are small, the 52% (k = 14) medium, and the 37% (k = 10) high effect size.

Table 2.2. Sample size, Correlation, type of neglect investigated, age category of participants, Cohen's d effect size and variance for the included studies.

Article ID	Authors	Well-being dimension studied	N	Correlation	Type of Neglect	Age category	Cohen's d	Cohen's d Var.
1	Galea, 2012, (1)	Psychological	800	r = -0.39	EN	YA	-0.85	0.006
1	Galea, 2012, (2)	Psychological	800	r = -0.21	PN	YA	-0.43	0.005
2	Hagborg, 2017	Psychological	1134	r = -0.4	EN	YA	-0.87	0.004
3	Kanai, 2016	Psychological	415	$\rho = -0.21$	CN	AD	-0.43	0.01
4	Lin, 2018, (1)	Health	338	r = -0.14	EN	AD	-0.28	0.012
4	Lin, 2018, (2)	Health	338	r = -0.17	PN	AD	-0.35	0.012
5	Oshi, 2013	Psychological	3292	r = -0.07	CN	AD	-0.14	0.001
6	Talmon, 2017, (1)	Psychological	531	r = -0.43	EN	YA	-0.95	0.009
6	Talmon, 2017, (2)	Psychological	531	r = -0.31	PN	YA	-0.65	0.008
7	Tran, 2017	Health	1851	r = -0.15	CN	YA	-0.3	0.002
8	Beilharz, 2020, (1)	Psychological	111	$\rho = -0.43$	EN	YA	-0.95	0.045
8	Beilharz, 2020, (2)	Health	111	$\rho = -0.43$	EN	YA	-0.95	0.045
8	Beilharz, 2020, (3)	Psychological	111	$\rho = -0.25$	PN	YA	-0.52	0.039
8	Beilharz, 2020, (4)	Health	111	$\rho = -0.36$	PN	YA	-0.77	0.042
9	Giovanelli, 2020	Social	1341	r = -0.12	CN	AD	-0.24	0.003
10	Herrenkohl, 2012	Psychological	357	r = -0.16	CN	AD	-0.32	0.012
11	Kong, 2018	Psychological	1371	r = -0.06	EN	AD	-0.12	0.003
12	Kong, 2019	Psychological	4696	r = -0.07	EN	AD	-0.14	0.001
13	Martsof, 2004, (1)	Health	159	r = -0.29	EN	AD	-0.61	0.028
13	Martsof, 2004, (2)	Health	159	r = -0.24	PN	AD	-0.49	0.027
14	McGee, 2018, (1)	Psychological	238	r = -0.27	EN	AD	-0.56	0.018
14	McGee, 2018, (2)	Health	238	r = -0.2	EN	AD	-0.41	0.018
14	McGee, 2018, (3)	Psychological	238	r = -0.25	PN	AD	-0.52	0.018
14	McGee, 2018, (4)	Health	238	r = -0.26	PN	AD	-0.54	0.018
15	Wu, 2021, (1)	Psychological	358	r = -0.37	EN	YA	-0.80	0.013
15	Wu, 2021, (2)	Psychological	358	r = -0.21	PN	YA	-0.43	0.012
16	Koctrnk, 2021	Psychological	450	r = -0.34	CN	YA	-0.72	0.010

Of the 27 effects included, 14 were obtained investigating the role played by neglect in determining life span well-being in adults, while 13 in young adults. As showed in Fig. 2.2, the effect of neglect on well-being appears greater in young adults ($M = -0.71$, $Med = -0.77$) than in adults ($M = -0.37$, $Med = -0.38$).

Figure 2.2. Box Plots: Cohen's d distribution among age categories. Adults (AD), young adults (YA). The horizontal line in the box indicates the median values, respectively Med = - 0.38 for AD and Med = - 0.77 for YA.

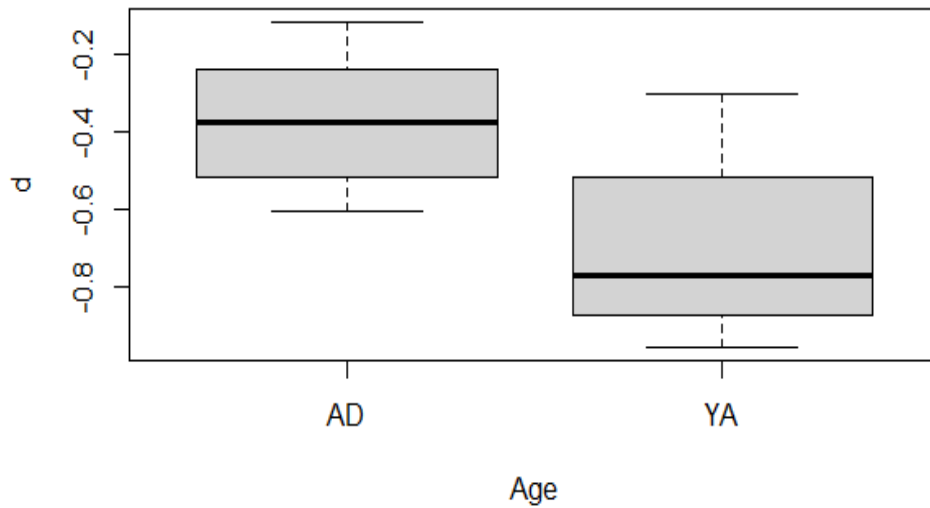
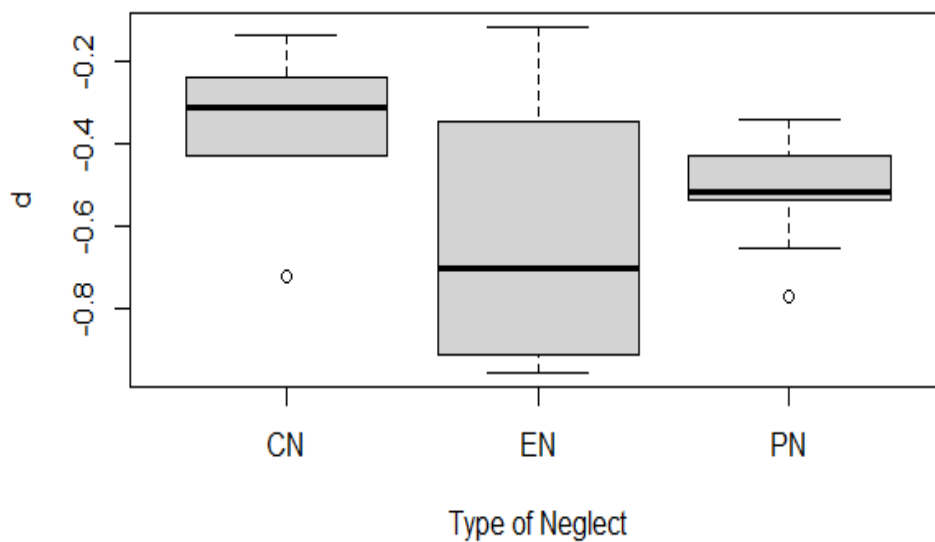


Figure 2.3. Box Plots: Cohen's d distribution among type of neglect. Child Neglect (CN), Emotional, Neglect (EN), Physical Neglect (PN).

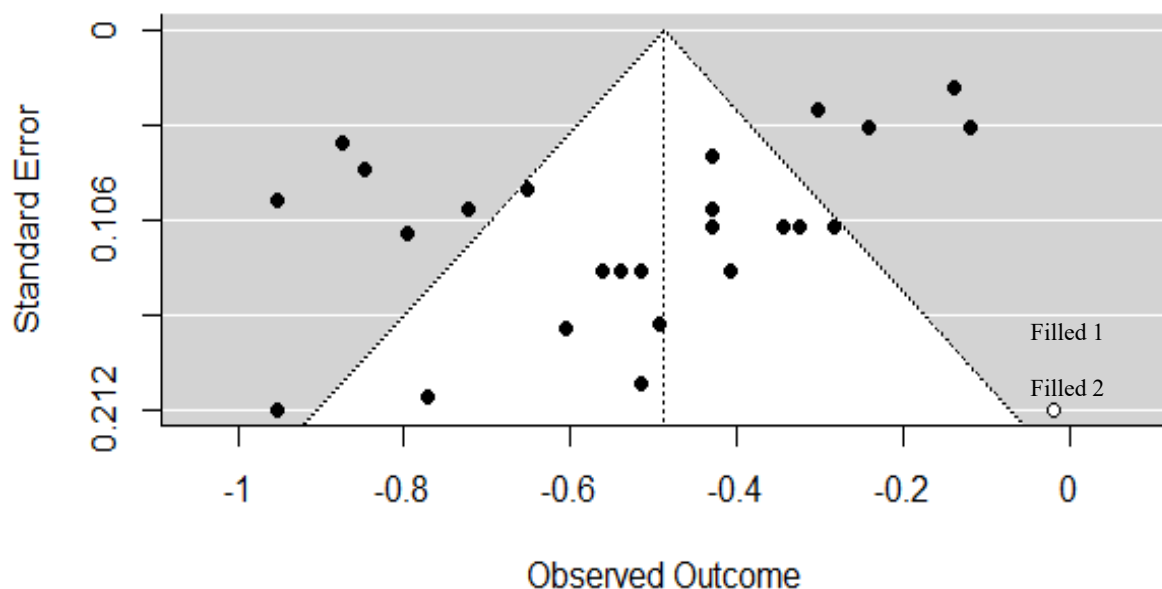


As showed in Fig. 2.3, of the 27 effects included, 12 investigate the effect of emotional neglect (M = - 0.62, Med = - 0.71), 9 physical neglect (M = - 0.52, Med = - 0.52) and 6 general childhood neglect (M = - 0.36, Med = - 0.31).

2.3.3 Meta-analysis of the effect of neglect on well-being

A random-effect model was used to account for the overall effect of neglect on well-being among all the studies ($k = 27$) identified for the meta-analysis. The results show a negative medium effect size $d = -0.51$, (95% CI [-0.62, -0.41]), $p < .001$ confirming that the more a person suffered of neglect the less he/she perceived well-being. Variation in true effect sizes was $\tau^2 = 0.06$ (SE = 0.02) and the 90% of this variation can be accounted for differences in studies ($I^2 = 90.89\%$). The results of the tests of homogeneity across effect suggest the presence of heterogeneity Q ($df = 26$) = 334.1695, $p < 0.001$. As showed by the funnel plot in Fig. 2.4, Trim-and-fill analysis identified 2 missing studies, displayed in the right side of the plot, leading to conclude that the present meta-analysis is affected by a trivial publication bias.

Figure 2.4. Funnel plot obtained with the Trim-and-fill analysis. Black dots are the observed Cohen's d as a function of standard error. White dots represent missing studies.



2.3.4 Moderators' role

We tested the possible moderator role of a set of two variables: Age category of participants of the studies and the Type of Neglect investigated. The results are presented in table 2.3.

Age of assessment has a significant role in moderating the effect of neglect on the perceived well-being $QM = 18.84, p < 0.001$. Studies where participants are young adults report greater effect size ($d = - 0.69, p < 0.001$) regarding the impact of neglect in worsening perceived well-being respect studies where respondents are adults ($d = - 0.34, p < 0.001$).

Meta-regression model ran to verify the moderator role of the Type of Neglect shows significant estimates for the two categories childhood ($d = - 0.35, p < 0.01$) and emotional ($d = - 0.6, p < 0.05$) but not physical ($d = - 0.51, p = 0.1$). To summarize, having suffered emotional neglect seems to have a higher impact on perceived well-being than having suffered physical or childhood neglect. Nevertheless, moderator analysis shows no overall effect ($QM = 3.92, p = 0.14$) of the Type of Neglect on neglect and perceived well-being.

Table 2.3: Moderating variables: Cohen’s d effect size (d) and its associated 95% Confidence Interval (CI_l and CI_u), Q statistic test of Moderators (and associated p value).

Moderators		Cohen’s d	CI_l	CI_u	Q	P
Age	AD	- 0.34	- 0.45	- 0.23	18.84	<.001
	YA	- 0.69	- 0.50	- 0.19		
Type of Neglect	CN	- 0.35	- 0.55	- 0.16	3.92	0.1
	EN	- 0.6	- 0.49	-0.002		
	PN	- 0.51	- 0.42	0.1		

2.4 Discussion and conclusions

The majority of the studies on the long-term consequences of childhood maltreatment and neglect experiences are related to the development of psychopathology in adulthood (Comacchio et al., 2019; Humphreys et al., 2020; Vonderlin et al., 2018). Recently, the literature on the experiences of childhood maltreatment and neglect paid attention to the long-term consequences in terms of well-being, in order to increase and enhance our knowledge of the possible processes of adaptation and resilience following these adverse experiences. Therefore, this systematic review and meta-analysis aims to investigate the magnitude of the association between childhood neglect experiences and well-being and how this can vary according to the different forms of neglect and in relation to the age of the participants.

The current study confirmed an increasing interest in the topic of childhood neglect experiences and dimensions of well-being in adolescents and adults over the last 10 years: 68.75% of the articles were published between 2017 and 2021; 25% were published between 2012 and 2016, and only one article was published in 2004.

Findings showed a significant and negative association between childhood experiences of neglect and well-being in all studies, showing a negative medium effect size $d = -0.51$, (95% CI [-0.62, -0.41]), $p < .001$ confirming that the more a person suffered of childhood neglect the less he/she perceived well-being, consistently in part with previous meta-analyses showing how having experienced childhood maltreatment is associated with lower psychological health later (e.g., Humphreys et al., 2020; Infurna et al., 2016). Furthermore, this result is in line with the literature about the long-term consequences of general childhood maltreatment, reporting whether childhood experiences of maltreatment are associated with lower scores of adult psychological well-being (Bruskas & Tessin, 2013; Dale et al., 2009; Greenfield & Marks, 2010).

Consistent with previous meta-analyses about childhood maltreatment experiences and psychopathology (e.g., Infurna et al., 2016; Yu et al., 2017), our results showed that the age of the

participants was a moderator between childhood neglect experiences and well-being, showing that young adults report greater effect size ($d = - 0.69$, $p < 0.001$) regarding the impact of neglect in worsening perceived well-being respect studies where respondents are adults ($d = - 0.34$, $p < 0.001$).

This is probably because adolescents and young adults have had less time to process their negative childhood experiences, consequently the risk of serious consequences is greater than with adults (Dunn et al., 2013; Hussey et al., 2006; Kugler et al., 2019; Moretti & Craig, 2013; Naughton et al., 2017). Besides, studies in literature have emphasized that the health and well-being of adolescents is strongly influenced by family factors. Although adolescence is a phase of separation from the family in order to search for one's autonomy, a supportive family is crucial to help young people develop their full potential and attain the best health in the transition into adulthood (Cunsolo, 2017; Viner et al., 2012). Thus, the effect of a neglectful family could be stronger during this developmental phase.

Further results showed no overall moderator effect of the type of neglect on neglect and perceived well-being. Nevertheless, main findings suggested that having suffered emotional neglect seems to have a higher impact on perceived well-being ($d = - 0.6$, $p < 0.05$) than having suffered physical ($d = - 0.51$, $p > 0.1$) or general ($d = - 0.35$, $p < 0.01$). This finding is in accord with result of previous meta-analyzes underlying that emotional abuse and emotional neglect forms are more strongly associated with less psychological health compared to the other forms (e.g., Humphreys et al., 2020; Nelson et al., 2017). Furthermore, our results converged with the literature related to the development of psychological well-being (Ryff, 2014; Ryff & Singer, 2006). Specifically, the literature emphasizes how a dysfunctional relationship with neglectful parents, defined by a lack of affection, emotional nourishment, and support, has a negative influence on psychological functioning and well-being (Francis et al., 2020; Ryff, 2014; Ryff & Singer, 2006; Saric & Sakic, 2014), probably more so than the experience of physical care. According to the literature about

the quality of the parent-child relationship (e.g., Khodabakhsh et al., 2014), parental interaction with children plays an important role in shaping the psychological well-being of adolescents mastering processes of positive self-regard, mastery, autonomy, positive relationships with other people, a sense of purposefulness and meaning in life (Ryff & Singer, 2006).

Overall, our study highlights a clear impact of childhood neglect experiences on well-being, especially in adolescence and young adulthood. The size of the effect found is moderate ($d=-.69$), underlying a strong relationship between these constructs occurring during two developmental ages. In particular, having suffered emotional neglect seems to have a higher impact on perceived well-being than having suffered physical or childhood neglect. For this reason, further studies are necessary in order to better understand the processes involved in the association. It is important to analyze what role possible mediators and moderators play in the relationship between childhood emotional neglect and psychological well-being.

2.4.1 Limitations and strengths

The still small number of studies on the issue did not allow us to investigate on further moderators of the association between childhood neglect and well-being, such as gender, ethnicity or the socio-economic background. Furthermore, it would be interesting to be able to extend the reference age range, including children. Therefore, it would be necessary to continue the study through an updated analysis with a larger number of studies.

Nevertheless, the current meta-analysis tried to shed light in literature about childhood neglect experiences and their consequences in terms of well-being, especially differentiating between the physical and emotional forms of childhood neglect and take in to consideration the age of assessment. Therefore, the current study allowed us to understand that the impact on well-being depends on the type of form of neglect experienced and on the age of the person who lived the traumatic experience in childhood.

Overall, findings provide suggestions for prevention and intervention. Having experienced childhood neglect is associated with lower psychological well-being, especially in younger people. For this reason, it would be necessary to direct any action to adolescents in particular, considering that they are still in a phase of elaboration of their traumatic experiences. In addition, the results showed that forms of emotional neglect seem to have a higher impact on psychological well-being than the other forms analyzed. Therefore, it is important to implement timely interventions focused on emotional and relational components, aimed at families at risk of inflicting emotional neglect.

CHAPTER 3

MEDIATIONAL EFFECTS IN THE RELATIONSHIP BETWEEN CHILDHOOD NEGLECT AND WELL-BEING IN YOUNG ADULTHOOD.

Difficulties in emotion regulation mediate the relationship between childhood neglect severity and well-being in young adults

Introduction

Childhood maltreatment and experiences of neglect have the potential to disrupt adaptive development (Cicchetti & Valentino, 2006). Among the different forms of childhood maltreatment, childhood neglect is the most frequently reported to youth protection systems in the USA (Vanderminden et al., 2019), with 61% of all children who received a child protection response in 2019 experiencing neglect (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2021); Child Maltreatment 2019). In Italy, national data showed that 9 out of 1,000 children and adolescents taken into social services were victims of some form of violence during childhood. From the data of the Italian Social Services as of 31 December 2018, out of four hundred and two thousand minors taken into care by the Social Services, 77.493 have suffered some form of maltreatment: therefore 193 minors out of every 1,000 in the charge of the Services appear to have been maltreated. In particular, data showed that childhood emotional neglect is the form most frequently reported by children and adolescents, with 40,7% taken in care by the Social Services (Autorità Garante per l'Infanzia e l'Adolescenza, CISMAL, & Terre des Hommes, 2021). Emotional neglect refers to the failure to meet children's emotional needs, by not providing adequate nurturance and affection (Ferrara et al., 2018; Stoltenborgh, Bakermans-Kranenburg & Van Ijzendoorn, 2013; Turner Vanderminden, Finkelhor & Hamby, 2019). Specifically, emotional neglect refers to the failure of caretakers to provide for a child's basic psychological needs, such as love, encouragement, a sense of belonging and support (Bernstein & Fink, 1998).

As regards the consequences of these traumatic childhood experiences, researchers have documented that childhood maltreatment and neglect are associated with adverse long-term consequences for mental health, including increased risk of depression (Humphreys et al., 2020), development of psychosis (Bailey et al., 2018; Green et al., 2019; Varese et al., 2012), alcohol related problems, delinquency, teenage pregnancy, and general victimization (Naughton et al., 2017). Nevertheless, other studies emphasized a more deleterious impact of emotional maltreatment on social development (Spertus et al., 2003; Spinazzola et al., 2014) as compared to childhood physical and sexual abuse. Studies conducted with adults indicate that emotional neglect is more strongly associated with social competence deficits and problems in social relationships (e.g., Berzenski, 2018; Paradis & Boucher, 2010). Given the relevance of a positive relational functioning for one's well-being and for life satisfaction (e.g., Berzenski, 2018; Fitzgerald et al., 2020; Paradis & Boucher, 2010; Seligman, 2010), we believe it is crucial to deeply understand which mechanisms are able to buffer the impact of childhood emotional neglect, to promote and fortify relational well-being in young adulthood.

Effects of childhood emotional neglect experiences on adult relational well-being

Together with the study of the psychopathological consequences of adverse family experiences (Comacchio et al., 2019; Norman et al., 2012; Vonderlin et al., 2018), it is increasingly important to analyze the outcomes of childhood experiences of neglect in terms of well-being (Greenfield & Marks, 2010; Kia-Keating et al., 2011).

Most research on clinical psychology focuses on delving into how stressful life conditions, such as childhood maltreatment and neglect experiences, lead to psychopathology. With the growth of interest in positive psychology (Seligman et al., 2005; Seligman, 2010), the focus has shifted to thriving through adversity and to concepts such as resilience and well-being. A growing body of research indicates variability in functioning following trauma, with some individuals exhibiting substantial psychopathology (Humphreys et al., 2020) or displaying a particularly low level of

quality of life (Weber et al., 2016), and others appearing relatively unaffected (e.g., Cicchetti, 2010; McNally, 2003), nor necessarily developing psychiatric disorders.

In line with the model of well-being conceptualized by Seligman (2010) within the theoretical framework of positive psychology, we define well-being not just as feeling happy, but having optimal psychological functioning (e.g., Ryff, 1989) or the ability to meet core psychological needs (Ryan & Deci, 2001). Well-being is composed by following core elements: positive emotion, engagement, relationships, meaning, and accomplishment (Seligman, 2010). Between these dimensions, Seligman stresses positive relations with others as a key dimension of individual psychological well-being, which contributes to the individual's well-being, regardless of the presence of the other dimensions. Positive relations with other dimension refers to the satisfaction of one's personal relationships, love received and perceived support (Giangrasso, 2021; Seligman, 2010). Young adults who experienced childhood maltreatment and neglect showed a lower level of well-being (Bruskas & Tessin, 2013; Weber et al., 2016), in terms of physical health, psychological health, interpersonal relationships and social roles (Hoefnagels et al., 2020; Vink et al., 2019). In particular, as regards the positive relation well-being dimension, the literature highlighted a stronger association between childhood maltreatment and neglect experiences and low levels of perceived social support and difficulties in interpersonal relationships (e.g., Beilharz et al., 2020; Berzenski, 2018; Fitzgerald et al., 2020; Horan & Widom, 2015).

Recent retrospective works underlined that, experiences of neglect, in particular emotional neglect, were associated with low levels of psychological well-being (Beilharz et al., 2020; Hagborg et al., 2017; Talmon & Ginzburg, 2017). Specifically, results of Beilharz et al., (2020) underlined that emotional neglect is the form of childhood maltreatment most strongly associated with lower levels of psychological well-being in young adulthood (emotional neglect= $-.43^{***}$; physical neglect = $-.25^{**}$; emotional abuse = $-.34^{***}$; physical abuse $-.14$ (ns); sexual abuse= $.02$ (ns)). Similar results were also found in the study by Talmon and Ginzburg (2017) in which emotional

neglect is associated with lower levels of psychological well-being in adulthood, with a larger effect size compared to other forms of child maltreatment (emotional neglect = $-.43^{***}$; physical neglect = $-.31^{***}$; emotional abuse = $-.34^{***}$; physical abuse $-.11^*$; sexual abuse = $-.16^{**}$). Besides, findings of Hagborg et al., (2017) showed a significant decrease in psychological well-being in adolescence after emotional neglect experiences with a larger effect size compared to emotional abuse experiences (emotional neglect: partial eta square = .161; emotional abuse: partial eta square = .092).

However, no studies have yet focused their attention specifically on the relationship between experiences of emotional neglect and relational well-being.

Findings presented in the meta-analysis in the second chapter on the association between childhood neglect experiences and well-being in adolescence and adulthood showed a negative medium effect size $d = -0.51$, (95% CI [- 0.62, - 0.41]), $p < .001$ confirming that the more a person suffered from neglect, the less he/she perceived well-being. In particular, as regard the type of neglect, results showed that having suffered emotional neglect seems to have a higher impact on perceived well-being than having suffered physical or childhood neglect.

The study of mediational and moderating factors of neglectful experiences becomes particularly relevant when the severity of these experiences is taken into account. In fact, although general mediational mechanisms have been defined and empirically confirmed, what is needed is an explanation of at which level of severity of emotionally neglectful experiences they can work. This will be a topic of this study.

Childhood maltreatment and neglect severity

An important indicator to consider when investigating the impact of neglect experiences on child development and adult health, is the level of severity of such experiences (e.g., English et al., 2005b; Higgins, 2004; Rehan et al., 2017; Vachon et al., 2015). In the early empirical studies, maltreatment was often treated as a global construct, without consideration of the nature and extent

of the child's experience or the possible individual and combined influences of specific maltreatment dimensions on the child's functioning (Crouch & Milner, 1993; English et al., 2005b; Manly et al., 1994). The dimensions of childhood maltreatment experiences include severity, frequency, chronicity, duration, type, age of onset, and perpetrator type (Manly et al., 1994). Severity can be defined on the basis of the type of maltreatment, its frequency, if the maltreatment resulted in an injury, and if the abuse was considered severe by the victim (Radford et al., 2011; Rehan et al., 2017).

To our knowledge, no studies have considered the influence of severity levels in the relationship between childhood neglect and adult well-being. Nevertheless, literature pointed out that the severity of childhood maltreatment and neglect experiences does influence children's development and has an impact on health in adolescents and adulthood (e.g., Rehan et al., 2017; Teicher & Samson, 2013). About that, the literature stressed that the severity of abuse and neglect is associated with increased psychopathology, in particular anxiety and depression (e.g., Evans et al., 2013; Vachon et al., 2015). Specifically, Evans et al., (2013) showed that adults who experienced more severe levels of childhood maltreatment, that correspond to a higher CTQ-SF score (Childhood Trauma Questionnaire-Short Form-Bernstein et al., 2003), have greater trauma symptoms. Moreover, the study of Vachon et al., (2015) considered the Maltreatment Classification System (MCS; Barnett et al., 1993) to define four cut off severity scores: mild, mild/moderate, moderate, moderate/severe, severe. Their findings underlined how the children and adolescents who experienced more severe levels of childhood maltreatment and neglect showed more depressive symptoms, anxiety and neuroticism compared to those who experienced moderate or mild levels of these adverse experiences. Previous works showed that the adolescents who had experienced very severe types of maltreatment were more likely to have physical, psychological, and adjustment problems, compared with those who experienced less severe types of maltreatment (e.g., Wong et al., 2009). Whatmore, Higgins (2004) showed the differences in

psychological adjustment between adults by classifying them in 3 different clusters according to the severity of their experiences (low, moderate, severe) according to the Comprehensive Child Maltreatment Scales–Parent (CCMS-P) (Higgins & McCabe, 2001). Adults classified into the high maltreatment cluster had significantly more adjustment problems than those in either the moderate or the low maltreatment clusters.

Therefore, the type of neglect experiences, based on severity, predicts different outcomes and specific pathways (e.g., English et al., 2005b).

Starting from these findings, we think it is crucial, when examining the impact of these experiences on development, health and well-being, to consider the severity of the maltreatment itself, rather than simply dichotomizing samples into maltreated and non-maltreated. Examining specific dimensions of maltreatment, such as the severity, in relation with individual aspects, is essential to identify specific pathways of adaptation or maladaptation exhibited by maltreated and neglected children.

Emotion regulation as a mediation mechanism

Evidence suggests that emotion regulation is one of the most compromised individual mechanisms following experiences of childhood neglect and maltreatment (Gruhn & Compas, 2020). Specifically, findings from a meta-analytic study by Gruhn and Compas (2020) showed that childhood maltreatment was significantly related to decreased emotion regulation ($r=-.24$, $p < .001$) and increased emotion dysregulation ($r=.28$, $p < .001$). Emotion regulation refers to the extent to which emotions are adaptively experienced and modulated, and includes flexibly processing, accepting, controlling, recognizing, understanding and responding to a range of emotions (Gratz & Roemer, 2004; Sighinolfi et al., 2010). This conceptualization emphasizes how emotion regulation is composed of a multidimensional set of skills, and is not synonymous with reduction in negative affect or use of any specific strategy (Gratz & Roemer, 2004). An emerging body of empirical work (e.g., Monti et al., 2014; Watson et al., 2014) suggests that the acquisition

of coping and emotion regulation strategies is learned through interpersonal interactions between caregivers and children, including communication, modeling, and expressions of support and warmth. Victims of early-life abuse or neglect may fail to develop coping and emotion regulation strategies that protect against the development of psychosocial problems, due to their decreased exposure to healthy examples of coping and emotion regulation, and increased exposure to maladaptive stress response processes, such as violence (Kim & Cicchetti, 2010). About that, previous studies suggested that parents who perpetrate childhood emotional neglect may fail to provide examples of any emotional strategy use, therefore, neglected children have an overall poorer understanding of emotion (Erickson & Egeland, 2002; Manly et al., 2001) than other children, given their reduced exposure to emotional models (Alegre, 2011; Pollak et al., 2000; Sullivan et al., 2008). In this sense, the caregiver's lack of emotional reference can negatively affect reflective self-construction (Fonagy & Target, 1996; Fonagy et al., 2007), thus it compromises the self, emotional awareness, and later, psychological states. Therefore, children who experience emotional neglect may have no emotional reference patterns, thus greater difficulty in interpreting, understanding their own emotional experiences, leading to difficulties in interpersonal relationships (Stern, 1985).

It is important not only to assess the effects of childhood neglect experiences on emotion regulation, but also to analyze these effects considering specific emotion regulation skills. In doing so, we can deepen the differential mechanisms by which emotional neglect exerts their influences on relational well-being. It's necessary to identify distinct pathways by which emotional neglect may exert its specific developmental influences on adult psychological outcomes, such as mental health and well-being.

Previous works underlined how difficulties in emotion regulation strategies have a negative impact on health and well-being (Côté et al., 2010; Ottenstein, 2020). In that regard, some prior works showed that difficulties in emotion regulation strategies may have severe negative effects, such as

anxiety, interpersonal difficulties, health problems, and weaker resilience in stressful events (Aldao, & Tull, 2015; Gross & John, 2003; Verzeletti et al., 2016; Webb et al., 2012). Furthermore, the literature stressed that emotion regulation is an attractive candidate mechanism for a pathway from child maltreatment to later maladjustment (Berzenski, 2018; Jessar et al., 2017). In particular previous studies have established that emotion regulation is an important mediator in the relationship between childhood maltreatment and psychopathology (e.g., Jennissen et al., 2016) physical health (Cloitre et al., 2019), risk behaviours (Oshri et al., 2015), and problems in social relationships (Berzenski, 2018).

Some of these studies have also highlighted that there are specific mechanisms of emotion regulation that more precisely indicate the relationship between childhood maltreatment and neglect and later maladaptation and psychopathology. Specifically, Oshri et al., (2015) found that, among the dimensions of emotion regulation, difficulty controlling one's emotions is the strongest indirect effect of having been mistreated as a child. The findings of Berzenski, (2018) showed that, in a sample of young adults, childhood emotional neglect is more likely to exert influence on the antecedent-focused aspects of emotion regulation, which include awareness and understanding of emotions, but not on the other emotion regulation strategies (e.g., in impulse control, goal-directed behaviour). In particular, the study found a significant indirect effect of childhood emotional neglect on problems in social relationships through lack of emotional awareness and emotional clarity. Moreover, Jessar et al., (2017) emphasized that decreases in emotional clarity mediated the relationship between emotional neglect and increases in depressive symptoms in a sample of adolescents. Another recent study showed that lack of confidence and lack of emotional control mediate the relationship between adverse childhood experiences (including childhood maltreatment experiences) and psychological distress in adulthood, in particular for individuals with low ACE (Adverse Childhood Experiences) scores (Rudenshine et al., 2018).

However, no studies yet have investigated specific emotional mechanisms that might explain the relationship between experiences of childhood emotional neglect at different levels of severity, and adult relational well-being.

The role of multi-type maltreatment as a covariate

We know from the international literature that often, victims were exposed to more than one of the following forms of childhood maltreatment: physical abuse, sexual abuse, emotional abuse, neglect, witnessing domestic violence (Hamby et al., 2010; Lev-Wiesel et al., 2019; Price-Robertson et al., 2013). Child multi-type maltreatment is associated with a range of severe consequences across multiple domains of children's functioning. Findings demonstrate that experiencing multiple types of child maltreatment contributes to increased negative symptoms compared with non-maltreated or single-type maltreated children. These symptoms include externalizing problems in adolescence (Baba et al., 2020), depression, suicidality, lower levels of self-esteem, sexual promiscuity, drug and alcohol use, and delinquent behavior in adolescence and young adulthood (e.g., Arata et al., 2005; Mwakanyamale et al., 2018). Moreover, literature showed that having experienced multiple forms of maltreatment and adverse experiences in childhood is associated with low life satisfaction in adulthood (Mosley-Johnson et al., 2019).

Starting from these considerations, the current study attempts to examine the impact childhood emotional neglect has on one's well-being in adulthood, controlling for the effect of multi-type maltreatment experiences. As noted by Wolfe and McGee (1994), "it may be misleading to study the impact of any particular form of maltreatment without controlling for or measuring the full range of maltreatment experiences". Therefore, considering all facets of the experience of maltreatment, we are able to evaluate the specific effect of emotional neglect on well-being through emotion regulation mechanisms. To include the unique effect caused by emotional neglect hinders us from considering that the results may be associated not only with that subtype, but with other forms of maltreatment as well. If we intend to deconstruct the cumulative experiences of

maltreatment during childhood, in order to examine the unique impact that one/any particular type has on health and well-being, it becomes necessary to control for other types (Scott-Store, 2011). Some prior works have even assessed the unique effect of one subtype of childhood maltreatment after controlling for the effect of the other subtypes (e.g., Manly et al., 1994; Senn & Carey, 2010). Specifically, the study by Manly et al., (1994) showed that physical and sexual abuse, along with physical neglect experienced in infancy and toddlerhood have been related to symptoms of externalizing behavior and aggression, controlling for other maltreatment subtypes experienced in the same developmental period. In particular, when all the subtypes were entered into the regression equation, and a multiple subtype occurrence was included in the analysis, the subtype that contributed significant unique variance to behavior problems was physical neglect (Manly et al., 1994). Results from the study by Senn and Carey, 2010, investigating whether sexual abuse in childhood was uniquely associated with risky sexual behavior in adulthood, using multivariate analyses, underscored that childhood sexual abuse remained associated with adult risky sexual behavior, controlling for multiple types of abuse. Physical abuse, psychological abuse, and neglect were not associated with any of the adult risky sexual behavior outcomes (Senn & Carey, 2010). Studies such as that of Finkelhor et al., (2005c) showed that only certain types of childhood victimization and maltreatment (e.g., neglect, emotional abuse, group assault) remained significantly associated with trauma symptoms, such as depression and anxiety, after controlling for poly-victimization in a sample of older children and adolescents.

As for experiences of emotional neglect, recent literature has analyzed distinct developmental pathways that, from unique experiences of emotional maltreatment (distinguishing between emotional neglect and emotional abuse) led to social adjustment (Berzenski, 2018). In particular, the findings show how emotional neglect during childhood has significant indirect effects on social adjustment, through emotional mechanisms such as self-awareness and understanding one's emotions, but not through other mechanisms such as emotional control strategies, which are a

unique effect of emotional abuse on later social adjustment. However, this study, in contrast from the others mentioned above, only considered the two forms of emotional maltreatment without controlling the effects of the other types of childhood maltreatment experiences.

In line with this literature, the current study aims to address a specificity in the emotional regulation mechanisms linking the severity of emotional neglect during childhood to relational well-being, after controlling for multi-type maltreatment experiences.

3.1 The current study

Starting from the considerations in the light of the reference literature, the current study aims to analyse whether the relationship between the severity of childhood neglect and well-being is mediated by specific mechanisms of emotions regulation. To understand whether the results are uniquely associated with emotional neglect experiences, the study also aims to analyse whether the relationship between the severity of childhood neglect and well-being is mediated by specific mechanisms of emotions regulation, controlling for multi-type maltreatment experiences.

Based on the research on childhood maltreatment severity, we hypothesized that at higher levels of severity of emotional neglect the impact on relational well-being is stronger. Even after controlling for multi-type maltreatment, we might assume that at higher levels of severity of emotional neglect the impact on relational well-being is stronger and that multi-type maltreatment has a significant and negative effect on relational well-being, regardless of severity level of emotional neglect.

Furthermore, consistent with previous literature about emotion regulation mechanisms, we hypothesized that emotional neglect experiences are positively associated with specific emotion regulation mechanisms that in turn can negatively impact on well-being in adulthood. In particular, controlling for multi-type maltreatment, we hypothesized the mediating effect of specific mechanisms of emotion regulation in the relationship between emotional neglect and relational well-being, differently respect to the severity levels of emotional neglect. For instance, according

to the Fonagy theories (Fonagy & Target, 1996; Fonagy et al., 2007), we might expect that one of the most compromised emotion regulation mechanisms, following severe emotional neglect experiences, is reduced self-awareness.

3.2 Method

3.2.1 Participants and procedure

Participants were 375 Italian students from the University of Florence with an age ranging from 18 to 30 years ($M=19.87$; $SD=1.92$). Of these 375 students, the majority are female (84% females). Students participated in the research during the first semester of university lessons between October and December 2020. The questionnaire has administered via the google form platform was anonymous, respecting the processing of personal data and included an informed consent form.

This research is part of a project that investigates the theme of resilience in adverse contexts, with particular attention to childhood experiences in the family context.

The study was approved by University Ethics Committees for Research of University of Florence (Prot. n. 0027513 of August 9, 2019).

3.2.2 Measures

Covariate

Multi-type maltreatment. The information about the experiences of childhood maltreatment forms was assessed with the revised Italian version of *Childhood Trauma Questionnaire with Witnessed Family Violence*. This revised version consists of six scale which correspond to six forms of childhood maltreatment: physical, emotional and sexual abuse, physical and emotional neglect and witnessed family violence. As the original version of the scale CTQ-SF (Bernstein et al., 2003) was maintained the Minimization/Denial (M/D) scale: any score from 1 to 3 on the M/D scale suggests the possible underreporting of maltreatment (false negatives).

Each of the six scales consists of five items and each item was evaluated on a 5-point Likert scale from 1 “Never True” to 5 “Very Often True”, with a score ranging from 5 to 25.

The scale is composed of 33 items including those of the Minimization/Denial scale.

The scales are composed as follows:

- 5 items (6,11,17,21,28) regarding Witnessed Family Violence ($\alpha=.78$; e.g. “*I have witnessed frequent fights and attacks between my parents*”; “*In my family insults and verbal violence were banned*”)
- 5 items (5, 8, 15, 23, 33) regarding Emotional Neglect ($\alpha=.90$; e.g. “*There was someone in my family who made me feel important or special*”; “*The people in my family took care of each other*”)
- 5 items (1, 2, 4, 7, 31) regarding Physical Neglect ($\alpha=.53$; e.g. “*I didn’t have enough to eat*”; “*I knew there was someone who took care of me and protected me*”)
- 5 items (3, 9, 16, 22, 30) regarding Emotional Abuse ($\alpha=.85$; e.g. “*I thought my parents wished I was never born*”; “*People in my family used to tell me insulting things that hurt me*”)
- 5 items (10, 13, 14, 18, 20) regarding Physical Abuse ($\alpha=.78$; e.g. “*The people in my family beat me so hard I left bruises or marks.*”; “*I was punished with a belt, a stick, a rope or other objects of this type*”)
- 5 items (24, 25, 27, 29, 32) regarding Sexual Abuse ($\alpha=.88$; e.g. “*Someone tried to touch me or get touched for sexual purposes*”; “*Someone tried to make me do or show me sex stuff*”)
- 3 items (12,19,26) regarding Minimization/Denial scale (“*There was nothing I wanted to change in my family*”; “*I had a perfect childhood*”; “*I had the best family in the world*”).

Items 2, 5, 8, 15, 23, 28, 31, 33 are reverse score.

To measure multi-type maltreatment experiences, we calculated a multi-type maltreatment index. This is a dichotomous variable in which 0 refers to those who have not experienced any form of childhood maltreatment and 1 refers to those who have experienced one or more forms a part form emotional neglect, that are: emotional abuse, sexual abuse, physical abuse, physical neglect and witnessed family violence experiences.

The CTQ with witnessed family violence scale evidenced excellent reliability in this sample ($\alpha=.93$).

Emotional Neglect. Childhood emotional neglect was assessed with the Childhood Trauma Questionnaire—Short Form (CTQ-SF; Bernstein et al., 2003). This measure contains items of childhood physical abuse, sexual abuse, emotional abuse, physical neglect, and emotional neglect, with 5 items per scale (and 3 additional “minimization” items, which were not used in the present study). Participants endorsed the frequency with which items occurred when they were growing up, on a 5-point scale from 1 (never true) to 5 (very often true).

Emotional neglect items include “*There was someone in my family who made me feel important or special*”; “*The people in my family took care of each other*”; “*I felt loved*”; “*The people in my family were close*”; “*My family has been a source of strength and support*”.

Emotional neglect subscale evidenced excellent reliability in this sample ($\alpha=.90$).

Difficulties in Emotion Regulation. The mechanisms of emotion regulation were assessed with the Italian versions of the *Difficulties in Emotion Regulation Scale* (DERS; Sighinolfi et al., 2010). This 33-item measure assessing the degree to which participants struggle with regulating emotions, according to the proportion of time they consider it a problem from 1 (almost never) to 5 (almost always). The DERS consists of six subscales: non-acceptance ($\alpha=.90$; e.g., “*When I’m upset, I get angry with myself because I feel that way*”); difficulty in distraction ($\alpha=.86$; e.g., “*When I’m upset, I have trouble concentrating*”); lack of confidence ($\alpha=.86$; e.g., “*When I’m upset, I think there’s nothing I can do to make me feel better*”); lack of control ($\alpha=.88$; e.g., “*I experience my emotions*

as overwhelming and out of control”); difficulty in recognition ($\alpha=.86$; e.g., “I have no idea how I feel”); reduced self-awareness ($\alpha=.82$; e.g., “I pay attention to my emotions”).

Relational Well-being. Relational Well-being was assessed using the Italian version of the *PERMA-Profiler* (Giangrasso, 2021). The Italian version of PERMA-Profiler consists of 23 items: 15 items related to the five main scales (3 items for assessing Positive emotions, 3 for Engagement, 3 for Relationships, 3 for Meaning, 3 for Accomplishment); one item for overall happiness; 3 for negative emotions; one item for loneliness; and 3 items for assessing self-perceived physical health. The response style is a Likert scale ranged from 0 to 10 (0 = not at all - 10 = completely; 0 = never - 10 = always; 0 = terrible - 10 = excellent). At a higher score corresponds the greater presence of the investigated dimension. Relational Well-Being was measured with Positive Relationships subscale which include “To what extent do you receive help and support from others when you need it?”; “In general, to what extent do you feel loved?”; “How satisfied he is with his personal relationships?”. Positive Relationships subscale evidenced good reliability in this sample ($\alpha=.77$).

3.2.3 Data analyses

All the analyses were conducted via PROCESS vs3.5 by Andrew F. Hayes and JAMOVI vs 1.6. To investigate the effects of emotional neglect severity on relational well-being through specific mechanisms of emotions regulation, a mediation analyses with multi-categorical focal predictor was conducted. Both direct and indirect effects have been estimated through the mediation model. We also estimated the same mediation model controlling for the multiple maltreatment index as a covariate.

According to the CTQ Manual by Bernstein and Fink (1998), we considered three levels of emotional neglect severity: none or minimal (0) [emotional neglect ≥ 5 & emotional neglect ≤ 9] in which there are those who have not experienced childhood emotional neglect or who have experienced it at a minimal level; low (1) [emotional neglect ≥ 10 & emotional neglect ≤ 14] in

which there are those who have experienced childhood emotional neglect at a low level, meaning that they were victims of neglectful parenting behaviours more consistently than in group 0; moderate/severe (2) [emotional neglect ≥ 15] in which there are those who have experienced childhood emotional neglect at a moderate and severe level, meaning that they were victims of multiple and severe neglectful parenting behaviours than in group 1.

The results will be organized through two main sessions: the first showing the results without considering multi-type maltreatment and the second one presented the results about the path analyses of obtained relations controlling for multi-type maltreatment covariance.

Overall, the results of the direct and indirect effects obtained are shown through the diagrams and tables. The table with the bivariate correlations between emotional neglect and multi-type maltreatment as a continuous variable, mechanism of emotional regulation and relational well-being has been also reported.

Table 3.1 Bivariate correlations between study variables, mean and standard deviation.

	1	2	3	4	5	6	7	8	9	Mean (SD)
1. Non-acceptance	1	.559**	.618**	.609**	.438**	.224**	-.245**	.230**	.245**	2.52 (1.08)
2. Difficulty in Distraction		1	.690**	.625**	.349**	.096	-.185**	.116*	.120*	3.51 (.92)
3. Lack of confidence			1	.698**	.513**	.268**	-.440**	.272**	.202**	2.63 (.87)
4. Lack of control				1	.355**	.091	-.192**	.196**	.206**	2.59 (.97)
5. Difficulty in Recognition					1	.493**	-.271**	.217**	.089	2.49 (.95)
6. Reduced self-Awareness						1	-.288**	.199**	.130*	1.76 (.77)
7. Relational Well-Being							1	-.498**	-.358**	7.52 (1.72)
8. Emotional neglect								1	.660**	1.92 (.92)
9. Multi-type maltreatment									1	.69 (1.11)

Note: *** p<.001; ** p<.01; * p<.05; *Emotional Neglect* and *multi-type maltreatment* as a continuous variable

3.3 Results

3.3.1 Descriptive and prevalence rates

As regards the prevalence of emotional neglect severity, within the sample of young adults, 60.3% (n=223) have not experienced childhood emotional neglect or have experienced it at a minimal level; 24.6% (n=91) have experienced childhood emotional neglect at a low level of severity and 15.1 % (n=56) have experienced it at a moderate and severe level. 5 participants did not answer some questions about the experiences of childhood neglect. Therefore, the analysis of the data has been carried out considering the sample of 370.

As regard the multiple maltreatment experiences, 62.2% of the young adults have not experienced any childhood maltreatment forms and 37.8% have experienced one or more forms of childhood maltreatment including emotional abuse, sexual abuse, physical abuse, physical neglect and witnessed family violence experiences. Furthermore, among those who experienced multiple forms of childhood maltreatment, 27.9% have not experienced emotional neglect, 35.7% experienced emotional neglect at a low level, and 36.4% at a moderate and severe level. While among those who have not experienced other forms including sexual abuse, physical abuse, physical neglect and witnessed family violence experiences, 20% experienced only emotional neglect (17.8% low and 2.2% moderate and severe).

3.3.2 Effects of childhood neglect severity on relational well-being

For the model predicting relational well-being findings showed a negative and significant effect of childhood neglect severity levels on relational well-being ($b=-1.37$; $se=.185$; $p<.001^{(low\ vs\ none)}$); $b= -2.06$; $se=.222$; $p<.001^{(mod\ vs\ none)}$; $b= -.697$; $se= .253$; $p<.01^{(mod\ vs\ low)}$) (see Table 3.2). Overall, the levels of childhood neglect severity explain 23.7% of the variability observed in relation well-being ($F(2, 367) = 57.1, p < 0.001$).

For the model predicting relational well-being controlling for multi-type maltreatment, findings showed a negative and significant effect of childhood neglect on relational well-being for those

who experienced emotional neglect at low level and moderate/severe level compared to those who have not experienced it ($b = -1.109$; $se = .196$; $p < .001^{(low\ vs\ none)}$; $b = -1.557$; $se = .260$; $p < .001^{(mod\ vs\ none)}$). Nevertheless, this result is not significant for those who have experienced emotional neglect at moderate/severe level compared to those who experienced it at low level ($b = -.448$; $se = .258$; $p = .08^{(mod\ vs\ low)}$). We also found a negative and significant effect of multi-type maltreatment on relational well-being ($b = -.690$; $se = .190$; $p < .001$) (see Table 3.4). Overall, the model explains 26.4% of the variability observed in relation well-being ($F(3, 366) = 43.7$, $p < 0.001$).

3.3.3 Effects of childhood neglect severity on relational well-being through specific mechanism of emotion regulation

Low level of neglectful experiences vs any experience

Findings showed a positive and significant association between childhood emotional neglect and lack of confidence ($b = .349$; $SE = .103$; $p < .01$), which in turn resulted negatively associated with relational well-being ($b = -.994$; $SE = .140$; $p < 0.001$). Besides childhood emotional neglect is positively and significantly associated with lack of emotional control ($b = .359$; $SE = .117$; $p < .01$), which in turn associated with relational well-being ($b = .313$; $SE = .111$; $p < .01$) (see table 3.3 and figure 3.1). As regard this specific result, findings related to the variable of emotional control produced regression coefficients that were in the opposite direction, due to suppression effect of many mediators in the model. However, the bivariate correlations showed that lack of emotional control is negatively associated with relational well-being ($r = -.192$; $p < .01$, see table 3.1 for details).

When controlling for multi-type maltreatment, findings showed a positive and significant association between childhood emotional neglect and lack of confidence ($b = .215$; $SE = .109$; $p < .05$), which in turn negatively associated with relational well-being ($b = -.966$; $SE = .139$; $p < 0.001$) (see table 3.5). Otherwise, no significant effects have been found for the mechanism of lack of emotional control in this case.

In relation to the indirect effects, the model in **figure 3.1** showed that lack of emotional confidence and emotional control explain the relationship between childhood emotional neglect and relational well-being ($b = -.347$; $SE = .104$; $p < .01$; $b = .112$; $SE = .062$; $p < .05$), for those who have experienced childhood emotional neglect at a low level compared to those who have not experienced it. No significant indirect effects have been found for the others mechanisms of non-acceptance, difficulty in distraction, difficulty in recognition and reduced self-awareness (see table 3.3 and figure 3.1). A direct and negative effect of emotional neglect experiences on relational well-being in adulthood was also found ($b = -1.166$; $SE = .172$; $p < .001$).

Controlling for multi-type maltreatment, the model in **figure 3.2** showed that only lack of emotional confidence explains the relationship between childhood emotional neglect and relational well-being ($b = -.208$; $SE = .106$; $p < .05$). No significant indirect effects have been found for mechanisms of lack of emotional control, non-acceptance, difficulty in distraction, difficulty in recognition and reduced self-awareness (see table 3.5 and figure 3.2).

Furthermore, a direct and negative effect of emotional neglect experiences on relational well-being in adulthood was also found ($b = -.976$; $SE = .181$; $p < .001$).

Moderate/severe level of neglectful experiences vs any experience

Findings showed a positive and significant association between childhood emotional neglect and lack of confidence ($b = .561$; $SE = .124$; $p < .001$), which in turn negatively associated with relational well-being ($b = -.994$; $SE = .140$; $p < .001$). Furthermore, findings showed a positive and significant association between childhood emotional neglect and lack of emotional control ($b = .423$; $SE = .140$; $p < .01$), which in turn associated with relational well-being ($b = .313$; $SE = .111$; $p < .01$) (see table 3.3) and a positive and significant association between childhood emotional neglect and reduced self-awareness ($b = .373$; $SE = .113$; $p < .01$), which in turn negatively associated with relational well-being ($b = -.296$; $SE = .107$; $p < .01$).

When controlling for multi-type maltreatment, findings showed a positive and significant association between childhood emotional neglect and lack of confidence ($b = .299$; $SE = .146$; $p < .05$), which in turn negatively associated with relational well-being ($b = -.966$; $SE = .139$; $p < .001$) and a positive and significant association between childhood emotional neglect and reduced self-awareness ($b = .361$; $SE = .135$; $p < .01$), which in turn negatively associated with relational well-being ($b = -.288$; $SE = .177$; $p < .01$) (see table 3.5). However, the effect of emotional neglect on lack of emotional control resulted not significant in this case.

In relation to the indirect effects, the model in **figure 3.3** showed that lack of emotional confidence and emotional control mediates the relationship between childhood emotional neglect and relational well-being ($b = -.558$; $SE = .151$; $p < .001$; $b = .132$; $SE = .074$; $p < .05$), for those who have experienced childhood emotional neglect at a moderate/severe level compared to those who have not experienced it. Besides, findings showed that even reduced self-awareness mediates the relationship between childhood emotional neglect and lower level of relational well-being ($b = -.110$; $SE = .065$; $p < .05$). No significant indirect effects have been found for the others mechanisms of non-acceptance, difficulty in distraction and difficulty in recognition (see table 3.3 and figure 3.3). A direct and negative effect of emotional neglect experiences on relational well-being in adulthood was also found ($b = -1.588$; $SE = .210$; $p < .001$).

Controlling for multi-type maltreatment, the model in **figure 3.4** showed that only reduced self-awareness mediates the relationship between childhood emotional neglect and relational well-being ($b = -.104$; $SE = .067$; $p < .05$). No significant indirect effects have been found for mechanisms of lack of emotional control, lack of confidence, non-acceptance, difficulty in distraction and difficulty in recognition (see table 3.5 and figure 3.4).

A direct and negative effect of emotional neglect experiences on relational well-being in adulthood was also found ($b = -1.197$; $SE = .242$; $p < .001$).

Moderate/severe level of neglectful experiences vs Low level of neglectful experiences

Finally, as regards the moderate/severe level of neglectful experiences versus low level of neglectful experiences, findings showed a positive and significant association between childhood emotional neglect and reduced self-awareness ($b = .301$; $SE = .129$; $p < .05$), which in turn negatively associated with relational well-being ($b = -.296$; $SE = .107$; $p < 0.01$).

As regards the indirect effects, the model in **figure 3.5** showed that only reduced self-awareness explains the relationship between childhood emotional neglect and lower level of relational well-being ($b = -.089$; $SE = .059$; $p < .05$). No significant indirect effects have been found for the others mechanisms of non-acceptance, difficulty in distraction, difficulty in recognition, lack of confidence and lack of emotional control (see table 3.3 and figure 3.5).

When controlling for multi-type maltreatment, findings showed a positive and significant association between childhood emotional neglect and reduced self-awareness ($b = .295$; $SE = .135$; $p < .05$), which in turn negatively associated with relational well-being ($b = -.288$; $SE = .177$; $p < 0.01$) (see **Figure 3.6**). However, the indirect effect through reduced self-awareness tends to be significant at $p = .069$ ($b = -.085$; $SE = .046$). No significant indirect effects have been found even for mechanisms of lack of emotional control, non-acceptance, difficulty in distraction and difficulty in recognition (see table 3.5 and figure 3.6).

Furthermore, no significant direct effect has been found of emotional neglect on relational well-being ($b = -.421$; $SE = .231$; $p = .07$), even when controlling for multi-type maltreatment ($b = -.220$; $SE = .237$; $p = .35$).

All the details relating to the direct effects and the explained variance of all the variables considered in the mediation model are shown in **table 3.3** and **3.5**.

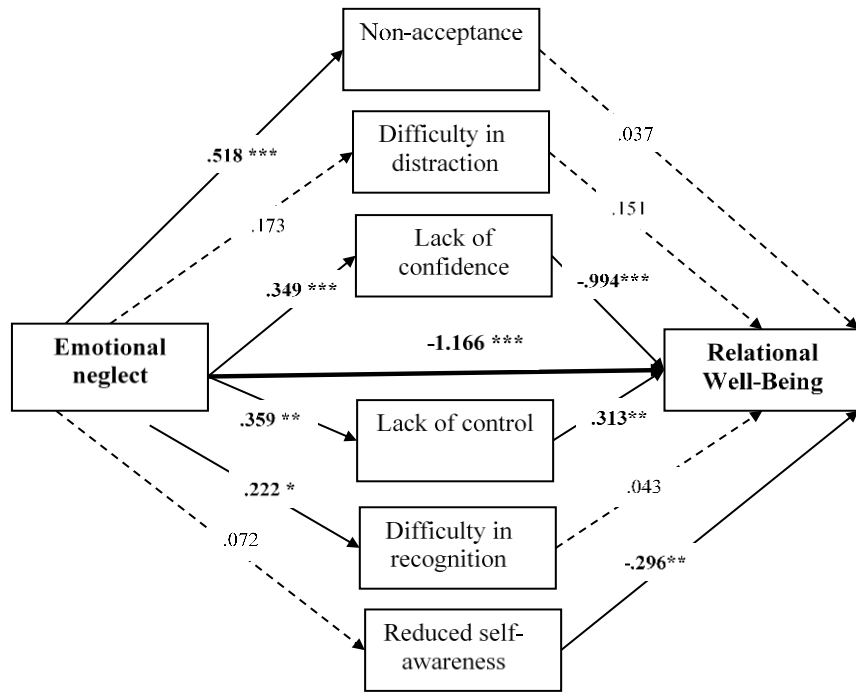
The role of multi-type maltreatment

As regards the role of multi-type maltreatment as covariate, findings of the mediation model showed the significant and negative effect of multi-type maltreatment on relational well-being ($b = -.557$; $SE = .177$; $p < .01$), regardless of severity levels of childhood neglect.

As regard the effects of multi-type maltreatment on emotion regulation mechanisms, findings showed the significant and positive effect of multi-type maltreatment on mechanisms of non-acceptance ($b = .393$; $SE = .134$; $p < .01$); lack of emotional control ($b = .404$; $SE = .120$; $p < 0.001$); lack of confidence ($b = .356$; $SE = .107$; $p < 0.001$) and difficulty in distraction ($b = .383$; $SE = .118$; $p < 0.01$). No significant effects have been found for mechanisms of difficulty in recognition and reduced self-awareness.

All the details relating to the direct effects and the explained variance of all the variables considered in the mediation model with multi-type maltreatment covariance are shown in **table 3.5**.

Figure 3.1 Direct and Indirect effects of emotional neglect severity (low vs none) on relational well-being, through mechanisms of emotion regulations.

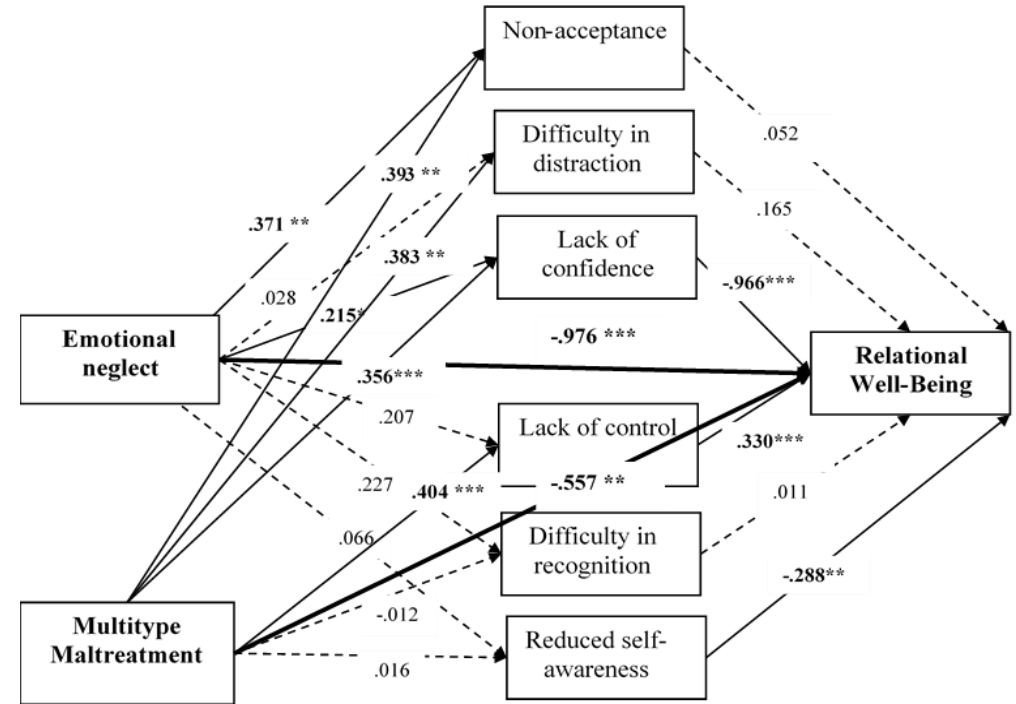


Indirect effects:

Emotional neglect->lack of confidence->relational well-being: -.347**; se=.104; p<.01

Emotional neglect ->lack of control-> relational well-being: .112*; se=.062; p<.05

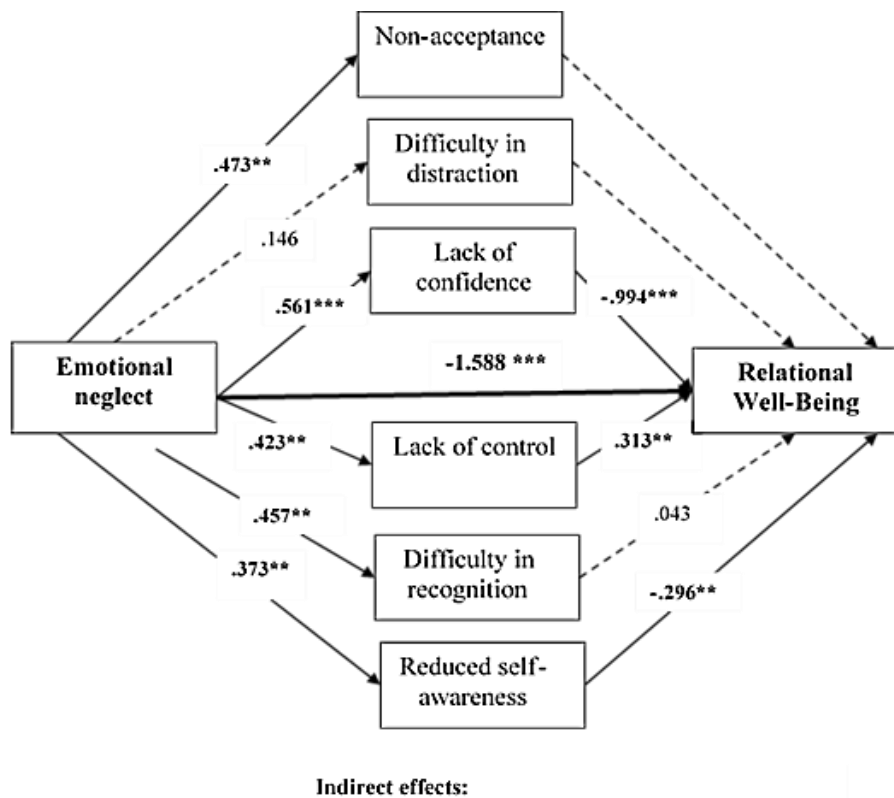
Figure 3.2 Direct and Indirect effects of emotional neglect severity (low vs none) on relational well-being, through mechanisms of emotion regulations, controlling for multitype maltreatment.



Indirect effects:

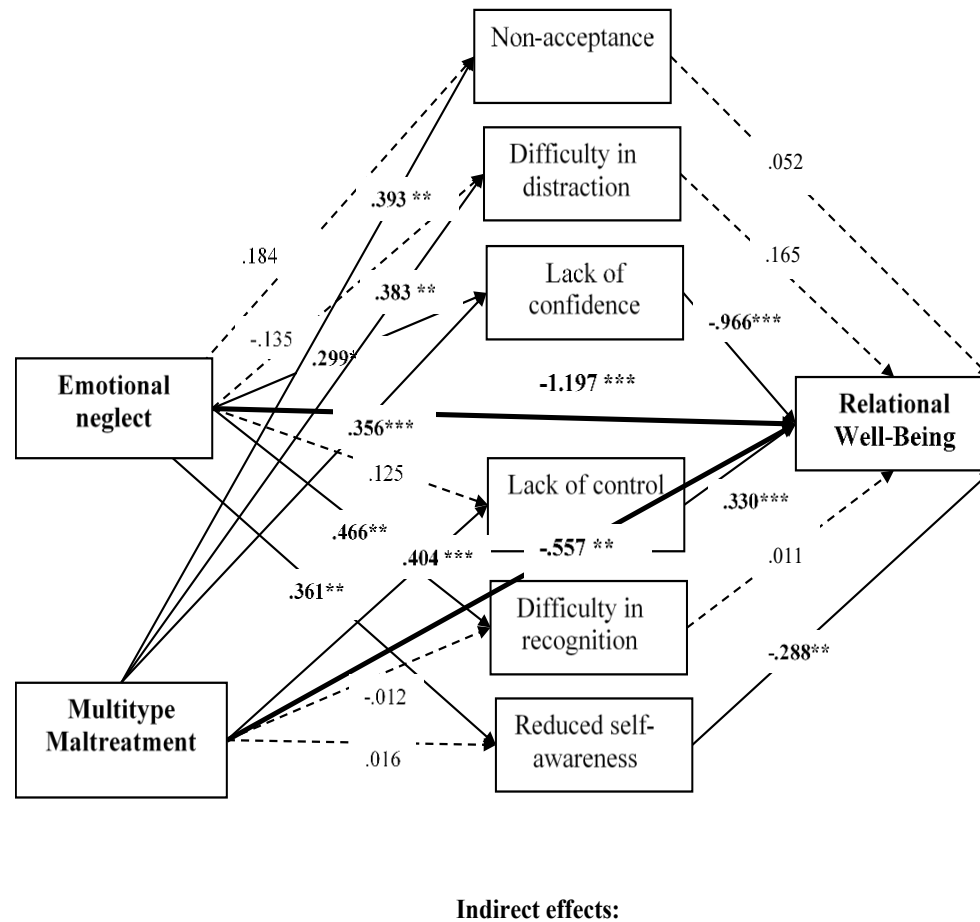
Emotional neglect->lack of confidence-> relational well-being: -.208*; se =.106; p<.05

Figure 3.3 Direct and Indirect effects of emotional neglect severity (moderate and severe vs none) on relational well-being, through mechanisms of emotion regulations.



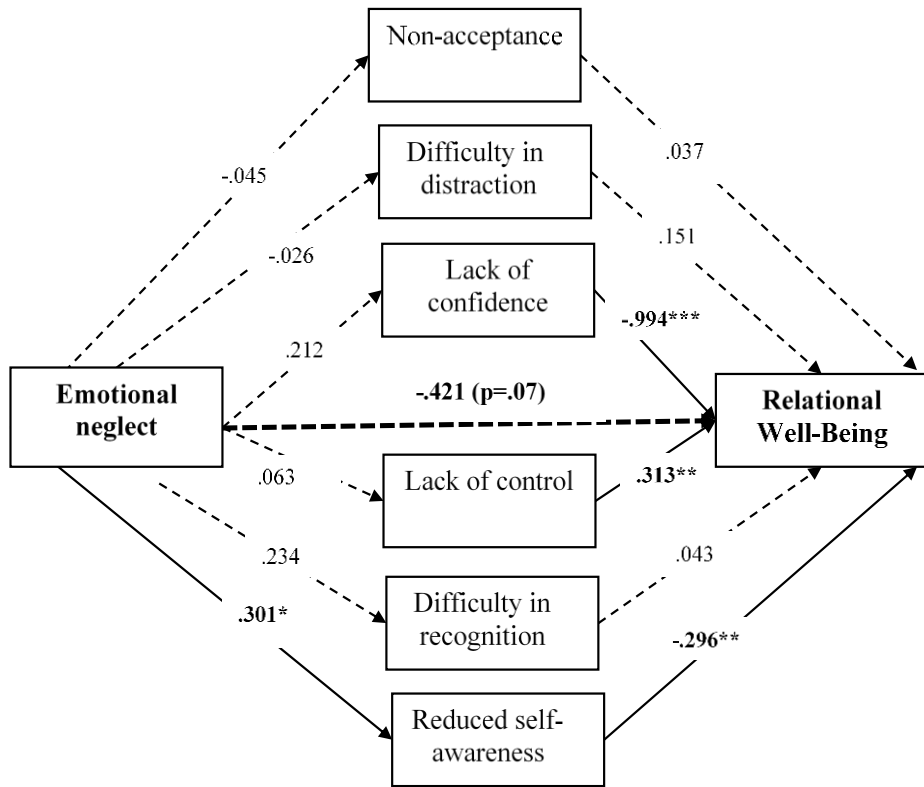
Emotional neglect \rightarrow lack of confidence \rightarrow relational well-being: $-.558^{***}$; $se = .151$; $p < .001$
 Emotional neglect \rightarrow lack of control \rightarrow relational well-being: $.132^*$; $se = .074$; $p < .05$
 Emotional neglect \rightarrow reduced self-awareness \rightarrow relational well-being: $-.110^*$; $se = .065$; $p < .05$

Figure 3.4 Direct and Indirect effects of emotional neglect severity (moderate and severe vs none) on relational well-being, through mechanisms of emotion regulations, controlling for multi-type maltreatment.



Emotional neglect \rightarrow reduced self-awareness \rightarrow relational well-being: $-.104$; $se = .067$; $p < .05$

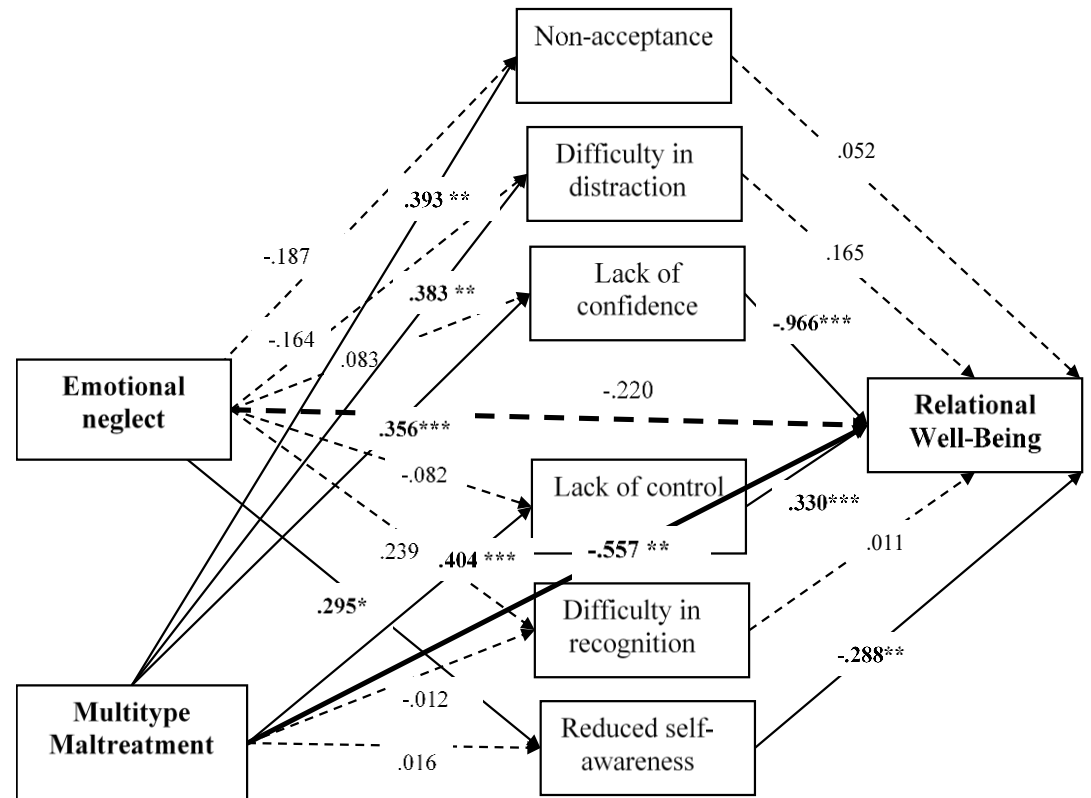
Figure 3.5 Direct and Indirect effects of emotional neglect severity (moderate and severe vs low) on relational well-being, through mechanisms of emotion regulations.



Indirect effects:

Emotional neglect->reduced self-awareness->PR: -.089*; se=.059; $p < .05$

Figure 3.6 Direct and Indirect effects of emotional neglect severity (moderate and severe vs low) on relational well-being, through mechanisms of emotion regulations, controlling for multi-type maltreatment.



Indirect effects:

Emotional neglect -> reduced self-awareness-> relational well-being: -.085; se=.046; $p = .069$

Table 3.2 Estimated linear regression coefficients of the direct path between severity level of childhood neglect and relational well-being.

Criterion	Predictor	<i>B</i>	SE	<i>P</i>	R ²
Relational Well-being	EN (low vs none)	-1.37	.185	<0.001	.237
	EN (mod vs none)	-2.06	.222	<0.001	
	EN (mod vs low)	-.697	.253	<0.01	

Table 3.3 Estimated regression coefficients of the mediation model.

Criterion	Predictor	<i>B</i>	SE	<i>P</i>	R ²
Relational Well-being	EN (low vs none)	-1.166	.172	<0.001	.385
	EN (mod vs none)	-1.588	.210	<0.001	
	EN (mod vs low)	-.421	.231	.069	
	Non-acceptance	.037	.090	.674	
	Difficulty in distraction	.151	.111	.177	
	Lack of confidence	-.994	.140	<0.001	
	Lack of control	.313	.111	.005	
	Difficulty in recognition	.043	.097	.652	
Non-acceptance	Reduced self-awareness	-.296	.107	.006	.052
	EN (low vs none)	.518	.130	<0.01	
	EN (mod vs none)	.473	.156	.002	
Difficulty in distraction	EN (mod vs low)	-.045	.177	.799	.007
	EN (low vs none)	.173	.114	.134	
	EN (mod vs none)	.146	.137	.289	
Lack of confidence	EN (mod vs low)	-.026	.156	.867	.065
	EN (low vs none)	.349	.103	<0.01	
	EN (mod vs none)	.561	.124	<0.001	
Lack of control	EN (mod vs low)	.212	.141	.135	.038
	EN (low vs none)	.359	.117	.002	
	EN (mod vs none)	.423	.140	.003	
Difficulty in recognition	EN (mod vs low)	.063	.159	.689	.032
	EN (low vs none)	.222	.115	.05	
	EN (mod vs none)	.457	.138	.001	
Reduced self-awareness	EN (mod vs low)	.234	.157	.135	.028
	EN (low vs none)	.072	.094	.446	
	EN (mod vs none)	.373	.113	.001	
	EN (mod vs low)	.301	.129	.020	

Note: *** $p < .001$; ** $p < .01$; * $p < .05$; EN *emotional neglect*; mod *moderate/severe*.

Table 3.4 Estimated linear regression coefficients of the direct path between severity level of childhood neglect and relational well-being with the covariance of multi-type maltreatment index.

Criterion	Predictor	<i>B</i>	SE	<i>P</i>	R ²
Relational Well-being	EN (low vs none)	-1.109	.196	<0.001	.264
	EN (mod vs none)	-1.557	.260	<0.001	
	EN (mod vs low)	-.448	.258	.08	
	Multi-maltreatment	-.690	.190	<0.001	

Table 3.5 Estimated regression coefficients of the mediation model considering the covariance of multi-type maltreatment.

Criterion	Predictor	<i>B</i>	SE	<i>P</i>	R ²
Relational Well-being	EN (low vs none)	-.976	.181	<0.001	.402
	EN (mod vs none)	-1.197	.242	<0.001	
	EN (mod vs low)	-.220	.237	.353	
	Multi-maltreatment	-.557	.177	<0.01	
	Non-acceptance	.052	.089	.557	
	Difficulty in distraction	.165	.110	.136	
	Lack of confidence	-.966	.139	<0.001	
	Lack of control	.330	.110	<0.01	
	Difficulty in recognition	.011	.096	.908	
	Reduced self-awareness	-.288	.177	<0.01	
Non-acceptance	EN (low vs none)	.371	.138	<0.01	.074
	EN (mod vs none)	.184	.183	.316	
	EN (mod vs low)	-.187	.182	.305	
	Multi-maltreatment	.393	.134	<0.01	
Difficulty in distraction	EN (low vs none)	.028	.121	.812	.035
	EN (mod vs none)	-.135	.161	.402	
	EN (mod vs low)	-.164	.160	.306	
Lack of confidence	Multi-maltreatment	.383	.118	<0.01	.093
	EN (low vs none)	.215	.109	<0.05	
	EN (mod vs none)	.299	.146	<0.05	
	EN (mod vs low)	.083	.145	.565	
Lack of control	Multi-maltreatment	.356	.107	<0.001	.067
	EN (low vs none)	.207	.124	.094	
	EN (mod vs none)	.125	.164	.445	
	EN (mod vs low)	-.082	.163	.616	
Difficulty in recognition	Multi-maltreatment	.404	.120	<0.001	.032
	EN (low vs none)	.227	.123	.067	
	EN (mod vs none)	.466	.164	<0.01	
	EN (mod vs low)	.239	.163	.143	
Reduced self-awareness	Multi-maltreatment	-.012	.120	.919	.028
	EN (low vs none)	.066	.101	.516	
	EN (mod vs none)	.361	.135	<0.01	
	EN (mod vs low)	.295	.134	<0.05	
	Multi-maltreatment	.016	.099	.869	

Note: *** $p < .001$; ** $p < .01$; * $p < .05$; EN *emotional neglect*; mod *moderate/severe*.

3.4 Discussion and conclusions

This study aims to extend our current understanding of the relationship between the severity of childhood neglect and relational well-being, by focusing on specific mechanisms of emotion regulation. Controlling for multi-type maltreatment experiences, the study allowed us to understand the specificity of processes uniquely associated with experiences of emotional neglect. Consistent with prior researches, findings confirm that childhood experiences of emotional neglect have a negative impact on relational well-being in adulthood (Beilharz et al., 2020; Fitzgerald et al., 2020; Galea, 2012; Hagborg et al., 2017; Horan & Widom, 2015; Talmon & Ginzburg, 2017) with a larger effect on those who have experienced it at a more severe level, compared to who did not experience it at all.

Controlling for multi-type maltreatment, findings showed that emotional neglect has a larger effect on the relational well-being of those who have experienced it at a more severe level, compared to those who did not experience it at all, but no significant effect for those who have experienced emotional neglect at a more severe level compared to those who experienced low levels of neglect. Furthermore, the effect size of the associations found in the model controlling for multi-type maltreatment were lower than the previous one. In line with the literature about the unique impact that one particular type of childhood maltreatment has on health and well-being, and controlling for other types (e.g., Manly et al., 1994; Finkelhor et al., 2005c; Scott-Store, 2011), may state that without controlling for the presence of other forms of multiple maltreatment, one may misinterpret having experienced emotional neglect as the unique contributor to the state of one's relational well-being. In particular, the presence of multi-type maltreatment seems to hide the distinction between low and moderate/severe levels of severity.

Moreover, conforming with previous studies, findings underscore that people who experienced childhood emotional neglect have difficulties in specific emotion regulation strategies (Berzenski, 2018; Cloitre et al., 2019; Jessar et al., 2017). In particular, we found that lack of confidence and

lack of control are significant effects for people who have experienced low, moderate, and severe levels of emotional neglect, compared to people who have not experienced it. This is associated with lower levels of relational well-being. Larger effects are highlighted for those who have experienced the most severe level of emotional neglect. Furthermore, findings underscored how neglect results in reduced self-awareness for those who experienced neglect at moderate/severe levels, compared to those who experienced it at low levels and to those who did not experience it at all, which, in turn, was associated with a lower relational well-being.

However, controlling for multi-type maltreatment, findings showed that emotional neglect does not have a significant effect on one's lack of emotional control, which instead is significantly associated with experiences of multi-type maltreatment. This result suggests that the emotional control process disappears when the multi-type is considered, and thus it is not specific to the association between emotional neglect and well-being, but rather it characterizes the multi-type maltreatment experiences. Besides, controlling for multi-type maltreatment, the effects of emotional neglect that remained significant are lack of confidence for those who experienced neglect at low levels, compared to those who have not experienced it and on reduced self-awareness for those who experienced neglect at moderate/severe levels compared to those who have experienced it at low levels and who have not experienced it at all. In line with previous studies (e.g., Berzenski, 2018), our results allow us to underline the fact that there are mechanisms of emotion regulation, such as emotional awareness and confidence, which constitute the specific mechanisms of the association between emotional neglect and well-being, in contrast to the emotional control mechanism which is more characteristic of experiences of multi-type maltreatment.

Overall, our findings suggested that emotional awareness is the most compromised mechanism among those who have experienced more severe levels of childhood emotional neglect. This mechanism differentiates those who experienced moderate/severe levels of neglect from those

who experienced it at low levels and from those who did not experience it at all. Controlling for multi-type maltreatment, reduced self-awareness remained the unique mechanism that differentiates those who experienced moderate/severe levels of neglect from those who experienced it at low levels and from those who did not experience it at all. Thus, reduced self-awareness is a specific mediational mechanism for the relationship between emotional neglect and relational well-being, in particular for those who have experienced it at more severe levels. This consideration is further confirmed by the fact that having or not having experienced multiple forms of childhood maltreatment is not significantly associated with the mechanism of reduced self-awareness. This is probably because emotional awareness, compared to other mechanisms of emotion regulation, such as confidence, control, recognition, acceptance, is a core mechanism for the definition of the emotional self, which develops from one's first interactions with the caregiver. Emotional awareness is defined as the capacity to recognize, feel and understand emotions in the self (Berzenski, 2018; Sighinolfi et al., 2010). This process can be understood through Fonagy's theories on the self-reflective function. According to this approach, the child, at the beginning, has no self-awareness, and the experiences related to his own emotions and physiological states are influenced by the stimuli of the external and family environment (Fonagy & Target, 1996; Fonagy et al., 2007).

Reflective function is the developmental acquisition that permits the child to respond not only to other people's behavior, but to his conception of their beliefs, feelings, hopes (Fonagy & Target, 1996). Some of the early conceptualization on the reflective function suggested that childhood maltreatment and neglect does, in fact, impair the child's reflective capacities and sense of self (Schneider et al., 1984), thus reflecting a withdrawal from social interactions (Beeghly & Cicchetti, 1994). Therefore, the caregiver's lack of emotional reference, due to severe emotional neglect experiences, can negatively affect reflective self-construction (Fonagy & Target, 1996; Fonagy et al., 2007), thus compromising the child's awareness of his or her emotions. In this sense,

neglected children, having no emotional reference patterns, may experience greater difficulty in interpreting, understanding and being aware of their own emotional experiences, which leads to difficulties in interpersonal relationships (Stern, 1985).

The finding related to the role of emotional control processes as related to multi-type childhood maltreatment is in accordance with the literature. Studies showed that among the dimensions of emotion regulation, difficulty in controlling one's emotions showed the strongest indirect effect of the forms of child maltreatment, such as emotional and sexual abuse, and can lead to risky behavior in young adulthood, along with psychological distress (e.g., Berzenski, 2018; Oshri et al., 2015; Rudenstine et al., 2018). In this case, only the mechanism of lack of confidence mediates the relationship between childhood emotional neglect and relational well-being, for those who experienced emotional neglect at low levels, compared to those who have not experienced it, but not for those who experienced it at moderate/severe levels.

This finding could be explained according to the attachment theory of John Bowlby (1973). When the caregiver does not respond or responds inadequately to the child's emotional needs, as is the case in some neglectful parenting behaviors, the child can activate two main defensive modes on which the forms of insecure attachment are organized: the distancing of negative affections (anger, fear, vulnerability), which underlies the configuration of distancing-avoiding insecure attachments, and the intensified manifestation of negative affections, especially anger, which is a feature of ambivalent-worried insecure attachment. This relationship with the caregiver can create difficulties in one's confidence in being able to cope with negative emotions (e.g., Baldoni, 2014), which consequently has a negative impact on interpersonal relationships and psychological well-being (Baldoni, 2014; Fonagy, Target 2001; Paetzold et al., 2015).

Overall, the results of the current study allow us to highlight the unique mediating effects of specific emotional mechanisms in the association between emotional neglect and relational well-being, controlling for multi-type maltreatment experiences. Specifically, our main findings

underlined that only reduced self-awareness and lack of emotional confidence are the core mechanisms of emotion regulation that specifically mediate the relationship between childhood emotional neglect experiences and low levels of relational well-being in young adulthood in different ways, based on the level of severity of such experiences. In this sense, emotional confidence is the most compromised mechanism among those who have experienced low levels of emotional neglect; emotional awareness is the most compromised mechanism among those who have experienced more severe levels of these traumatic experiences. These results highlight whether having experienced emotional neglect, albeit at a low level, is associated with the adults' lack of confidence in one's ability to manage negative emotions, and later, difficulties in managing relationships with others (Baldoni, 2014; Bowlby, 1973). On the other hand, when the experiences of neglect are more severe and chronic, characterized by a total absence of the caregiver as a social and emotional reference, they can lead to a real failure in the development of the functional self (Fonagy & Target, 1996; Fonagy et al., 2007), compromising a more complex emotional mechanism such as that of emotional awareness and self-awareness.

Therefore, our study showed evidence that the different levels of severity of neglect predict different outcomes and specific pathways (e.g., English et al., 2005b; Rehan et al., 2017). Compared to the early studies on that issue, our study also allowed us to identify the specific emotional mechanisms that, in relation to the different levels of severity of neglectful experiences, define psychological and social functioning in adulthood. Moreover, the results identify specific emotional mechanisms that would need to be worked on, in order to reduce the long-term impact of childhood neglect experiences on relational well-being, especially in severe cases. In this sense, findings suggest the need to differentiate clinical and social interventions in relation to the severity of the neglectful experiences. Thus, it is crucial to develop specific interventions on emotional awareness and emotional intelligence, especially, for those who have experienced severe levels of childhood neglect.

3.4.1 Strengths and limitations

Nevertheless, it is necessary to interpret these findings in light of a few key limitations.

The most significant limitation of the present study is the nature of the sample. The sample was quite small and mainly composed by females, thus it was not representative of the general population. Whatsmore, the retrospective nature of the data is another key limit of the study. A longitudinal study of children's experiences of emotional neglect and later adaptation would provide the strongest evidence for the mechanisms described here, and could better explain the developmental trajectories after these adverse childhood experiences.

Despite these limitations, the study made it possible to thoroughly inspect specific emotional mechanisms of mediation of the impact of childhood neglect experiences on one's relational well-being, taking into account the different nature of such experiences and controlling for multi-type maltreatment experiences. The inclusion of a severity index of emotional neglect experiences contributed significantly to the study, with relevant implications for both basic and applied research levels.

CHAPTER 4

MODERATION EFFECTS IN THE RELATIONSHIP BETWEEN CHILDHOOD NEGLECT AND WELL-BEING IN YOUNG ADULTHOOD.

Environmental sensitivity and contextual resilience as moderators of the relationship between childhood emotional neglect severity and current psychological well-being in young adulthood.

Introduction

Childhood emotional neglect has deleterious consequences on psychological health and well-being (e.g., Bailey et al., 2018; Cicchetti & Valentino, 2006; Green et al., 2019; Humphreys et al., 2020; Naughton et al., 2017). Yet, there are also empirical evidences suggesting that adults who experienced early emotional neglect are overall well-adjusted and not more at risk than others to develop psychological symptoms (Cheung et al., 2017; Folger & Wright; Luthar & Cicchetti, 2000). This heterogeneous pattern of findings suggests that a series of variables might act as moderators, and their identification can better allow to understand the variability in the pathways of adaptation and maladaptation after traumatic childhood experiences, in order to identify factors to be targeted in intervention and prevention programs.

Childhood neglect is defined as parental omission of response to the child's needs (Ferrara et al., 2018; Stoltenborgh et al., 2013). Specifically, emotional neglect refers to the failure of caregivers to provide for a child's basic psychological needs, such as love, encouragement, a sense of belonging and support (Bernstein & Fink, 1998; Turner et al., 2019). It is the most frequently reported form of child maltreatment, taking up 61% of all children who received a child protection response in 2019 in the USA (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2021); Child Maltreatment 2019) and 18.4 % in Europe (Sethi et al., 2013).

From a developmental perspective, the impact of emotional neglect is not limited to current adjustment, rather it impacts on current and long-term psychological well-being and socio-

emotional development (Spertus et al., 2003; Spinazzola et al., 2014, Beilharz et al., 2020; Hagborg et al., 2017; Talmon & Ginzburg, 2017). Specifically, several empirical studies provided evidence that childhood emotional neglect hamper the individual's relational well-being, defined in terms of perceived social support, interpersonal relationships and socio-emotional adjustment (e.g., Beilharz et al., 2020; Berzenski, 2018), and suggest that the impact of early emotional neglect is even higher than that reported for other form of childhood maltreatment and abuse (Beilharz et al., 2020; Cohen & Thakur, 2021; Berzenski, 2018; Naughton et al., 2017; Paradis & Boucher, 2010; Talmon & Ginzburg, 2017).

Furthermore, evidences emphasized that problems are proportional to the severity of neglectful experiences (e.g., English et al., 2005; Higgins, 2004; Rehan et al., 2017; Teicher & Samson, 2013; Vachon et al., 2015), with those who experienced more severe levels of neglect during childhood displaying more symptoms of anxiety and depression in adulthood compared to those who experienced low levels of these adverse experiences (e.g., Evans et al., 2013; Higgins, 2004; Vachon et al., 2015).

However, not all studies reported emotional neglect to have a long-term impact on adjustment, with some empirical evidences reporting adults with childhood experiences of emotional neglect to become well-adjusted individuals (Cheung et al., 2017; Folger & Wright, 2013). This heterogeneity is understood within a resilient framework (Constantine et al., 1999; Luthar et al., 2000; Luthar & Cicchetti, 2000; Masten, 2014) where individual and contextual protective factors can act as moderators (e.g., Booth et al., 2015; Cheung et al., 2017; Greven et al., 2019; Folger & Wright, 2013). To identify what specific variables might play a moderating, protective role, can have important applied implications for informing intervention and prevention programs.

Guided by the developmental perspective of individual by context (e.g., Cicchetti, 1993; Rutter, 2014), in the current study we investigated the impact of childhood neglect experiences on adult well-being considering individual and contextual characteristics that can influence one's ability to

cope with such negative experiences. Specifically, we considered individual differences in environmental sensitivity (Aron et al., 2012; Pluess, 2015) and contextual resilience (e.g., Masten, 2014). Individuals high in environmental sensitivity, due to their increased susceptibility to stimuli, might present lower levels of well-being growing up if experiencing emotional neglect in childhood. However, because they are more sensitive to positive stimuli too, an increased environmental sensitivity might allow them to benefit more of a positive supportive environment encountered while growing up, as captured by the notion of contextual resilience.

Environmental sensitivity as a candidate moderator

Theoretical reasoning and empirical evidences converge on the notion that some people are more likely to be more affected than others by the negative effects of adverse childhood experiences, and by the positive effects of an enriching contexts, due to their increased sensitivity to environmental stimuli. According to the Environmental Sensitivity meta-framework, such differences in response to the environment are captured by the individual trait of Sensory Processing Sensitivity (SPS, Aron et al., 2012; Pluess, 2015; Greven et al., 2019), which is defined as the ability to perceive and process inner and external stimuli. This increased sensitivity and susceptibility to events is deemed to be driven by a more sensitive central nervous system, which perceives and processes experiences more deeply (Aron et al., 2012; Greven et al., 2019; Bas et al., 2021). Meta-analytic data (Lionetti et al., 2019) and correlational studies have shown that individuals high in SPS are more prone to negative affect, including anxiety and depression, especially when the quality of the environment is less than optimal (Bakker & Moulding, 2012; Benham, 2006; Liss, et al., 2008; Liss et al., 2005). For example, results of the retrospective study by Aron et al., (2005) showed that individuals high in SPS had a higher tendency to be shy/withdrawn and to express more negative affect in adulthood only when reared in adverse family environments during childhood. Similarly, longitudinal evidences suggested that children high in environmental sensitivity were more at risk of higher levels of externalizing and

internalizing behavioral problems (Slagt et al., 2018; Lionetti et al., 2019b), including rumination and depression, up to pre-adolescence (Lionetti et al., 2021), particularly when exposed to negative parenting and permissive parental styles in early childhood. The negative impact of adverse experiences in childhood and quality of life has been also reported by Booth et al., 2015 in relation to young adults, showing that environmental sensitivity did moderate the association between childhood experiences and adult life satisfaction, and emphasizing how young adults who scored high in environmental sensitivity, and reported negative childhood experiences such as being neglected, showed lower life satisfaction.

Yet, individuals with an increased environmental sensitivity have been also reported to benefit more of positive rearing contexts and experiences, including emotional closeness in the parent-child relationship (Lionetti et al., 2021b), nurturing and supportive parenting (e.g., Hankin et al., 2011; Slagt et al., 2018, Scrimin et al., 2018), intervention and prevention programs (Nocentini et al., 2018; Pluess & Boniwell, 2015), and video-clip inducing positive emotions in laboratory contexts (Lionetti et al., 2018).

Hence, from the available empirical evidences, we can conclude that differences in environmental sensitivity interact with the quality of the developmental context influencing adjustment and well-being currently and longitudinally. Therefore, it is important to consider not only individual characteristics but also contextual factors as processes potentially able to explain the response to childhood experiences of neglect. From a vantage perspective (Pluess & Belsky, 2013), an increased susceptibility might allow individuals to exceptionally benefit of an enriched environment, with important implications for intervention and prevention programs (de Villiers et al., 2018).

The role of contextual resilience

The notion of *resilient contexts* refers to the quality of family relationships and relationships with peers, and to participation within the community (Constantine et al., 1999; Masten, 2014), that is

to contextual variables responsible for individual variability in the adjustment and well-being and hence variables potentially able to explain the heterogeneity found in the adjustment trajectories after emotional neglectful experiences. Positive relational factors as close relationships with friends, peers, romantic partners, and family members, and an active and fruitful participation within the community, including places of employment, neighborhoods, and schools (Afifi & MacMillan, 2011; Constantine et al., 1999), can potentially attenuate the impact of adverse events as childhood maltreatment and neglect, reducing the symptoms of suffering, and promoting adaptive development and well-being (Afifi & MacMillan, 2011, Afifi et al., 2016; Folger & Wright, 2013). For example, social support from family and friends have been reported to decrease the long-term negative impact of childhood maltreatment (e.g., Folger & Wright, 2013), and being happy living in one's neighborhood and experiencing positive academic achievements are associated with better mental health outcomes in adolescents exposed to childhood maltreatment earlier in life (e.g., Cheung et al., 2017).

From an individual by context perspective (e.g., Cicchetti, 1993; Rutter, 2014), and in line with the Environmental Sensitivity framework (SPS, Aron et al., 2012; Pluess, 2015; Greven et al., 2019), it is reasonable to expect some adults to be more susceptible to the impact of contextual, resilience factors, an hypothesis that has not been investigated yet. Our study aims to deepen our understanding of the interplay between individual traits, and specifically environmental sensitivity as captured by SPS, and resilient contextual environments, in the exploration of childhood emotional neglect on well-being in young adulthood.

4.1 The current study

To the best of our knowledge, this is the first study investigating the moderating role of environmental sensitivity and contextual resilience in the association between childhood emotional neglect experiences and psychological well-being in young adulthood. Understanding the buffering effect of environmental sensitivity and contextual resilience in the association

between childhood emotional neglect and current well-being might contribute to explain differences in response to severity of childhood neglect experiences, and inform intervention and prevention programs on what variable to target for promoting the individual's well-being.

In line with the *Environmental Sensitivity meta-framework* (Aron & Aron, 1997; Aron et al., 2012; Greven et al., 2019; Pluess, 2015), we hypothesised that young adults with high sensitivity to the environment are more affected by both negative and positive developmental contexts in relation to well-being. More specifically, we expected those with a high sensitivity to the environment to be more vulnerable when exposed to severe experiences of childhood emotional neglect, and therefore to present lower levels of relational well-being. At the same time, we expected those with a high environmental sensitivity to benefit more from the positive, resilient contexts (including family, community and friends as supportive and enriching context factors), despite having experienced severe levels of emotional neglect and to be more at risk of low levels of relational well-being in the context of severe childhood neglect experiences and low levels of contextual resilient contexts.

4.2 Method

4.2.1 Participants and procedure

Participants were 737 Italian students from the University of Florence with an age ranging from 18 to 30 years ($M=19.81$; $SD=1.91$). The majority (59.5%) are from Psychology School, 40.1% from Education Sciences and the remaining 0.4% did not specify the degree course.

About the socio-demographic variables, of these 737 students, the majority are female (86.5% females), 13.5% are male. 97% of the students are Italian, the remaining 3% of foreign nationality.

362 Students (49%) participated in the research during the first semester of University lessons between October and December 2020 and 375 (51%) participated during the first semester between October and December 2021. The questionnaire has been administered via the google form platform and was anonymous, respecting the processing of personal data and included an

informed consent form. Therefore, the students participated voluntarily in the research having the possibility to accept or not the consent to the processing of personal data.

This research is part of a broader project that investigates the theme of resilience in adverse contexts, with particular attention to childhood experiences in the family context. The study was approved by University Ethics Committees for Research of University of Florence (Prot. n. 0027513 of August 9, 2019).

4.2.2 Measures

Emotional Neglect. Childhood emotional neglect was assessed with the Childhood Trauma Questionnaire—Short Form (CTQ-SF; Bernstein et al., 2003). This measure contains items of childhood physical abuse, sexual abuse, emotional abuse, physical neglect, and emotional neglect, with 5 items per scale (and 3 additional “minimization” items, which were not used in the present study). Participants endorsed the frequency with which items occurred when they were growing up, on a 5-point scale from 1 (never true) to 5 (very often true). For the purpose of the current study, we will consider only the Emotional Neglect subscale.

Emotional neglect items include “There was someone in my family who made me feel important or special”; “The people in my family took care of each other”; “I felt loved”; “The people in my family were close”; “My family has been a source of strength and support”. Emotional neglect subscale evidenced excellent reliability in this sample ($\alpha=.91$).

Environmental Sensitivity. The environmental sensitivity was assessed with the Italian short version of *Highly Sensitive Person Scale* (HSP scale from Aron & Aron, *JPSP*, 1997), consisting of 12 items each rated from 0 to 7 (“0” = “Not at All; “7” = “Extremely”). The items measure *Sensory Processing Sensitivity* (SPS), which represents physiological reactivity to stimuli in the environment (e.g., “Are you easily overwhelmed by things like bright lights, strong smells, coarse fabrics, or sirens close by?”; “Do you get rattled when you have a lot to do in a short amount of time?”). Consistent with previous studies on the psychometric properties of the scale with children

(HSCS) and young adults (HSPS) (e.g., Pluess et al., 2018; Pluess et al., 2020), internal consistency in the current sample had a Cronbach's alpha of .72 and the bifactorial structure of the tested model showed good fit indexes [$\chi^2(43) = 131.388, p < .0001, CFI = .961, RMSEA = .053$, confidence interval [CI] 90% .043; .063; SRMR = .036].

Contextual Resilience. Contextual resilience factors were assessed using items from *Resilience and Youth Developmental Module (RYDM)* (Constantine & Benard, 2001; Hanson & Kim, 2007). Originally, the module version for adolescents and young adults includes 51 items designed to measure six internal and 11 external assets of resilience. In this study we used only the external resources. The external resilience assets are defined as the ability of the child to meaningfully participate, to receive support, to experience caring relationships, and to be expected to succeed within home, school, peer and community contexts.

In the current study we assessed the contextual resilience dimension using the external resilience factors through the sum of dimension of experience caring relationships in family, community and peer. The examples of items measure contextual resilience are the follows: "In my family there are those who talk to me about my problems", "In the community I belong to, there are those who really care about me", "Among my friends there are those who talk to me about my problems". The internal consistency in the current sample was good ($\alpha = .83$).

Relational well-being. Relational well-being was assessed using the Italian version of the *PERMA-Profiler* (Giangrasso, 2021). The Italian version of PERMA-Profiler consists of 23 items: 15 items related to the five main scales (3 items for assessing Positive emotions, 3 for Engagement, 3 for Relationships, 3 for Meaning, 3 for Accomplishment); one item for overall happiness; 3 for negative emotions; one item for loneliness; and 3 items for assessing self-perceived physical health. The response style is a Likert scale ranged from 0 to 10 (0 = not at all - 10 = completely; 0 = never - 10 = always; 0 = terrible - 10 = excellent). At a higher score corresponds the greater presence of the investigated dimension. Relational Well-Being was measured with Positive

Relationships subscale which include “To what extent do you receive help and support from others when you need it?”; “In general, to what extent do you feel loved?”; “How satisfied he is with his personal relationships?”. Positive Relationships subscale evidenced good reliability in this sample ($\alpha=.78$).

4.2.3 Overview of the analysis

First, bivariate correlations were run to explore the associations among variables. Afterwards, to investigate the effects of childhood emotional neglect on relational well-being, and the moderating role of environmental sensitivity and contextual resilience on the impact of emotional neglect, a series of generalized linear models, including only main effects and interaction terms, were run and compared. More specifically, the following models were tested: (1) Model 1, including emotional neglect, environmental sensitivity and contextual resilience as continuous predictors of relational well-being (main effect model); (2) Model 2, adding the two-way interaction terms emotional neglect X environmental sensitivity, emotional neglect X contextual resilience, and environmental sensitivity X contextual resilience (two-way interaction model); (3) Model 3, adding the three-way interaction term emotional neglect X environmental sensitivity X contextual resilience, to investigate if environmental sensitivity and contextual resilience moderated the impact of emotional neglect on relational well-being in young adulthood (three-way interaction model). To compare the investigated models, we used the Akaike Information Criterion, with lower values representing a better predictive capability of the model, and related Akaike weights, ranging from 0 to 1, and providing a direct measure of the model to predict new data conditional upon models considered (Wagenmakers & Farrell, 2004).

Follow-up and descriptive analyses were conducted to graphically explore the interaction identified, grouping subjects depending on their sensitivity, emotional neglect severity, and contextual resilience levels. More specifically, according to the literature, the following thresholds and cut off scores were considered. For emotional neglect, we considered three levels of emotional

neglect severity based on cut off scores proposed in the CTQ manual of Bernstein and Fink (1998): none or minimal (0) [emotional neglect ≥ 5 & emotional neglect ≤ 9] in which there are those who have not experienced childhood emotional neglect or who have experienced it at a minimal level; low (1) [emotional neglect ≥ 10 & emotional neglect ≤ 14] in which there are those who have experienced childhood emotional neglect at a low level, meaning that they were victims of neglectful parenting behaviours more consistently than in group 0; moderate/severe (2) [emotional neglect ≥ 15] in which there are those who have experienced childhood emotional neglect at a moderate and severe level, meaning that they were victims of multiple and severe neglectful parenting behaviours than in group 1. For environmental sensitivity, we followed the most recent literature defining people to fall into three sensitivity groups along a sensitivity continuum (Lionetti et al., 2018; Pluess et al., 2018) and we considered a three-class solution differentiating low (0) [$< 30\%$ percentile], medium (1) [$30\% \geq$ and $< 70\%$] and high (2) [$> 70\%$ percentile] sensitive groups. For resilient contexts, to define an enriched context, we calculated a dichotomous variable starting from the 70% percentile on the scale, where above are considered high levels of resilience and below medium-low levels.

All analyses were conducted via JAMOVI, version 1.6 (www.jamovi.org).

4.3 Results

4.3.1 Association between variables and prevalence rates

Emotional neglect was moderately associated with relational well-being ($r = -.518$) and with contextual resilience ($r = -.508$) but not significantly associated with environmental sensitivity ($r = .052$). Contextual resilience was also strongly associated with relational well-being ($r = .672$) but not significantly associated with environmental sensitivity ($r = .001$). The bivariate associations are reported in Table 4.1.

As regards the prevalence of emotional neglect severity, within the sample of young adults, 62.8% ($n=459$) have not experienced childhood emotional neglect or have experienced it at a minimal

level; 23% (n=168) have experienced childhood emotional neglect at a low level of severity and 14.2 % (n=104) have experienced it at a moderate and severe level. 6 subjects did not answer some questions about the experiences of childhood neglect.

Table 4.1 Bivariate correlations between study variables, mean and standard deviation

	1	2	3	4	Mean (SD)	N
1. Relational Well-Being	1	-.518**	-.063	.672**	7.58 (1.66)	737
2. Emotional neglect		1	.052	-.508**	1.86 (.91)	735
3. Environmental sensitivity			1	.001	5.15 (.77)	737
4. Contextual Resilience				1	3.26 (.55)	737

Note: *** p<.001; ** p<.01; * p<.05

4.3.2 Generalized Linear Model: interactions effects of emotional neglect experiences, environmental sensitivity and contextual resilience on relational well-being.

AIC and Akaike weights provided support for Model 3, that is, the model including the three-way interaction emotional neglect X environmental sensitivity X contextual resilience as predictors of relational well-being (see Table 4.2).

The three-way interaction generalized linear model showed that emotional neglect was significantly and negatively associated with relational well-being (B= -.43; SE=.06; $p < .001$) and contextual resilience was significantly and positively associated with relational well-being (B=1.6; SE=.09; $p < .001$). However, no significant effects of environmental sensitivity, environmental sensitivity X emotional neglect, environmental sensitivity X contextual resilience and contextual resilience X emotional neglect were found (see Table 4.3 for more details).

Besides, the three-way interaction was significant ($B = .37$, $SE = .11$, $p < .001$), suggesting that the environmental sensitivity and contextual resilience moderated the impact of emotional neglect experiences on relational well-being in young adulthood.

Table 4.2. AIC and Akaike weights for compared models.

	AIC	Akaike weights
Model 1, emotional neglect, environmental sensitivity and contextual resilience	2333.249	.05
Model 2, emotional neglect X environmental sensitivity, emotional neglect X contextual resilience, environmental sensitivity X contextual resilience	2337.230	.01
Model 3, emotional neglect X environmental sensitivity X contextual resilience	2327.323	.94

Looking at plots (Figure 4.1), at low levels of resilience (<70% of the resilience scale distribution), all three groups of environmental sensitivity showed low levels on relational well-being scores, and this is true in particular for those who experienced neglect at moderate/severe level.

At high levels of resilience, young adults who experienced emotional neglect at severe levels and who scored low on environmental sensitivity showed a very low level of relational well-being. On the contrary, young adults who experienced emotional neglect at severe levels but scoring high on environmental sensitivity showed a high level of relational well-being.

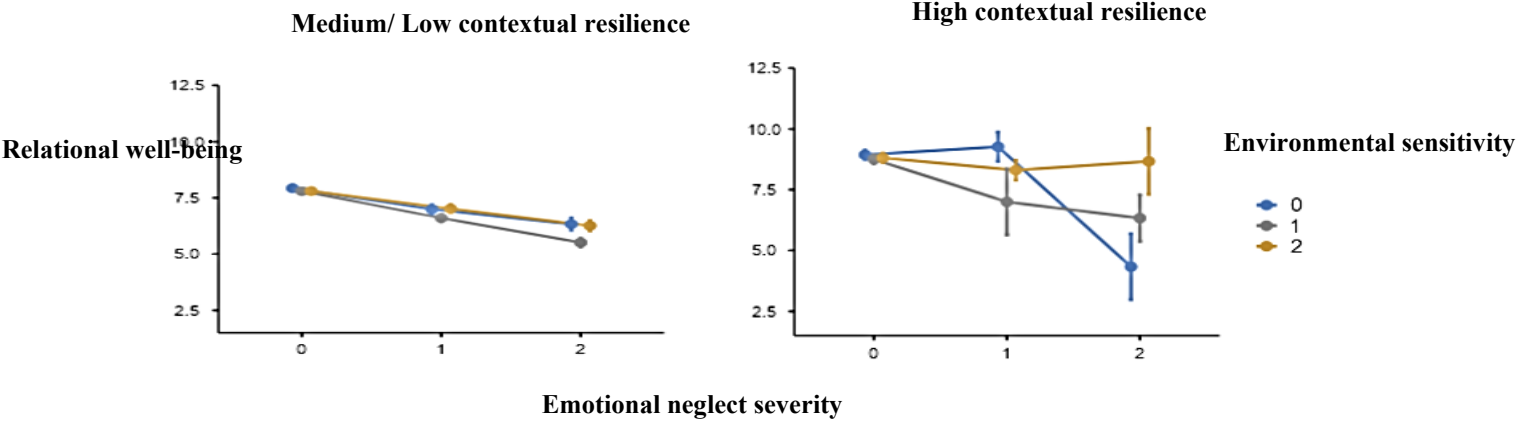
In particular, findings showed that among those who have experienced severe emotional neglect, there is a large difference in the mean of the well-being score between those with high environmental sensitivity and those with medium environmental sensitivity ($\Delta^{(MEDIUM-HIGH)} = -2.3$) and particularly between those with high environmental sensitivity and those with low environmental sensitivity ($\Delta^{(LOW-HIGH)} = -4.3$).

Overall, these findings show that, among those who experienced a severe level of emotional neglect, young adults high in environmental sensitivity are more able to be affected by the enriching and supportive contexts increasing their level of relational well-being. On the other side, those who experienced a severe level of emotional neglect but are characterized by low levels of environmental sensitivity are less influenced by the enriching and supportive contexts, explaining their low level of relational wellbeing.

Table 4.3. Model 3 regression coefficients.

Predictor		<i>B</i>	SE	<i>P</i>	<i>R</i> ²
	Emotional neglect	-.428	.058	<.001	
	Environmental sensitivity	-.042	.059	.48	
	Contextual Resilience	1.63	.093	<.001	
Relational Well- being	Emotional neglect X Environmental sensitivity	.065	.072	.36	
	Emotional neglect X Contextual Resilience	.005	.079	.94	.51
	Environmental sensitivity X Contextual Resilience	.085	.109	.43	
	Emotional neglect X Environmental sensitivity X Contextual Resilience	.368	.107	<.001	

Figure 4.1. Interaction patterns between emotional neglect severity, environmental sensitivity groups and contextual resilience



Note: **emotional neglect severity**=0 none; =1 low; =2 moderate/severe; **environmental sensitivity** =0 low; =1 medium; =2 high

4.4 Discussion

The current study provided for the first time empirical evidences for a differential impact of enriching environment on well-being during adulthood on the base of people level of sensory processing sensitivity (SPS). This is the first study that investigated the moderating role of environmental sensitivity of childhood emotional neglect experiences, showing that highly sensitive adults who experienced childhood emotional neglect are more affected by the benefit of a resilient context, increasing their level of relational well-being as compared to low sensitive adults.

Consistent with the individual by contest perspective (e.g., Cicchetti, 1993; Cicchetti & Rogosch, 2012; Rutter, 2014), the study underscored the interplay between individual differences in environmental sensitivity and resilient contexts defined as social and family support in buffering the impact of childhood experiences of neglect on adulthood relational well-being. In particular, results revealed that at medium/low levels of contextual resilience, all three groups of environmental sensitivity showed low levels of relational well-being. This means that, when there are no resilience factors such as social and family support, the severity of the traumatic experience negatively affects current well-being, regardless of SPS characteristics. This finding underlines that SPS, alone, is not able to moderate the impact of childhood neglect experiences on current well-being when the social and family context is medium-low supportive. In this case, the main effect of a neglectful experience is too relevant, a result in line with previous studies providing evidence that when the family and social context is less than optimal early neglect impacts on subsequent adjustment (e.g., Cheung et al., 2017; Folger & Wright, 2013). Contrary to what we expected, highly sensitive adults were not more vulnerable to emotional neglect experiences than low sensitive adults. This finding could be related to the measure used for investigating childhood experiences: we used a retrospective self-report of childhood emotional neglect, while the environmental sensitivity and contextual resilience were measured by referring to the present time.

Even though Environmental Sensitivity is a partially inherited trait (Assary et al., 2021) and, as such, potentially might tend to a certain degree of stability, changes in sensitivity levels can't be excluded. We can hypothesis that findings might have been different if Environmental Sensitivity was measured at the same time of the environmental variable of childhood neglect. Future prospective studies are needed to assess longitudinally how high and low SPS individuals respond to a negative childhood event, such as neglectful experiences.

On the other hand, at high levels of contextual resilience, those who experienced severe levels of emotional neglect, but are high in environmental sensitivity, are more strongly influenced by enriching and supportive contexts, and do not appear to be more affected in the long term by negative childhood neglect experiences compared to low sensitive groups. According to Environmental Sensitivity meta-framework, this means that people characterized by a predisposition for the development of heightened sensitivity were more receptive to the environmental benefits to which they were exposed, such as family support, strong friend relationships and participation in community life, increasing their level of relational well-being. Important is the finding related to those young adults who experienced emotional neglect at severe levels, and who scored low in environmental sensitivity: they showed a very low level of relational well-being although encountered family, peer and community contexts very resilient. This means that those who have low levels of environmental sensitivity are less influenced by enriching and supportive contexts (Boyce & Ellis, 2005; Lionetti et al., 2018), and therefore do not benefit from the contextual resilience factors, explaining their low levels of relational well-being. This probably because low sensitive people are characterized by low scores of positive emotional reactivity (e.g., Lionetti et al., 2018), thus they might be less responsive to positive and enriched, supportive contexts.

Overall, the current study emphasized that not all people having experienced childhood emotional neglect presented low levels of well-being in adulthood. In particular, our main results pointed out

that when the social and family contexts where individuals are living resulted as being rich and supportive, individuals with high sensitivity increased their level of relational well-being compared to low sensitivity person. This means that high sensitivity can be considered an individual characteristic of positive adaptation after childhood emotional neglect experiences, when the current social and family environment is optimal.

4.4.1 Limitations, Strengths and future directions

These results must be considered in light of certain limitations.

First, the sample was composed mainly of females, so it was not representative of the general population. Although this is a bias characterizing the general literature on childhood maltreatment (e.g., Beilharz et al., 2020; Berzenski, 2018; Talmon & Ginzburg, 2017), a more representative sample balancing genders should be considered.

Besides, the retrospective nature of the data is another key limit of the study.

Specifically, we used a retrospective measure of childhood neglect experiences, whereas moderators (environmental sensitivity and contextual resilience) were measured by asking the subject to think about the present. The fact that childhood neglect experiences and environmental sensitivity have been measured by referring to different moments in life may have potentially influenced the results. However, the *Childhood Trauma Questionnaire* (CTQ- Bernstein & Fink, 1998) is one of the most commonly used retrospective measures to investigate the impact of childhood maltreatment and neglect experiences on well-being (e.g., Beilharz et al., 2020; Galea, 2012; Hagborg et al., 2017; Kong, 2018; Talmon & Ginzburg, 2017), and it has demonstrated its reliability and validity across various countries and samples (Bernstein et al., 2003; Grassi-Oliveira et al., 2014; Hernandez et al., 2013; Paivio & Cramer, 2004; Sacchi et al., 2018; Thombs et al., 2009).

Future studies could be developed from a longitudinal perspective to investigate the processes that characterize the trajectories in relation to the differences in sensitivity to the environment and the severity levels of childhood neglect.

Notwithstanding these limitations, findings allowed us to make some reflections related to possible applied implications. More specifically, we propose that to tailor psychological interventions according to the individual differences in environmental sensitivity might allow to better promote well-being and reduce the long-term impact of family neglect for individuals with high levels of SPS who experienced negative childhood events. Close to this, findings also highlight the need to develop prevention programs for individuals low in environmental sensitivity to help them flourish, and suggest, from an empirical perspective, the need to further examining conditions leading to positive health and well-being in individuals low in SPS who lived severe childhood neglect experiences.

CHAPTER 5

GENERAL DISCUSSION AND CONCLUSIONS

The general aim of the present dissertation was to investigate the association between childhood neglect experiences and psychological well-being in young adults.

After having confirmed the multidimensional nature of childhood maltreatment as measured by the CTQ, our first research aim was to understand how the magnitude of the association varies according to the type of neglect and the age of assessment, through the meta-analytic study. We found that having suffered emotional neglect seems to have a higher impact on perceived well-being than having suffered physical or general childhood neglect, and the effect is greater in young adults compared to adults.

However, the meta-analyses showed that only a few moderators of the association between childhood emotional neglect and well-being were considered in the literature. These considerations led to the second research question regarding the possible role of mediators and moderators in the relationship between childhood emotional neglect and psychological well-being. According to a developmental perspective of the “individual by context” (Cicchetti, 1993; Rutter, 2014; Sameroff, 2014), this dissertation attempts to understand the interplay between specific dimensions of childhood emotional neglect (e.g., severity) and individual characteristics (e.g., emotional characteristics), in order to identify specific pathways of adaptation or maladaptation exhibited by neglected children. Besides, the investigation of the interplay between environmental sensitivity and contextual resilience sheds light on possible moderators which may buffer the impact of childhood emotional neglect on current psychological well-being and fortify the impact of supportive and resilient contexts in these people.

Dissertation’s contribution to the literature

The four studies allowed us to deepen some critical issues in the literature about the phenomenon of childhood emotional neglect.

1) The psychometric definition of childhood maltreatment

The study presented in the first chapter contributed to the literature about the psychometric definition of childhood maltreatment as a multi-level construct. The study identified the second-order model as the most appropriate to define the factorial structure of the revised CTQ-SF scale in the Italian context, in which the high-ordered construct of childhood maltreatment is defined by the following 6 specific forms: witnessed family violence, emotional neglect, emotional abuse, sexual abuse, physical abuse, physical neglect. This means that childhood maltreatment is defined as a multi-level construct in which the different forms are strictly correlated, strengthening the results of a substantial proportion of studies, which argue that maltreated individuals experienced multi-type maltreatment, including witnessed family violence (e.g., Lev-Wiesel et al., 2019; Price-Robertson et al., 2013). These results guided us in the structuring of subsequent studies. Particularly, if we want to deconstruct cumulative experiences of childhood maltreatment to examine the unique impact of one particular type on health and well-being, it becomes necessary to check for other types (Scott-Store, 2011). Therefore, in the study presented in chapter 3 we decided to consider the experiences of multiple forms of maltreatment in order to understand the specific emotional mechanisms involved in the association between emotional neglect and well-being.

2) The association between childhood neglect experiences and psychological well-being

The second contribution of the present dissertation fills the gap in the scientific literature about the impact of childhood neglect experiences on the dimensions of psychological well-being.

For many years, researchers of clinical psychology focused on how stressful life conditions, such as childhood maltreatment and experiences of neglect led to psychopathology. With the growth of interest in positive psychology (Seligman, 2010), the focus shifted to thriving through adversity and to concepts such as resilience and well-being. The positive psychology perspective had the intent to supplement what is known about human suffering, weakness, and disorder in order to

have a more complete and balanced scientific understanding of the human experience (Seligman et al., 2005; Seligman, 2010).

In line with the positive psychology framework (Seligman, 2010), we define well-being not just as feeling happy, but also having optimal psychological functioning (e.g., Ryff, 1989) or the ability to meet core psychological needs (Ryan & Deci, 2001). Therefore, well-being is composed of the following core elements: positive emotion, engagement, relationships, meaning, and accomplishment (Seligman, 2010). Between these dimensions, Seligman stresses that positive relations with others is a key dimension of individual psychological well-being which contributes to the individual's well-being, regardless of the presence of the other dimensions.

Given how important positive relational functioning is to one's well-being and life satisfaction (e.g., Berzenski, 2018; Fitzgerald et al., 2020; Paradis & Boucher, 2010; Seligman, 2010), we believe it to be crucial to gain an in-depth understanding of which mechanisms can buffer the impact of childhood emotional neglect, and enhance relational well-being in young adulthood. The studies in chapters 2, 3 and 4 contribute to this topic, investigating the association between childhood neglect and well-being, especially relational well-being, and the role of specific mechanisms that can influence it.

Although some studies have documented the association between childhood maltreatment and well-being (e.g., Weber et al., 2016), no meta-analysis has been published on the forms of childhood neglect and well-being. The meta-analysis presented in chapter 2 aims to address this gap by distinguishing the physical and emotional forms of childhood neglect. Main findings suggested that emotional neglect has a higher impact on well-being than physical neglect, and the moderating role of age, showing that young adults perceive lower levels of well-being as compared to adults. Specifically young adults report greater effect size ($d = -0.69$, $p < 0.001$) regarding the impact of neglect in worsening perceived well-being respect studies where respondents are adults ($d = -0.34$, $p < 0.001$).

3) The Severity of childhood maltreatment and childhood neglect experiences

Another important contribution of the present dissertation was to consider the level of severity of childhood neglect experiences. The severity of these traumatic childhood experiences is an important indicator to consider when investigating the impact of neglect experiences on child development and adult health (e.g., English et al., 2005b; Higgins, 2004; Rehan et al., 2017; Vachon et al., 2015). In the early empirical studies, maltreatment and neglect were often treated as global constructs, without consideration of the nature and extent of the childhood experience on the adults' functioning (Crouch & Milner, 1993; English et al., 2005b; Manly et al., 1994).

Given the high prevalence of childhood neglect with the 61% in USA, the 40,7 % in Italy (Autorità Garante per l'Infanzia e l'Adolescenza, CISMAI, & Terre des Hommes, 2021; U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2021); *Child Maltreatment 2019*), and with the 39,7% of young adults who suffered of childhood emotional neglect experiences in our community sample of 375 university students (see study in chapter 3), it is an understatement to simply dichotomizing samples into neglected and non-neglected people. Childhood neglect experiences involve mild forms and also, but not only, chronic and severe situations. In our sample, the 24,6% is involved in childhood neglect experiences at a mild level, and 15,1% in severe forms. The study of psychological implications and processes activated by severe and milder experiences of childhood neglect is necessary in order to design selective interventions. According to this consideration, study 3 showed evidence that processes involved for those who have experienced neglect at a severe level are different from those who have experienced low levels of such experiences, controlling for other forms of maltreatment.

4) Mediatlional and moderation effects in the relationship between childhood emotional neglect and relational well-being in young adulthood

The next question addressed by this dissertation concerns which mechanisms are capable of influencing the relationship between experiences of emotional neglect and relational well-being in young adulthood. Guided by developmental perspective of the “individual by context” (Cicchetti, 1993; Rutter, 2014; Sameroff, 2014), we tried to understand the interplay between specific dimensions of childhood emotional neglect (e.g., severity) and individual characteristics (e.g., emotional mechanisms), in order to identify specific pathways of adaptation or maladaptation exhibited by neglected children.

In particular, the study presented in chapter 3 contributed to addressing the specific mediational mechanisms involved in the association between childhood emotional neglect and relational well-being, considering the severity of such experiences. The additional contribution of our study to the relevant literature on the issue (e.g., English et al., 2005b; Berzenski, 2018; Rehan et al., 2017), was to identify the specific emotional mechanisms activated by different levels of severity of neglectful experiences, able to impact social functioning and relational well-being in adulthood. Findings underlined that reduced self-awareness and lack of emotional confidence are the core mechanisms of emotion regulation that specifically mediate the relationship between childhood emotional neglect experiences and low levels of relational well-being in young adulthood. However, they act differently with respect to the levels of severity of such experiences. Emotional confidence is the most compromised mechanism among those who have experienced low levels of emotional neglect and emotional awareness is the most compromised mechanism among those who have experienced more severe levels of these traumatic experiences. These results highlight the fact that having experienced emotional neglect, albeit at a low level, is associated in adulthood with lack of confidence in one's ability to manage negative emotions, and later, difficulties in managing relationships with others (Baldoni, 2014; Bowlby, 1973). On the other hand, when the experiences of neglect are more severe and chronic, characterized by a total absence of the caregiver as a social and emotional reference, they can lead to a real failure in the development of

the functional self (Fonagy & Target, 1996; Fonagy et al., 2007) and compromise a more complex emotional mechanism such as that of emotional awareness and self-awareness. Overall, the inclusion of the severity index of emotional neglect experiences contributed significantly to the research on the field, with relevant implications for both basic and applied research levels.

Finally, the study presented in chapter 4 is the first to investigate the moderating role of environmental sensitivity and contextual resilience in the association between childhood emotional neglect experiences and psychological well-being in young adulthood. The study suggested the buffering effect of sensory processing sensitivity and contextual resilience in the association between childhood emotional neglect and current psychological well-being. In particular, the main results showed that young adults who experienced emotional neglect at severe levels and who scored low on environmental sensitivity showed a very low level of relational well-being when encountering a resilient context. Thus, low sensitive persons who experienced neglectful experiences during childhood, are less influenced by the enriching and supportive contexts (Boyce & Ellis, 2005; Lionetti et al., 2018), not benefitting from the resilience factors and showing lower levels of well-being. On the other side, those who experienced a severe level of emotional neglect but are high in environmental sensitivity are more able to be affected by enriching and supportive contexts, which increase their level of relational well-being. This is the first study that confirmed the moderating role of environmental sensitivity of childhood emotional neglect experiences, showing whether highly sensitive adults who experienced childhood emotional neglect are more affected by the benefit of a resilient context as compared to low sensitive adults.

Limitations and strengths

This dissertation certainly has some limitations, especially related to the methodological level.

We can say that the cross-sectional design allowed us to investigate the variables at a particular time, but in contrast to a longitudinal study, we were unable to understand the changes over time

(e.g., Widom et al., 2004) and the definition of developmental trajectories. Therefore, any inferences on causal pathways are limited.

The use of a retrospective measure to assess childhood maltreatment is another limitation. Nevertheless many of the studies that investigated the impact of childhood maltreatment and neglect experiences on well-being used retrospective measures, including *Childhood Trauma Questionnaire* (CTQ) (e.g., Beilharz et al., 2020; Galea, 2012; Hagborg et al., 2017; Kong, 2018; Talmon & Ginzburg, 2017), which is one of the most commonly used retrospective measures of childhood maltreatment (e.g., Newbury et al., 2018), as it has demonstrated its reliability and validity across various countries and samples (Bernstein et al., 2003; Grassi- Oliveira et al., 2014; Hernandez et al., 2013; Paivio & Cramer, 2004; Sacchi et al., 2018; Thombs et al., 2009).

Besides, the retrospective method allows us to evaluate the long-term impact of negative childhood neglect experiences on adulthood psychological health without the practical and ethical problems associated with obtaining prospective measures of maltreatment during childhood (e.g., Newbury et al., 2018). This is because asking questions about traumatic experiences may be more distressing for a child than for an adult (Newbury et al., 2018), because the child is still processing the experiences of maltreatment and neglect.

There is another point that may be considered a limitation regarding the nature of the population sample used. The sample was primarily composed of females, so it was not representative of the general population. This could be due to the fact that we collected the data in a sample of University students from the School of Psychology and Education Sciences, which has a female majority. Furthermore, having used only the sample of university students (aged from 18 to 30) we were unable to analyze the differences compared to other age groups, such as adolescents and children.

Despite these limitations, the dissertation also presents some strengths that need to be specified.

First of all, one of the strengths to consider is the different methodological approaches and data analysis we used according to the specific aims of the dissertation. Specifically, we conducted a confirmatory factor analysis to evaluate the factorial structure of the revised CTQ-SF scale in the Italian context. We also conducted a meta-analysis of the effect childhood neglect has on well-being. To inspect the strength of this association we used a mediational model, and then we implemented a moderation model to analyze the mechanisms that may influence the association between emotional neglect and psychological well-being.

Another general strength is the attention for both individual and contextual characteristics. Guided by the “individual by context” perspective (Cicchetti, 1993; Rutter, 2014; Sameroff, 2014), the dissertation focused on the role of both the individual and contextual mechanisms that occur between experiences of emotional neglect during childhood, and, later on, well-being in young adulthood.

Another important strength was the investigation into the phenomenon of emotional neglect, checking for multi-type-maltreatment. To consider only emotional neglect would not have allowed us to disentangle the implications associated with that subtype on its own, or as a facet of multiple-maltreatment experiences (Scott-Store, 2011). In this sense, taking into consideration the experiences of multiple forms of maltreatment allows us to evaluate the specific effect of emotional neglect on well-being through emotion regulation mechanisms.

Finally, our having considered multiple severity levels of childhood neglect, rather than simply dichotomizing samples into neglected and non-neglected, is another important strength that allowed us to evaluate the different effects of emotionally neglectful experiences on well-being in young adulthood, based on the nature of the events that took place. Given the high prevalence of this form in the community samples, the severity index allows us to understand the implications for a range of lived experiences; not only severe levels of emotional neglect, but also that of those

who suffered this type of maltreatment at a milder, but still relevant level in terms of psychological health implications.

Future research directions

Overall, the present dissertation has important implications for future research that intends to open new directions of research investigation.

Starting from the limitations of the sample mentioned above, it would be necessary to collect further data in order to make the sample more homogeneous between genders. It would be interesting to analyze the association between experiences of childhood neglect and well-being in young adulthood according to gender. This may be useful in order to also understand if there are mechanisms that indicate the effect that neglect has on males' well-being rather than females, and vice versa.

In accordance with the literature, the risk of serious consequences after childhood maltreatment and neglect is greater in adolescents than adults (Dunn et al., 2013; Hussey et al., 2006; Kugler et al., 2019; Moretti & Craig, 2013; Naughton et al., 2017). Our meta-analysis concluded that the effect childhood neglect experiences have on well-being is greater in studies with young adults than with adults. Therefore, it appears to be necessary to analyze which mechanisms influence the impact of such experiences on the psychological well-being of adolescents and children.

Further studies could analyze the impact of childhood neglect experiences on well-being through a prospective longitudinal study. In particular, the main aim of future studies could be to investigate how the impact of these traumatic childhood experiences on psychological well-being vary over time, according to the different stages of development. A longitudinal study of children and adolescent's experiences of emotional neglect and later adaptation would provide the strongest evidence for the mechanisms described in the studies presented in this dissertation, and could better explain the developmental trajectories after these adverse childhood experiences.

According to a translational approach, where basic research needs to be translated into intervention practices, it would be necessary to implement specific timely actions aimed at reducing the long-term impact of childhood experiences of neglect, in particular in regards to vulnerable people. These findings suggest the need to implement targeted interventions according to age, type of experiences (i.e., severity level), and individual characteristics (i.e., emotional difficulties and environmental sensitivity trait).

References

- AC Del Re (2013). compute.es: Compute Effect Sizes. R package version 0.2-2. URL <https://cran.r-project.org/package=compute.es>
- Adams, C. M. (2006). The consequences of witnessing family violence on children and implications for family counselors. *The Family Journal, 14*(4), 334-341.
- Afifi, T. O., & MacMillan, H. L. (2011). Resilience following child maltreatment: A review of protective factors. *The Canadian Journal of Psychiatry, 56*(5), 266-272.
- Afifi, T. O., MacMillan, H. L., Taillieu, T., Turner, S., Cheung, K., Sareen, J., & Boyle, M. H. (2016). Individual-and relationship-level factors related to better mental health outcomes following child abuse: results from a nationally representative Canadian sample. *The Canadian Journal of Psychiatry, 61*(12), 776-788.
- Akoglu, H. (2018). User's guide to correlation coefficients. *Turkish journal of emergency medicine, 18*(3), 91-93. <https://doi.org/10.1016/j.tjem.2018.08.001>
- Aldao, A., & Tull, M. T. (2015). Putting emotion regulation in context. *Current Opinion in Psychology, 3*, 100-107.
- Alegre, A. (2011). Parenting styles and children's emotional intelligence: What do we know?. *The Family Journal, 19*(1), 56-62.
- Appel, A. E., & Holden, G. W. (1998). The co-occurrence of spouse and physical child abuse: a review and appraisal. *Journal of family psychology, 12*(4), 578.
- Arata, C. M., Langhinrichsen-Rohling, J., Bowers, D., & O'Farrill-Swails, L. (2005). Single versus multi-type maltreatment: An examination of the long-term effects of child abuse. *Journal of Aggression, Maltreatment & Trauma, 11*(4), 29-52.
- Aron, E. N., & Aron, A. (1997). Sensory-processing sensitivity and its relation to introversion and emotionality. *Journal of personality and social psychology, 73*(2), 345.

- Aron, E. N., Aron, A., & Davies, K. M. (2005). Adult shyness: The interaction of temperamental sensitivity and an adverse childhood environment. *Personality and Social Psychology Bulletin*, 31(2), 181-197.
- Aron, E. N., Aron, A., & Jagiellowicz, J. (2012). Sensory processing sensitivity: A review in the light of the evolution of biological responsivity. *Personality and Social Psychology Review*, 16(3), 262-282.
- Assary, E., Zavos, H., Krapohl, E., Keers, R., & Pluess, M. (2021). Genetic architecture of environmental sensitivity reflects multiple heritable components: A twin study with adolescents. *Molecular Psychiatry*, 26(9), 4896-4904.
- Autorità Garante per l'Infanzia e l'Adolescenza, Cismai, & Terre des Hommes, 2021.
- Baba, Y., Lee, J. D., & Vallergera, M. E. (2020). Exploring Family Multi-type Maltreatment, Social Support, and Externalizing and Internalizing Problems Among Asian and Asian American College Students. *Asian Journal of Social Science Studies*, 5(3), 1.
- Bailey, T., Alvarez-Jimenez, M., Garcia-Sanchez, A. M., Hulbert, C., Barlow, E., & Bendall, S. (2018). Childhood trauma is associated with severity of hallucinations and delusions in psychotic disorders: a systematic review and meta-analysis. *Schizophrenia bulletin*, 44(5), 1111-1122. <https://doi.org/10.1093/schbul/sbx161>
- Bakker, K., & Moulding, R. (2012). Sensory-processing sensitivity, dispositional mindfulness and negative psychological symptoms. *Personality and individual differences*, 53(3), 341-346.
- Baldoni, F. (2014). *Mentalizzazione e integrazione psicosomatica del Sé. La plasticità del Sé. Una prospettiva neuropsicodinamica*, Il Mulino, Bologna, 93-130.
- Baldry, A. C. (2003). Bullying in schools and exposure to domestic violence. *Child abuse & neglect*, 27(7), 713-732.
- Banks, D., Hazen, A. L., Coben, J. H., Wang, K., & Griffith, J. D. (2009). Collaboration between child welfare agencies and domestic violence service providers: Relationship with child welfare

policies and practices for addressing domestic violence. *Children and Youth Services Review*, 31(5), 497-505.

Barnett D, Manly JT, Cicchetti D. Defining child maltreatment: the interface between policy and research. In: Cicchetti D, Toth SL, eds. *Child Abuse, Child Development, and Social Policy*. Norwood, NJ: Ablex; 1993:7-74.

Beeghly, M., & Cicchetti, D. (1994). Child maltreatment, attachment, and the self system: Emergence of an internal state lexicon in toddlers at high social risk. *Development and psychopathology*, 6(1), 5-30.

Beilharz, J. E., Paterson, M., Fatt, S., Wilson, C., Burton, A., Cvejic, E., ... & Vollmer-Conna, U. (2020). The impact of childhood trauma on psychosocial functioning and physical health in a non-clinical community sample of young adults. *Australian & New Zealand Journal of Psychiatry*, 54(2): 185-194. <https://doi.org/10.1177/0004867419881206>

Bellis Mark A., Hughes K., Leckenby N., Perkins C., & Lowey H. (2014). National Household Survey of Adverse Childhood Experiences and Their Relationship with Resilience to Health-Harming Behaviors in England. *BMC Medicine* 12, (72).

Belsky, J. (1997). Variation in susceptibility to environmental influence: An evolutionary argument. *Psychological inquiry*, 8(3), 182-186.

Benham, G. (2006). The highly sensitive person: Stress and physical symptom reports. *Personality and individual differences*, 40(7), 1433-1440.

Bernstein, D. P., Stein, J. A., Newcomb, M. D., Walker, E., Pogge, D., Ahluvalia, T., ... & Zule, W. (2003). Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child abuse & neglect*, 27(2), 169-190.

Bernstein, D., & Fink, L. (1998). *Manual for the childhood trauma questionnaire*. New York: The Psychological Corporation.

- Berzenski, S. R. (2018). Distinct emotion regulation skills explain psychopathology and problems in social relationships following childhood emotional abuse and neglect. *Development and psychopathology*, 31(2), 483-496.
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York, NY: Wiley.
- Booth, C., Standage, H., & Fox, E. (2015). Sensory-processing sensitivity moderates the association between childhood experiences and adult life satisfaction. *Personality and individual differences*, 87, 24-29.
- Bowlby, J. 1973 *Attachment and loss, vol. II: Separation: Anxiety and anger*. Hogarth Press, London; trad. it. *Attaccamento e perdita, vol. 2: La separazione dalla madre*, Boringhieri, Torino, 1975.
- Boyce, W. T., & Ellis, B. J. (2005). Biological sensitivity to context: I. An evolutionary–developmental theory of the origins and functions of stress reactivity. *Development and psychopathology*, 17(2), 271-301.
- Boothby, N. (2017). US Government action plan on children in adversity: In pursuit of a coherent foreign assistance framework for vulnerable children. *Peace and conflict: journal of peace psychology*, 23(1), 31.
- Brown, M. W., & Cudek, R. (1993). Alternative ways of assessing model fit. In K. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Newbury Park, CA: Sage.
- Bruskas, D., & Tessin, D. H. (2013) Adverse childhood experiences and psychosocial well-being of women who were in foster care as children. *The Permanente Journal*; 17(3): e131. doi: 10.7812/TPP/12-121.
- Camisasca, E., Miragoli, S., Di Blasio, P., & Grych, J. (2017). Children’s coping strategies to inter-parental conflict: The moderating role of attachment. *Journal of child and family studies*, 26(4), 1099-1111.

- Carlson, B. E. (1991). Outcomes of physical abuse and observation of marital violence among adolescents in placement. *Journal of Interpersonal Violence, 6*(4), 526-534.
- Chen, Y., Hua, K., Huang, C., Zhou, G., & Wang, J. (2021). Adverse childhood experiences and psychological well-being in Chinese college students: moderated mediation by gender and resilience. *Frontiers in psychiatry, 12*. 10.3389/fpsyt.2021.710635
- Cheung, K., Taillieu, T., Turner, S., Fortier, J., Sareen, J., MacMillan, H. L., ... & Afifi, T. O. (2017). Relationship and community factors related to better mental health following child maltreatment among adolescents. *Child abuse & neglect, 70*, 377-387.
- Cicchetti, D. (1993). Developmental psychopathology: Reactions, reflections, projections. *Developmental review, 13*(4), 471-502.
- Cicchetti, D. (2010). Resilience under conditions of extreme stress: a multilevel perspective. *World Psychiatry, 9*(3), 145.
- Cicchetti, D. (2013). Annual research review: Resilient functioning in maltreated children—past, present, and future perspectives. *Journal of child psychology and psychiatry, 54*(4), 402-422.
- Cicchetti, D., & Lynch, M. (1995). *Failures in the expectable environment and their impact on individual development: The case of child maltreatment*. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Risk, disorder, and adaptation* (Vol. 2, pp. 32–71). Hoboken,
- Cicchetti, d., & Manly, j. T. (2001). Operationalizing child maltreatment: Developmental processes and outcomes. *Development and psychopathology, 13*(4), 755-757.
- Cicchetti, D., & Rogosch, F. A. (2012). Gene× Environment interaction and resilience: Effects of child maltreatment and serotonin, corticotropin releasing hormone, dopamine, and oxytocin genes. *Development and psychopathology, 24*(2), 411-427.
- Cicchetti, D., & Toth, S. L. (2005). Child maltreatment. *Annu. Rev. Clin. Psychol., 1*: 409-438. <https://doi.org/10.1146/annurev.clinpsy.1.102803.144029>

- Cicchetti, D., & Valentino, K. (2006). *An ecological-transactional perspective on child maltreatment: Failure of the average expectable environment and its influence on child development*. John Wiley & Sons, Inc.
- Clément, M. È., Bérubé, A., & Chamberland, C. (2016). Prevalence and risk factors of child neglect in the general population. *Public health*, *138*: 86-92.
<https://doi.org/10.1016/j.puhe.2016.03.018>
- Cloitre, M., Khan, C., Mackintosh, M. A., Garvert, D. W., Henn-Haase, C. M., Falvey, E. C., & Saito, J. (2019). Emotion regulation mediates the relationship between ACES and physical and mental health. *Psychological Trauma: Theory, Research, Practice, and Policy*, *11*(1), 82.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155–159.
<https://doi.org/10.1037/0033-2909.112.1.155>
- Cohen, J. R., & Thakur, H. (2021). Developmental consequences of emotional abuse and neglect in vulnerable adolescents: A multi-informant, multi-wave study. *Child Abuse & Neglect*, *111*, 104811.
- Comacchio, C., Lasalvia, A., & Ruggeri, M. (2019). Current evidence of childhood traumatic experiences in psychosis—focus on gender differences. *Psychiatry research*, *281*: 112-507.
<https://doi.org/10.1016/j.psychres.2019.112507>.
- Constantine, N., Benard, B., & Diaz, M. (1999, June). Measuring protective factors and resilience traits in youth: The healthy kids resilience assessment. *In seventh annual meeting of the Society for Prevention Research, New Orleans, LA* (pp. 3-15).
- Constantine, N.A., Benard, B. (2001). *California Healthy Kids Survey Resilience Assessment Module*, Technical Report, Berkeley, CA, Public Health Institute.
- Côté, S., Gyurak, A., & Levenson, R. W. (2010). The ability to regulate emotion is associated with greater well-being, income, and socioeconomic status. *Emotion*, *10*(6), 923.

- Gross, J. J., & Munoz, R. F. (1995). Emotion regulation and mental health. *Clinical Psychological Science and Practice*, 2, 151–164. Retrieved from <http://dx.doi.org/10.1111/j.1468-2850.1995.tb00036.x>
- Crouch, J. L., & Milner, J. S. (1993). Effects of child neglect on children. *Criminal justice and behavior*, 20(1), 49-65.
- Cunsolo, S. (2017). Subjective wellbeing during adolescence: a literature review on key factors relating to adolescent's subjective wellbeing and education outcomes. *Studi sulla Formazione/Open Journal of Education*, 20(1): 81-94. DOI: 10.13128/Studi_Formaz-20941
- Dale, L. P., Carroll, L. E., Galen, G., Hayes, J. A., Webb, K. W., & Porges, S. W. (2009). Abuse history is related to autonomic regulation to mild exercise and psychological wellbeing. *Applied psychophysiology and biofeedback*, 34(4): 299-308. DOI 10.1007/s10484-009-9111-4
- DeLong-Hamilton, T. A., Krase, K., & Bundy-Fazioli, K. (2016). Exploring child welfare workers' experiences with neglect cases: A qualitative study. *Journal of Public Child Welfare*, 10(1): 21-38. <https://doi.org/10.1080/15548732.2015.1075454>
- Devries, K. M., Knight, L., Child, J. C., Kyegombe, N., Hossain, M., Lees, S., ... & Naker, D. (2017). Witnessing intimate partner violence and child maltreatment in Ugandan children: a cross-sectional survey. *BMJ open*, 7(2), e013583.
- de Villiers, B., Lionetti, F., & Pluess, M. (2018). Vantage sensitivity: a framework for individual differences in response to psychological intervention. *Social psychiatry and psychiatric epidemiology*, 53(6), 545-554.
- Diener, E., Sapyta, J. J., & Suh, E. (1998). Subjective well-being is essential to well-being. *Psychological Inquiry*, 9(1): 33–37. https://doi.org/10.1207/s15327965pli0901_3
- DiLillo, D., Hayes-Skelton, S. A., Fortier, M. A., Perry, A. R., Evans, S. E., Moore, T. L. M., ... & Fauchier, A. (2010). Development and initial psychometric properties of the Computer Assisted

Maltreatment Inventory (CAMI): A comprehensive self-report measure of child maltreatment history. *Child Abuse & Neglect*, 34(5), 305-317.

Dubowitz, H., Pitts, S. C., Litrownik, A. J., Cox, C. E., Runyan, D., & Black, M. M. (2005). Defining child neglect based on child protective services data. *Child abuse & neglect*, 29(5): 493-511. <https://doi.org/10.1016/j.chiabu.2003.09.024>

Dunn, E. C., McLaughlin, K. A., Slopen, N., Rosand, J., & Smoller, J. W. (2013). Developmental timing of child maltreatment and symptoms of depression and suicidal ideation in young adulthood: results from the National Longitudinal Study of Adolescent Health. *Depression and anxiety*, 30(10), 955-964.

Edleson, J. L. (1999). Children's witnessing of adult domestic violence. *Journal of Interpersonal Violence*, 14(8), 839-870.

Edleson, J. L. (2004). Should childhood exposure to adult domestic violence be defined as child maltreatment under the law. *Protecting children from domestic violence: Strategies for community intervention*, 8-29.

Edleson, J. L., Ellerton, A. L., Seagren, E. A., Kirchberg, S. L., Schmidt, S. O., & Ambrose, A. T. (2007). Assessing child exposure to adult domestic violence. *Children and Youth Services Review*, 29(7), 961-971.

Edleson, J. L., Shin, N., & Armendariz, K. K. J. (2008). Measuring children's exposure to domestic violence: The development and testing of the Child Exposure to Domestic Violence (CEDV) Scale. *Children and Youth Services Review*, 30(5), 502-521.

English, D. J., Bangdiwala, S. I., & Runyan, D. K. (2005b). The dimensions of maltreatment: Introduction. *Child abuse & neglect*, 29(5), 441-460.

English, D. J., Edleson, J. L., & Herrick, M. E. (2005a). Domestic violence in one state's child protective caseload: A study of differential case dispositions and outcomes. *Children and Youth Services Review*, 27(11), 1183-1201.

- Erickson, M. F., & Egeland, B. (2002). Child neglect. In J. Briere, L. Berliner, J. A. Bulkley, C. Jenny, & T. Reid (Eds.), *The APSAC handbook on child maltreatment* (Vol. 2, pp. 3–20). Thousand Oaks, CA: Sage.
- Euser, E. M., van IJzendoorn, M. H., Prinzie, P., & Bakermans-Kranenburg, M. J. (2010). Prevalence of child maltreatment in the Netherlands. *Child maltreatment, 15*(1), 5-17.
- Evans, S. E., Steel, A. L., & DiLillo, D. (2013). Child maltreatment severity and adult trauma symptoms: Does perceived social support play a buffering role?. *Child abuse & neglect, 37*(11), 934-943.
- Fantuzzo, J. W., & Mohr, W. K. (1999). Prevalence and effects of child exposure to domestic violence. *The future of children, 21*-32.
- Ferrara, P., Michela, P., Annunziata, F., Di Lucia, A., Ianniello, F., & Chiaretti, A. (2018). An epidemiological study of child neglect and abuse in Italy: an undervalued problem of public health but also an unknown reality. *Minerva Psichiatrica, 59*(2):118-24. <http://dx.doi.org/10.23736/S0391-1772.18.01965-9>.
- Finkelhor D, Turner HA, Shattuck A, Hamby SL, Kracke K. (2015b). *Children's exposure to violence, crime, and abuse: an update*. Juv. Justice Bull. NCJ 248547, US Dep. Justice, Washington, DC.
- Finkelhor D, Turner HA, Shattuck A, Hamby SL. (2015a). Prevalence of childhood exposure to violence, crime, and abuse: results from the National Survey of Children's Exposure to Violence. *JAMA Pediatr. 169*(8):746–54
- Finkelhor, D., Ormrod, R. K., Turner, H. A., & Hamby, S. L. (2005c). Measuring poly-victimization using the Juvenile Victimization Questionnaire. *Child abuse & neglect, 29*(11), 1297-1312.

- Fitzgerald, M., Hamstra, C., & Ledermann, T. (2020). Childhood maltreatment and adult's provisions of emotional support given to family, friends, and romantic partners: An examination of gender differences. *Child abuse & neglect, 106*, 104520.
- Fleck-Henderson, A. (2000). Domestic violence in the child protection system: Seeing double. *Children and Youth Services Review, 22*(5), 333-354.
- Folger, S. F., & Wright, M. O. D. (2013). Altering risk following child maltreatment: Family and friend support as protective factors. *Journal of Family Violence, 28*(4), 325-337.
- Fonagy, P. e Target, M. (2001). *Attaccamento e funzione riflessiva*, Milano, Raffaello Cortina.
- Fonagy, P., & Target, M. (1997). Attachment and reflective function: Their role in self-organization. *Dev Psychopathol, 9*(4), 679-700.
- Fonagy, P., Gergely, G., & Target, M. (2007). The parent–infant dyad and the construction of the subjective self. *Journal of child psychology and psychiatry, 48*(3-4), 288-328.
- Francis, A., Pai, M. S., & Badagabettu, S. (2020). Psychological Well-being and Perceived Parenting Style among Adolescents. *Comprehensive child and adolescent nursing*, 1-10. <https://doi.org/10.1080/24694193.2020.1743796>
- Galea, M. (2012). Studying the incremental validity of family environment among Maltese university students with past mental trauma. *Pastoral Psychology, 61*(2): 211-220. DOI 10.1007/s11089-011-0389-9
- Ganley, A. L., & Schechter, S. (1996). *Domestic violence: A national curriculum for child protective services*. Family Violence Prevention Fund.
- Giangrasso, B. (2021). Psychometric properties of the PERMA-Profiler as hedonic and eudaimonic well-being measure in an Italian context. *Current Psychology, 40*(3), 1175-1184.3
- Gilbert, R., Widom, C. S., Browne, K., Fergusson, D., Webb, E., & Janson, S. (2009). Burden and consequences of child maltreatment in high-income countries. *The lancet, 373*(9657): 68-81. [https://doi.org/10.1016/S0140-6736\(08\)61706-7](https://doi.org/10.1016/S0140-6736(08)61706-7)

- Giovanelli, A., Mondì, C. F., Reynolds, A. J., & Ou, S. R. (2020). Adverse childhood experiences: Mechanisms of risk and resilience in a longitudinal urban cohort. *Development and psychopathology*, 32(4):1418-1439. <https://doi.org/10.1017/S095457941900138X>
- Grassi-Oliveira, R., Cogo-Moreira, H., Salum, G. A., Brietzke, E., Viola, T. W., Manfro, G. G., ... & Artechè, A. X. (2014). Childhood Trauma Questionnaire (CTQ) in Brazilian samples of different age groups: findings from confirmatory factor analysis. *PloS one*, 9(1).
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of psychopathology and behavioral assessment*, 26(1), 41-54.
- Green, K., Browne, K., & Chou, S. (2019). The relationship between childhood maltreatment and violence to others in individuals with psychosis: a systematic review and meta-analysis. *Trauma, Violence, & Abuse*, 20(3): 358-373. <https://doi.org/10.1177/1524838017708786>
- Greenfield, E. A., & Marks, N. F. (2010). Identifying experiences of physical and psychological violence in childhood that jeopardize mental health in adulthood. *Child Abuse & Neglect*, 34(3):161-171. <https://doi.org/10.1016/j.chiabu.2009.08.012>
- Greven, C. U., Lionetti, F., Booth, C., Aron, E. N., Fox, E., Schendan, H. E., ... & Homberg, J. (2019). Sensory processing sensitivity in the context of environmental sensitivity: A critical review and development of research agenda. *Neuroscience & Biobehavioral Reviews*, 98, 287-305.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of personality and social psychology*, 85(2), 348.
- Gruhn, M. A., & Compas, B. E. (2020). Effects of maltreatment on coping and emotion regulation in childhood and adolescence: A meta-analytic review. *Child abuse & neglect*, 103, 104446.

- Grych, J. H., Seid, M., & Fincham, F. D. (1992). Assessing marital conflict from the child's perspective: The Children's Perception of Interparental Conflict Scale. *Child development, 63*(3), 558-572.
- Guterman, N. B. (2004). Advancing prevention research on child abuse, youth violence, and domestic violence: Emerging strategies and issues. *Journal of Interpersonal Violence, 19*(3): 299-321. <https://doi.org/10.1177/0886260503261153>
- Hagborg, J. M., Tidefors, I., & Fahlke, C. (2017). Gender differences in the association between emotional maltreatment with mental, emotional, and behavioral problems in Swedish adolescents. *Child Abuse & Neglect, 67*: 249-259. <https://doi.org/10.1016/j.chiabu.2017.02.033>
- Hamby, S., Finkelhor, D., Turner, H., & Ormrod, R. (2010). The overlap of witnessing partner violence with child maltreatment and other victimizations in a nationally representative survey of youth. *Child abuse & neglect, 34*(10): 734-741. <https://doi.org/10.1016/j.chiabu.2010.03.001>
- Hankin, B. L., Nederhof, E., Oppenheimer, C. W., Jenness, J., Young, J. F., Abela, J. R. Z., ... & Oldehinkel, A. J. (2011). Differential susceptibility in youth: evidence that 5-HTTLPR x positive parenting is associated with positive affect 'for better and worse'. *Translational psychiatry, 1*(10), e44-e44.
- Hanson, T. L., & Kim, J. O. (2007). Measuring resilience and youth development: the psychometric properties of the Healthy Kids Survey.
- Hartley, C. C. (2004). Severe domestic violence and child maltreatment: Considering child physical abuse, neglect, and failure to protect. *Children and Youth Services Review, 26*(4), 373-392.
- Hazen, A. L., Connelly, C. D., Kelleher, K. J., Barth, R. P., & Landsverk, J. A. (2006). Female caregivers' experiences with intimate partner violence and behavior problems in children investigated as victims of maltreatment. *Pediatrics, 117*(1), 99-109.

- Henry, C. (2017). Expanding the legal framework for child protection: Recognition of and response to child exposure to domestic violence in California law. *Social Service Review, 91*(2), 203-232.
- Hernandez, A., Gallardo-Pujol, D., Pereda, N., Arntz, A., Bernstein, D. P., Gaviria, A. M., ... & Gutiérrez-Zotes, J. A. (2013). Initial validation of the Spanish childhood trauma questionnaire-short form: factor structure, reliability and association with parenting. *Journal of interpersonal violence, 28*(7), 1498-1518.
- Hernandez, R., Bassett, S. M., Boughton, S. W., Schuette, S. A., Shiu, E. W., & Moskowitz, J. T. (2018). Psychological well-being and physical health: Associations, mechanisms, and future directions. *Emotion Review, 10*(1):18-29. <https://doi.org/10.1177/1754073917697824>
- Herrenkohl, T. I. Resilience and protection from violence exposure in children: Implications for prevention and intervention programs with vulnerable populations. In T. I. Herrenkohl, E. Aisenberg, J. H. Williams, & J. M. Jenson (Eds.), *Violence in context: Current evidence on risk, protection, and prevention* (pp. 92–108). New York, NY: Oxford University Press 2011.
- Herrenkohl, T. I., Klika, J. B., Herrenkohl, R. C., Russo, M. J., & Dee, T. (2012). A prospective investigation of the relationship between child maltreatment and indicators of adult psychological well-being. *Violence and victims, 27*(5):764-776. DOI: 10.1891/0886-6708.27.5.764
- Higgins, D. J. (2004). The importance of degree versus type of maltreatment: A cluster analysis of child abuse types. *The Journal of Psychology, 138*(4), 303-324.
- Higgins, D. J., & McCabe, M. P. (1998). Parent perceptions of maltreatment and adjustment in children. *Journal of family Studies, 4*(1), 53-76.
- Higgins, D. J., & McCabe, M. P. (2000). Multi-type maltreatment and the long-term adjustment of adults. *Child Abuse Review: Journal of the British Association for the Study and Prevention of Child Abuse and Neglect, 9*(1), 6-18.

- Higgins, D. J., & McCabe, M. P. (2001). The development of the comprehensive child maltreatment scale. *Journal of family studies*, 7(1), 7-28.
- Hildyard, K. L., & Wolfe, D. A. (2002). Child neglect: developmental issues and outcomes☆. *Child abuse & neglect*, 26(6-7): 679-695. [https://doi.org/10.1016/S0145-2134\(02\)00341-1](https://doi.org/10.1016/S0145-2134(02)00341-1)
- Hoefnagels, C., Evers, S., Snoeren, F., Meesters, C., & Lamers-Winkelmann, F. (2020). Self-Reported Quality of Life of Maltreated Children Who Have Been Reported to Advice and Reporting Centers On Child Abuse and Neglect. *Journal of Child and Family Studies*, 29(2):471-481. <https://doi.org/10.1007/s10826-019-01604-4>
- Horan, J. M., & Widom, C. S. (2015). Cumulative childhood risk and adult functioning in abused and neglected children grown up. *Development and psychopathology*, 27(3), 927.
- Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 4, 424–453.
- Humphreys, K. L., LeMoult, J., Wear, J. G., Piersiak, H. A., Lee, A., & Gotlib, I. H. (2020). Child maltreatment and depression: A meta-analysis of studies using the Childhood Trauma Questionnaire. *Child abuse & neglect*, 102:104-361.
- Huppert, F. A., & So, T. T. (2013). Flourishing across Europe: Application of a new conceptual framework for defining well-being. *Social indicators research*, 110(3):837-861. DOI 10.1007/s11205-011-9966-7.
- Hussey, J. M., Chang, J. J., & Kotch, J. B. (2006). Child maltreatment in the United States: Prevalence, risk factors, and adolescent health consequences. *Pediatrics*, 118(3): 933-942. <https://doi.org/10.1542/peds.2005-2452>
- Infurna, M. R., Reichl, C., Parzer, P., Schimmenti, A., Bifulco, A., & Kaess, M. (2016). Associations between depression and specific childhood experiences of abuse and neglect: A meta-analysis. *Journal of affective disorders*, 190, 47-55.

- Jennissen, S., Holl, J., Mai, H., Wolff, S., & Barnow, S. (2016). Emotion dysregulation mediates the relationship between child maltreatment and psychopathology: A structural equation model. *Child abuse & neglect, 62*, 51-62.
- Jessar, A. J., Hamilton, J. L., Flynn, M., Abramson, L. Y., & Alloy, L. B. (2017). Emotional clarity as a mechanism linking emotional neglect and depressive symptoms during early adolescence. *The Journal of early adolescence, 37*(3), 414-432.
- Jouriles, E. N., Rosenfield, D., McDonald, R., & Mueller, V. (2014). Child involvement in interparental conflict and child adjustment problems: A longitudinal study of violent families. *Journal of abnormal child psychology, 42*(5), 693-704.
- Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *The Journal of Economic Perspectives, 20*(1): 3–24. DOI: 10.1257/089533006776526030
- Kanai, Y., Takaesu, Y., Nakai, Y., Ichiki, M., Sato, M., Matsumoto, Y., ... & Kusumi, I. (2016). The influence of childhood abuse, adult life events, and affective temperaments on the well-being of the general, nonclinical adult population. *Neuropsychiatric disease and treatment, 12*: 823-832. doi: 10.2147/NDT.S100474
- Kaufman, Kantor, G. K., & Little, L. (2003). Defining the boundaries of child neglect: When does domestic violence equate with parental failure to protect?. *Journal of interpersonal violence, 18*(4), 338-355.
- Kaslow, N. J., & Thompson, M. P. (2008). Associations of child maltreatment and intimate partner violence with psychological adjustment among low SES, African American children. *Child Abuse & Neglect, 32*(9), 888-896.
- Khodabakhsh, M. R., Kiani, F., & Ahmedbookani, S. (2014). Psychological well-being and parenting styles as predictors of mental health among students: Implication for health promotion. *International Journal of pediatrics, 2*(3.3), 39-46. <https://doi.org/10.22038/ijp.2014.3003>

- Kia-Keating, M., Dowdy, E., Morgan, M. L., & Noam, G. G. (2011). Protecting and promoting: An integrative conceptual model for healthy development of adolescents. *Journal of Adolescent Health, 48*(3):220-228. <https://doi.org/10.1016/j.jadohealth.2010.08.006>.
- Kim, J., & Cicchetti, D. (2010). Longitudinal pathways linking child maltreatment, emotion regulation, peer relations, and psychopathology. *Journal of child psychology and psychiatry, 51*(6), 706-716.
- Kinard, E. M. (1994). Methodological issues and practical problems in conducting research on maltreated children. *Child Abuse & Neglect, 18*(8), 645-656.
- Kitzmann, K. M., Gaylord, N. K., Holt, A. R., & Kenny, E. D. (2003). Child witnesses to domestic violence: a meta-analytic review. *Journal of consulting and clinical psychology, 71*(2), 339.
- Klika, J. B., & Herrenkohl, T. I. (2013). A review of developmental research on resilience in maltreated children. *Trauma, Violence, & Abuse, 14*(3): 222-234. <https://doi.org/10.1177/1524838013487808>
- Koçtürk, N., Demirtas-Zorbaz, S., & Tarım, B. (2021). The Mediating Role of Resilience and Social Support on the Relationship Between Childhood Neglect and Adult Well-Being. *Violence and Victims, 36*(2), 292-305. 10.1891/VV-D-19-00006
- Kong, J. (2018). Childhood maltreatment and psychological well-being in later life: The mediating effect of contemporary relationships with the abusive parent. *The Journals of Gerontology: Series B, 73*(5): e39-e48. <https://doi.org/10.1093/geronb/gbx039>
- Kong, J., & Martire, L. M. (2019). Parental childhood maltreatment and the later-life relationship with parents. *Psychology and aging, 34*:900-911. <https://doi.org/10.1037/pag0000388>
- Kugler, K. C., Guastaferrro, K., Shenk, C. E., Beal, S. J., Zadzora, K. M., & Noll, J. G. (2019). The effect of substantiated and unsubstantiated investigations of child maltreatment and subsequent adolescent health. *Child abuse & neglect, 87*:112-119. <https://doi.org/10.1016/j.chiabu.2018.06.005>

- Layard, R. (2011). *Happiness: Lessons from a new science*. London:Penguin.
- Lev-Wiesel, R., First, M., Gottfried, R., & Eisikovits, Z. (2019). Reluctance versus urge to disclose child maltreatment: The impact of multi-type maltreatment. *Journal of interpersonal violence, 34*(18), 3888-3914.
- Lin, H. H. S., Naimi, A. I., Brooks, M. M., Richardson, G. A., Burke, J. G., & Bromberger, J. T. (2018). Child maltreatment as a social determinant of midlife health-related quality of life in women: do psychosocial factors explain this association? *Quality of life research, 27*(12): 3243-3254. <https://doi.org/10.1007/s11136-018-1937-x>
- Lionetti, F., Aron, A., Aron, E. N., Burns, G. L., Jagiellowicz, J., & Pluess, M. (2018). Dandelions, tulips and orchids: Evidence for the existence of low-sensitive, medium-sensitive and high-sensitive individuals. *Translational psychiatry, 8*(1), 1-11.
- Lionetti, F., Aron, E. N., Aron, A., Klein, D. N., & Pluess, M. (2019b). Observer-rated environmental sensitivity moderates children's response to parenting quality in early childhood. *Developmental psychology, 55*(11), 2389.
- Lionetti, F., Klein, D. N., Pastore, M., Aron, E. N., Aron, A., & Pluess, M. (2021). The role of environmental sensitivity in the development of rumination and depressive symptoms in childhood: a longitudinal study. *European Child & Adolescent Psychiatry, 1*-11.
- Lionetti, F., Pastore, M., Moscardino, U., Nocentini, A., Pluess, K., & Pluess, M. (2019). Sensory processing sensitivity and its association with personality traits and affect: A meta-analysis. *Journal of Research in Personality, 81*, 138-152.
- Lionetti, F., Spinelli, M., Moscardino, U., Ponzetti, S., Garito, M.C., Dellagiulia, A., Aureli, T., Fasolo, M., & Pluess, M. (2021b). The interplay between parenting and environmental sensitivity in the prediction of children's externalizing and internalizing behaviors during COVID-19. *Development and Psychopathology, 1*-14.

- Liss, M., Mailloux, J., & Erchull, M. J. (2008). The relationships between sensory processing sensitivity, alexithymia, autism, depression, and anxiety. *Personality and individual differences, 45*(3), 255-259.
- Liss, M., Timmel, L., Baxley, K., & Killingsworth, P. (2005). Sensory processing sensitivity and its relation to parental bonding, anxiety, and depression. *Personality and individual differences, 39*(8), 1429-1439.
- Luke, N., & Banerjee, R. (2013). Differentiated associations between childhood maltreatment experiences and social understanding: A meta-analysis and systematic review. *Developmental Review, 33*(1), 1-28.
- Luthar, S. S., & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. *Development and psychopathology, 12*(4), 857-885.
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child development, 71*(3), 543-562.
- Manly, J. T., Cicchetti, D., & Barnett, D. (1994). The impact of subtype, frequency, chronicity, and severity of child maltreatment on social competence and behavior problems. *Development and psychopathology, 6*(1), 121-143.
- Manly, J. T., Kim, J. E., Rogosch, F. A., & Cicchetti, D. (2001). Dimensions of child maltreatment and children's adjustment: Contributions of developmental timing and subtype. *Development and psychopathology, 13*(4), 759-782.
- Marsh, H. W., Huppert, F. A., Donald, J. N., Horwood, M. S., & Sahdra, B. K. (2020). The well-being profile (WB-Pro): Creating a theoretically based multidimensional measure of well-being to advance theory, research, policy, and practice. *Psychological assessment, 32*(3): 294. <https://doi.org/10.1037/pas0000787>

- Martsof, D. S., Draucker, C. B., & Chapman, T. R. (2004). The physical health of women in primary care who were maltreated as children. *Journal of emotional abuse*, 4(1): 39-59. https://doi.org/10.1300/J135v04n01_03
- Masten, A. S. (2014). Global perspectives on resilience in children and youth. *Child development*, 85(1), 6-20.
- Mayer, M., Lavergne, C., Tourigny, M., & Wright, J. (2007). Characteristics differentiating neglected children from other reported children. *Journal of Family Violence*, 22(8): 721-732. DOI 10.1007/s10896-007-9120-0
- Mc Gee, S. L., Hölzge, J., Maercker, A., & Thoma, M. V. (2018). Sense of coherence and stress-related resilience: Investigating the mediating and moderating mechanisms in the development of resilience following stress or adversity. *Frontiers in Psychiatry*, 9: 378. <https://doi.org/10.3389/fpsy.2018.00378>
- McMahan, E. A., & Estes, D. (2011). Hedonic versus eudaimonic conceptions of well-being: Evidence of differential associations with self-reported well-being. *Social Indicators Research*, 103(1): 93– 108. DOI 10.1007/s11205-010-9698-0
- McNally, R. J. (2003). Psychological mechanisms in acute response to trauma. *Biological psychiatry*, 53(9), 779-788.
- McSherry, D. (2007). Understanding and addressing the “neglect of neglect”: Why are we making a mole-hill out of a mountain. *Child abuse & neglect*, 31(6):607-614. doi:10.1016/j.chiabu.2006.08.011
- Mennen, F. E., Kim, K., Sang, J., & Trickett, P. K. (2010). Child neglect: Definition and identification of youth's experiences in official reports of maltreatment. *Child abuse & neglect*, 34(9): 647-658. <https://doi.org/10.1016/j.chiabu.2010.02.007>

- Merrick, M. T., Ford, D. C., Ports, K. A., & Guinn, A. S. (2018). Prevalence of adverse childhood experiences from the 2011-2014 behavioral risk factor surveillance system in 23 states. *JAMA pediatrics*, *172*(11), 1038-1044.
- Miragoli, S., Milani, L., Di Blasio, P., & Camisasca, E. (2020). Difficulties in emotion regulation in child abuse potential: Gender differences in parents. *Child Abuse & Neglect*, *106*, 104529.
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & Prisma Group (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS med*, *6*(7): e1000097. DOI:10.1371/ journal.pmed.1000097
- Moles, K. (2008). Bridging the divide between child welfare and domestic violence services: Deconstructing the change process. *Children and Youth Services Review*, *30*(6), 674-688.
- Monti, J. D., Rudolph, K. D., & Abaied, J. L. (2014). Contributions of maternal emotional functioning to socialization of coping. *Journal of Social and Personal Relationships*, *31*(2), 247-269.
- Moretti, M. M., & Craig, S. G. (2013). Maternal versus paternal physical and emotional abuse, affect regulation and risk for depression from adolescence to early adulthood. *Child abuse & neglect*, *37*(1), 4-13.
- Mosley-Johnson, E., Garacci, E., Wagner, N., Mendez, C., Williams, J. S., & Egede, L. E. (2019). Assessing the relationship between adverse childhood experiences and life satisfaction, psychological well-being, and social well-being: United States Longitudinal Cohort 1995–2014. *Quality of Life Research*, *28*(4), 907-914.
- Moylan, C. A., Herrenkohl, T. I., Sousa, C., Tajima, E. A., Herrenkohl, R. C., & Russo, M. J. (2010). The effects of child abuse and exposure to domestic violence on adolescent internalizing and externalizing behavior problems. *Journal of family Violence*, *25*(1), 53-63.
- Muthe'n, L. K., & Muthe'n, B. O. (1998-2010). *MPlus user's guide version 6, sixth Edition*. Los Angeles, CA: Muthén & Muthén.

- Mwakanyamale, A. A., Wande, D. P., & Yizhen, Y. (2018). Multi-type child maltreatment: prevalence and its relationship with self-esteem among secondary school students in Tanzania. *BMC psychology*, 6(1), 1-8.
- Naughton, A. M., Cowley, L. E., Tempest, V., Maguire, S. A., Mann, M. K., & Kemp, A. M. (2017). Ask Me! self-reported features of adolescents experiencing neglect or emotional maltreatment: a rapid systematic review. *Child: care, health and development*, 43(3):348-360. <https://doi.org/10.1111/cch.12440>.
- Nelson, J., Klumparendt, A., Doebler, P., & Ehring, T. (2017). Childhood maltreatment and characteristics of adult depression: meta-analysis. *The British Journal of Psychiatry*, 210(2), 96-104.
- Newbury, J. B., Arseneault, L., Moffitt, T. E., Caspi, A., Danese, A., Baldwin, J. R., & Fisher, H. L. (2018). Measuring childhood maltreatment to predict early-adult psychopathology: Comparison of prospective informant-reports and retrospective self-reports. *Journal of psychiatric research*, 96, 57-64.
- Nixon, K. L., Tutty, L. M., Weaver-Dunlop, G., & Walsh, C. A. (2007). Do good intentions beget good policy? A review of child protection policies to address intimate partner violence. *Children and Youth Services Review*, 29(12), 1469-1486.
- Nocentini, A., Menesini, E., & Pluess, M. (2018). The personality trait of environmental sensitivity predicts children's positive response to school-based antibullying intervention. *Clinical Psychological Science*, 6(6), 848-859.
- Norman, R. E., Byambaa, M., De, R., Butchart, A., Scott, J., & Vos, T. (2012). The long-term health consequences of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis. *PLoS Med*, 9(11):e1001349. <https://doi.org/10.1371/journal.pmed.1001349>.
- O'Keefe, M. A. U. R. A. (1995). Predictors of child abuse in maritally violent families. *Journal of Interpersonal Violence*, 10(1), 3-25.

- Oshio, T., Umeda, M., & Kawakami, N. (2013). Childhood adversity and adulthood subjective well-being: Evidence from Japan. *Journal of Happiness Studies*, *14*(3), 843-860. DOI 10.1007/s10902-012-9358-y
- Oshri, A., Sutton, T. E., Clay-Warner, J., & Miller, J. D. (2015). Child maltreatment types and risk behaviors: Associations with attachment style and emotion regulation dimensions. *Personality and Individual Differences*, *73*, 127-133.
- Osofsky, J. D. (1998). Children as invisible victims of domestic and community violence.
- Osofsky, J. D. (2003). Prevalence of children's exposure to domestic violence and child maltreatment: Implications for prevention and intervention. *Clinical child and family psychology review*, *6*(3), 161-170.
- Ottenstein, C. (2020). Emotion regulation effectiveness accounts for the associations of self-reported emotion differentiation with well-being and depression. *Cognition and Emotion*, *34*(5), 994-1002.
- Ozturk, E., & Mohler, J. L. (2021). Childhood adversities and life satisfaction: The moderator role of perceived resilience in early adulthood. *Journal of Family Trauma, Child Custody & Child Development*, *18*(2), 121-138. <https://doi.org/10.1080/26904586.2021.1918038>
- Paetzold, R. L., Rholes, W. S., & Kohn, J. L. (2015). Disorganized attachment in adulthood: Theory, measurement, and implications for romantic relationships. *Review of General Psychology*, *19*(2), 146-156.
- Paget, K. D., Philip, J. D., & Abramczyk, L. W. (1993). Recent developments in child neglect. *Advances in clinical child psychology*.
- Paivio, S. C., & Cramer, K. M. (2004). Factor structure and reliability of the Childhood Trauma Questionnaire in a Canadian undergraduate student sample. *Child abuse & neglect*, *28*(8), 889-904.

- Paradis, A., & Boucher, S. (2010). Child maltreatment history and interpersonal problems in adult couple relationships. *Journal of Aggression, Maltreatment & Trauma, 19*(2), 138-158.
- Pluess, M. (2015). Individual differences in environmental sensitivity. *Child Development Perspectives, 9*(3), 138-143.
- Pluess, M. (2017). Vantage sensitivity: Environmental sensitivity to positive experiences as a function of genetic differences. *Journal of personality, 85*(1), 38-50.
- Pluess, M., & Belsky, J. (2013). Vantage sensitivity: individual differences in response to positive experiences. *Psychological bulletin, 139*(4), 901.
- Pluess, M., & Boniwell, I. (2015). Sensory-processing sensitivity predicts treatment response to a school-based depression prevention program: Evidence of vantage sensitivity. *Personality and individual differences, 82*, 40-45.
- Pluess, M., Assary, E., Lionetti, F., Lester, K. J., Krapohl, E., Aron, E. N., & Aron, A. (2018). Environmental sensitivity in children: Development of the Highly Sensitive Child Scale and identification of sensitivity groups. *Developmental psychology, 54*(1), 51.
- Pluess, M., Lionetti, F., Aron, E. N., & Aron, A. (2020). People differ in their sensitivity to the environment: An integrated theory and empirical evidence.
- Pollak, S. D., Cicchetti, D., Hornung, K., & Reed, A. (2000). Recognizing emotion in faces: developmental effects of child abuse and neglect. *Developmental psychology, 36*(5), 679.
- Price-Robertson, R., Higgins, D., & Vassallo, S. (2013). Multi-type maltreatment and polyvictimisation: A comparison of two research frameworks. *Family Matters, (93)*, 84.
- R Core Team (2021). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org/>
- Radford, L., Corral, S., Bradley, C., Fisher, H., Bassett, C., Howat, N., & Collishaw, S. (2011). Child abuse and neglect in the UK today.

- Rehan, W., Antfolk, J., Johansson, A., Jern, P., & Santtila, P. (2017). Experiences of severe childhood maltreatment, depression, anxiety and alcohol abuse among adults in Finland. *PLoS one*, *12*(5), e0177252.
- Rodrigo, M. J., León, I., García-Pentón, L., Hernández-Cabrera, J. A., & Quiñones, I. (2020). Neglectful maternal caregiving involves altered brain volume in empathy-related areas. *Development and psychopathology*, *32*(4), 1534-1543.
- Rudenshine, S., Espinosa, A., McGee, A. B., & Routhier, E. (2019). Adverse childhood events, adult distress, and the role of emotion regulation. *Traumatology*, *25*(2), 124.
- Rutter, M. (2014). Nature–nurture integration. In *Handbook of developmental psychopathology* (pp. 45–65). Springer.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual review of Psychology*, *52*(1): 141-166. <https://doi.org/10.1146/annurev.psych.52.1.141>.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology*, *57*(6): 1069. <https://doi.org/10.1037/0022-3514.57.6.1069>
- Ryff, C. D. (2014). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and psychosomatics*, *83*(1):10-28. <https://doi.org/10.1159/000353263>
- Ryff, C. D., & Singer, B. H. (2006). Best news yet on the six-factor model of well-being. *Social Science Research*, *35*(4): 1103–1119. <https://doi.org/10.1016/j.ssresearch.2006.01.002>
- Sacchi, C., Vieno, A., & Simonelli, A. (2018). Italian validation of the Childhood Trauma Questionnaire—Short Form on a college group. *Psychological Trauma: Theory, Research, Practice, and Policy*, *10*(5), 563.

Sameroff, A. J. (2014). Adialectic integration of development for the study of psychopathology. In M. Lewis & K. D. Rudolph (Eds.), *Handbook of developmental psychopathology* (3rd ed., pp. 25–43). New York, NY: Plenum.

Sanders, B., & Becker-Lausen, E. (1995). The measurement of psychological maltreatment: Early data on the child abuse and trauma scale. *Child abuse & neglect, 19*(3), 315-323.

Saric, Z. R., & Sakic, M. (2014). Relations of parenting styles and friendship quality to self-esteem, life satisfaction and happiness in adolescents. *Applied Research in Quality of Life, 9*(3): 749–765. DOI 10.1007/s11482-013-9268-0

Scher, C. D., Stein, M. B., Asmundson, G. J., McCreary, D. R., & Forde, D. R. (2001). The childhood trauma questionnaire in a community sample: psychometric properties and normative data. *Journal of traumatic stress, 14*(4), 843-857.

Schneider-Rosen, K., & Cicchetti, D. (1984). The relationship between affect and cognition in maltreated infants: Quality of attachment and the development of visual self-recognition. *Child Development, 64*8-658.

Scott-Storey, K. (2011). Cumulative abuse: Do things add up? An evaluation of the conceptualization, operationalization, and methodological approaches in the study of the phenomenon of cumulative abuse. *Trauma, Violence, & Abuse, 12*(3), 135-150.

Scrimin, S., Osler, G., Pozzoli, T., & Moscardino, U. (2018). Early adversities, family support, and child well-being: The moderating role of environmental sensitivity. *Child: care, health and development, 44*(6), 885-891.

Sedlak, A. J., Mettenberg, J., Basena, M., Peta, I., McPherson, K., & Greene, A. (2010). Fourth national incidence study of child abuse and neglect (NIS-4). *Washington, DC: US Department of Health and Human Services, 9*, 2010.

Seligman, M. (2010). Flourish: Positive psychology and positive interventions. *The Tanner lectures on human values, 31*(4), 1-56.

Seligman, M. E. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York, NY: Free Press.

Seligman, M. E., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, *60*, 410–421. doi:10.1037/0003-066X.60.5.410

Senn, T. E., & Carey, M. P. (2010). Child maltreatment and women's adult sexual risk behavior: Childhood sexual abuse as a unique risk factor. *Child Maltreatment*, *15*, 324–335.

Sesar, K., Šimić, N., & Barišić, M. (2010). Multi-type childhood abuse, strategies of coping, and psychological adaptations in young adults. *Croatian medical journal*, *51*(5), 406-416.

Sethi, D., Bellis, M., Hughes, K., Gilbert, R., Mitis, F., & Galea, G. (Eds.). (2013). *European report on preventing child maltreatment*. Retrieved from World Health Organization website http://www.euro.who.int/_data/assets/pdf_file/0019/217018/European-Report-on-Preventing-Child-Maltreatment.pdf.

Sharkey, P. (2018). The long reach of violence: A broader perspective on data, theory, and evidence on the prevalence and consequences of exposure to violence. *Annual Review of Criminology*, *1*, 85-102.

Shlonsky, A., Friend, C., & Lambert, L. (2007). From culture clash to new possibilities: A harm reduction approach to family violence and child protection services. *Brief treatment and crisis intervention*, *7*(4), 345.

Sighinolfi, C., Pala, A. N., Chiri, L. R., Marchetti, I., & Sica, C. (2010). Traduzione e adattamento italiano del Difficulties in Emotion Regulation Strategies (DERS): una ricerca preliminare. *Psicoter Cogn Comport*, *16*, 141-70.

Silverman, A. B., Reinherz, H. Z., & Giaconia, R. M. (1996). The long-term sequelae of child and adolescent abuse: A longitudinal community study. *Child abuse & neglect*, *20*(8), 709-723.

- Slagt, M., Dubas, J. S., van Aken, M. A., Ellis, B. J., & Deković, M. (2018). Sensory processing sensitivity as a marker of differential susceptibility to parenting. *Developmental psychology*, 54(3), 543.
- Slep, A. M. S., Heyman, R. E., & Foran, H. M. (2015). Child maltreatment in DSM-5 and ICD-11. *Family Process*, 54(1), 17-32.
- Sperry, D. M., & Widom, C. S. (2013). Child abuse and neglect, social support, and psychopathology in adulthood: A prospective investigation. *Child abuse & neglect*, 37(6): 415-425. <https://doi.org/10.1016/j.chiabu.2013.02.006>
- Spertus, I. L., Yehuda, R., Wong, C. M., Halligan, S., & Seremetis, S. V. (2003). Childhood emotional abuse and neglect as predictors of psychological and physical symptoms in women presenting to a primary care practice. *Child abuse & neglect*, 27(11), 1247-1258.
- Spinazzola, J., Hodgdon, H., Liang, L. J., Ford, J. D., Layne, C. M., Pynoos, R., ... & Kisiel, C. (2014). Unseen wounds: The contribution of psychological maltreatment to child and adolescent mental health and risk outcomes. *Psychological Trauma: Theory, Research, Practice, and Policy*, 6(S1), S18.
- Spinhoven, P., Penninx, B. W., Hickendorff, M., van Hemert, A. M., Bernstein, D. P., & Elzinga, B. M. (2014). Childhood Trauma Questionnaire: Factor structure, measurement invariance, and validity across emotional disorders. *Psychological assessment*, 26(3), 717.
- Stern, D. N. (1985). The interpersonal world of the infant. A view from psychoanalysis and developmental psychology. *Nueva York: Basic Books*. [Citado en J. Aguilar, 1996, «La funció de contenció». *Revista Catalana de Psicoanàlisi* 13, 1, 13-14.
- Singer, MT (1963), *Thought disorder and family relations of schizophrenics*, 1, 9-191.
- Stoltenborgh, M., Bakermans-Kranenburg, M. J., & Van Ijzendoorn, M. H. (2013). The neglect of child neglect: a meta-analytic review of the prevalence of neglect. *Social psychiatry and psychiatric epidemiology*, 48(3): 345-355. DOI 10.1007/s00127-012-0549-y

- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The conflict tactics (CT) scales. *Journal of Marriage and the Family*, 75-88.
- Sullivan, M. W., Bennett, D. S., Carpenter, K., & Lewis, M. (2008). Emotion knowledge in young neglected children. *Child maltreatment*, 13(3), 301-306.
- Talmon, A., & Ginzburg, K. (2017). Between childhood maltreatment and shame: The roles of self-objectification and disrupted body boundaries. *Psychology of Women Quarterly*, 41(3): 325-337. <https://doi.org/10.1177/0361684317702503>
- Tebbutt, J., Swanston, H., Oates, R. K., & O'TOOLE, B. I. (1997). Five years after child sexual abuse: Persisting dysfunction and problems of prediction. *Journal of the American Academy of Child & Adolescent Psychiatry*, 36(3), 330-339.
- Teicher, M. H., & Samson, J. A. (2013). Childhood maltreatment and psychopathology: A case for ecophenotypic variants as clinically and neurobiologically distinct subtypes. *American journal of psychiatry*, 170(10), 1114-1133.
- Teicher, M. H., & Vitaliano, G. D. (2011). Witnessing violence toward siblings: an understudied but potent form of early adversity. *PloS one*, 6(12).
- Thombs, B. D., Bernstein, D. P., Lobbestael, J., & Arntz, A. (2009). A validation study of the Dutch Childhood Trauma Questionnaire-Short Form: factor structure, reliability, and known-groups validity. *Child abuse & neglect*.
- Tran, N. K., Van Berkel, S. R., van IJzendoorn, M. H., & Alink, L. R. (2017). The association between child maltreatment and emotional, cognitive, and physical health functioning in Vietnam. *BMC public health*, 17(1): 332. DOI 10.1186/s12889-017-4258-z
- Turner, H. A., Vanderminden, J., Finkelhor, D., & Hamby, S. (2019). Child neglect and the broader context of child victimization. *Child maltreatment*, 24(3): 265-274. <https://doi.org/10.1177/1077559518825312>

U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2021); Child Maltreatment 2019.

Vachon, D. D., Krueger, R. F., Rogosch, F. A., & Cicchetti, D. (2015). Assessment of the harmful psychiatric and behavioral effects of different forms of child maltreatment. *JAMA psychiatry*, 72(11), 1135-1142.

Vaingankar, J. A., Subramaiam, M., Lim, Y. W., Sherbourne, C., Luo, N., Ryan, G., ... & Bradley, M. (2012). From well-being to positive mental health: conceptualization and qualitative development of an instrument in Singapore. *Quality of Life Research*, 21(10):1785-1794. DOI 10.1007/s11136-011-0105-3

van Berkel, S. R., Prevoo, M. J., Linting, M., Pannebakker, F. D., & Alink, L. R. (2020). Prevalence of child maltreatment in the Netherlands: An update and cross-time comparison. *Child abuse & neglect*, 103, 104439.

Vanderminden, J., Hamby, S., David-Ferdon, C., Kacha-Ochana, A., Merrick, M., Simon, T. R., ... & Turner, H. (2019). Rates of neglect in a national sample: Child and family characteristics and psychological impact. *Child abuse & neglect*, 88:256-265.

Varese, F., Smeets, F., Drukker, M., Lieveise, R., Lataster, T., Viechtbauer, W., ... & Bentall, R. P. (2012). Childhood adversities increase the risk of psychosis: a meta-analysis of patient-control, prospective-and cross-sectional cohort studies. *Schizophrenia bulletin*, 38(4): 661-671. <https://doi.org/10.1093/schbul/sbs050>

Verzeletti, C., Zammuner, V. L., Galli, C., & Agnoli, S. (2016). Emotion regulation strategies and psychosocial well-being in adolescence. *Cogent Psychology*, 3(1), 1199294.

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, 36(3), 1-48. <https://doi.org/10.18637/jss.v036.i03>

- Viner, R. M., Ozer, E. M., Denny, S., Marmot, M., Resnick, M., Fatusi, A., & Currie, C. (2012). Adolescence and the social determinants of health. *The lancet*, 379(9826): 1641-1652. [https://doi.org/10.1016/S0140-6736\(12\)60149-4](https://doi.org/10.1016/S0140-6736(12)60149-4)
- Vink, R. M., van Dommelen, P., van der Pal, S. M., Eekhout, I., Pannebakker, F. D., Velderman, M. K., ... & Dekker, M. (2019). Self-reported adverse childhood experiences and quality of life among children in the two last grades of Dutch elementary education. *Child abuse & neglect*, 95. <https://doi.org/10.1016/j.chiabu.2019.104051>
- Vonderlin, R., Kleindienst, N., Alpers, G. W., Bohus, M., Lyssenko, L., & Schmahl, C. (2018). Dissociation in victims of childhood abuse or neglect: a meta-analytic review. *Psychological medicine*, 48(15):2467-2476. DOI:10.1017/S0033291718000740.
- Wagenmakers, E.-J., & Farrell, S. (2004). AIC model selection using Akaike weights. *Psychonomic bulletin & review*, 11(1), 192-196.
- Wallace, H. (2002). *Family violence: Legal, medical, and social perspectives* (3rd ed). Boston: Allyn & Bacon.
- Wang, P., Kelifa, M. O., Yu, B., & Yang, Y. (2021). Classes of childhood adversities and their associations to the mental health of college undergraduates: a nationwide cross-sectional study. *Environmental health and preventive medicine*, 26(1), 1-16. <https://doi.org/10.1186/s12199-021-01003-6>
- Watson, K. H., Dunbar, J. P., Thigpen, J., Reising, M. M., Hudson, K., McKee, L., ... & Compas, B. E. (2014). Observed parental responsiveness/warmth and children's coping: cross-sectional and prospective relations in a family depression preventive intervention. *Journal of Family Psychology*, 28(3), 278.
- Webb, T. L., Miles, E., & Sheeran, P. (2012). Dealing with feeling: a meta-analysis of the effectiveness of strategies derived from the process model of emotion regulation. *Psychological bulletin*, 138(4), 775.

- Weber, S., Jud, A., & Landolt, M. A. (2016). Quality of life in maltreated children and adult survivors of child maltreatment: a systematic review. *Quality of life research*, 25(2): 237-255. DOI 10.1007/s11136-015-1085-5
- Weithorn, L. A. (2001). Protecting children from exposure to domestic violence: The use and abuse of child maltreatment statutes. *Hastings LJ*, 53, 1.
- Widom, C. S., Raphael, K. G., & DuMont, K. A. (2004). The case for prospective longitudinal studies in child maltreatment research: Commentary on Dube, Williamson, Thompson, Felitti, and Anda (2004). *Child abuse & neglect*, 28(7), 715-722.
- Wolfe, D. A., & McGee, R. A. (1994). Dimensions of child maltreatment and their relationship to adolescent adjustment. *Dev Psychopathol* 6, 165–181.
- Wolfe, D. A., Crooks, C. V., Lee, V., McIntyre-Smith, A., & Jaffe, P. G. (2003). The effects of children's exposure to domestic violence: A meta-analysis and critique. *Clinical child and family psychology review*, 6(3), 171-187.
- Wong, W. C., Leung, P. W., Tang, C. S., Chen, W. Q., Lee, A., & Ling, D. C. (2009). To unfold a hidden epidemic: Prevalence of child maltreatment and its health implications among high school students in Guangzhou, China. *Child Abuse & Neglect*, 33(7), 441-450.
- Wu, Q., Cao, H., Lin, X., Zhou, N., & Chi, P. (2021). Child maltreatment and subjective well-being in Chinese emerging adults: a process model involving self-esteem and self-compassion. *Journal of interpersonal violence*. <https://doi.org/10.1177/0886260521993924>.
- Yu, C. Y. (2002). *Evaluating cutoff criteria of model fit indices for latent variable models with binary and continuous outcomes*. University of California, Los Angeles.
- Yu, z., Zhao, a., & Liu, a. (2017). Childhood maltreatment and depression: A meta-analysis. *Acta Psychologica Sinica*, 49(1), 40.

Academical Acknowledgments

I would like to thank the PhD Coordinator, Professor Vanna Boffo for the training offered by the doctoral course.

A special acknowledgment goes to my Supervisor, Professor Annalaura Nocentini, whose passion for research and determination in her work, were stimulating my growth at personal and professional level. Besides, I would thank Professor Ersilia Menesini, with whom I have had the pleasure of working in these years, thanks to the collaboration within the Laboratory of Longitudinal Studies in Developmental Psychology of the University of Florence.