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Christian O. Garcia & Sara R. Berzenski

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# The Importance of Perception and Personality on the Association Between Childhood Neglect and Adult Social Competence

Christian O. Garcia <sup>a</sup> and Sara R. Berzenski <sup>b</sup>

<sup>a</sup>Department of Psychology, University of California, Riverside, Riverside, CA, USA; <sup>b</sup>Department of Psychology, California State University institution, Northridge, Northridge, CA, USA

## ABSTRACT

Social competence is a key component in engaging and sustaining everyday interactions. As such, it is prudent to identify factors that protect the development of social competence. In the present study, sociability and locus of control were examined as protective factors in two separate three-way interaction models of the effects of childhood physical and emotional neglect on adult social competence. Participants were 405 introductory psychology students from a public Southern California University. Students answered a computerized battery of assessments examining multidomain regulation. In the physical neglect model, a significant three-way interaction was found, such that for those with an internal locus of control, sociability was a protective factor: there was a strong negative relationship between physical neglect and social competence only when sociability was lower ( $b = -2.763, p = .024$ ). However, for externally controlled individuals, higher sociability acted as a risk factor, strengthening the association between physical neglect and social competence ( $b = -2.205, p = .037$ ). Childhood neglect has enduring effects in the lives of maltreated individuals, but their effects are not entirely uniform. Individual traits and perceptions can serve as potential intervention targets to mitigate the effects of childhood neglect on important outcomes.

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## KEYWORDS

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Social competence refers to one's ability to form, maintain, and be effective in social relationships (Rose & Krasnor, 1997). Previous research has shown social competence to be associated with an array of psychological outcomes. Children's social competence abilities have been found to be linked to higher academic achievement in early adolescence (Wentzel, 1991), and in young adults, social competence has been positively associated with perspective taking and emotion management (McGarry et al., 2021; Yip & Martin, 2006). Social competence also has important implications for social support. Social support has been defined in the literature as the support accessible to an individual through social ties to other individuals, groups, and the larger community (Lin et al., 1979). Social competence can facilitate prosocial

**CONTACT** Christian O. Garcia  [cgarc051@ucr.edu](mailto:cgarc051@ucr.edu)  Department of Psychology, University of California, Riverside, Riverside, CA 92521

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behavior which in turn helps form and maintain friendships and social support groups (Hawley et al., 2002). An abundance of research has been conducted on the mental and physical benefits of perceived and received support. Amounts of social support are associated with variations in levels of depression (Grav et al., 2012; Lin et al., 1999; Stice et al., 2004) and anxiety (Hill et al., 1996; Lewis et al., 2012). Further, physical health benefits associated with social support include fewer risk taking behaviors and lower mortality rates (Berkman & Glass, 2000; Rutledge et al., 2004).

It's crucial to understand how these social capabilities develop, as social relationships are integral to functioning productively in society. It is equally important that we understand what may disrupt the typical pattern of development of these specialized skills. Childhood maltreatment, patterns of abusive and neglectful behaviors, intentional or not, that result in risk of or actual injury to a child's development, well-being, or dignity is a major threat to normative development (World Health Organization, 2022). Outcomes of childhood maltreatment include higher risk of perceived stress, difficulties controlling anger, higher risk of committing intimate partner violence, and myriad negative psychopathological outcomes (Anda et al., 2006; Lansford et al., 2002). Of special importance to the present study is child neglect, which is the failure of a parent or caregiver to provide appropriate care to a child resulting in potential or actual harm (Schumacher et al., 2001).

Neglect has been found to contribute uniquely to deficits in childhood social competence and socialization outcomes according to both self- and other-reports (English et al., 2005; Manly et al., 1994). The current study seeks to examine protective factors that mitigate the negative effects of childhood neglect on social competence. Dispositional traits such as sociability and cognitive factors such as locus of control may be important in how individuals perceive experiences of maltreatment and may have implications for how they navigate relationships. Therefore, the current study proposes a three way-interaction model to examine the protective capabilities of sociability and locus of control on the relationship between childhood neglect and social competence.

### **Neglect and social competence**

Childhood neglect has been linked to numerous social and cognitive maladaptive issues across the lifespan (Hildyard & Wolfe, 2002), and in particular has been robustly associated with social competence outcomes. Specifically, children with a history of neglect have been found to be less socially competent and more isolated than their non-maltreated peers and evidenced more impaired peer relationships, with lasting effects into adulthood (Egeland & Erickson, 1987; Loos & Alexander, 1997; Raby et al., 2019; Shields et al., 1994), and observed across adolescents (Cohen & Thakur, 2021) as well as school age

children (Manly et al., 2001). Excessive social withdrawal poses a threat to social competence, albeit indirectly, by limiting opportunities for children to practice and master social skills. Research has shown that the frequency and severity of maltreatment is also associated with lower evaluations of social competence (Manly et al., 1994). Neglect may be uniquely positioned to influence social outcomes because children are inextricably linked with their caregivers from birth up until adolescence (when the relationship priorities begin to shift). Thus, time spent with their caregivers early in childhood serves as a model from which children learn about how to interact with the outside world and others (Bowlby, 1973). Through early exposure to healthy parent-child relationships, children are afforded the opportunity to develop social competencies and safely explore the social world with a responsive figure. It is this relationship that creates expectancies for future relationships (Rubin et al., 2013). This theoretical link has been examined by Groh et al. (2014) who found that attachment security was strongly associated with peer competence. Neglect disrupts the development of adaptive social capabilities that would help children create and maintain meaningful social relationships later in life. A child who develops an insecure attachment can represent all future relationships as being neglectful or rejecting. The formation of this representation leads the child to act aggressively or avoid interactions which in turn denies them the opportunities to learn from interactions with peers (Rubin et al., 2013).

Neglect can further be examined along specific dimensions. Physical neglect refers to a caregiver's inability to provide adequate physical care such as nutrition, hygiene, and medical attention. Emotional neglect on the other hand is the failure to provide adequate affection, nurturance, and structure (Stoltenborgh et al., 2013). In the case of social competence, physical neglect may not pose as great a threat as emotional neglect because the omission of adequate nutrition or hygiene by caregivers does not necessarily denote a lack of love and care for the child's emotional needs. For example, one study examining the effects of poverty and neglect on a variety of adaptation problems, including social skills, found poverty to be less predictive of detrimental outcomes than neglect (Herruzo et al., 2020).

Although studies have found associations between social competence and both physical (English et al., 2005; Manly et al., 2001) and emotional neglect (Cohen & Thakur, 2021; Egeland, 1987; Loos & Alexander, 1997), at least one study suggests that when directly compared, emotional neglect may be more salient (Dubowitz et al., 2004). Emotional neglect may pose a greater threat to the development of social skills because it compromises a child's understanding of the function of relationships (Haslam & Taylor, 2022; Rees, 2008). These negative preconceptions of relationships hinder a child from learning the necessary cooperation skills needed in a social world. Further, children can develop negative perceptions of themselves as being unworthy of love and thus

be wary of future relationships. Although physical neglect may also have indirect effects on social competence through its effects on children's perception by social partners, emotional neglect may have a more salient effect on social competence through its increased likelihood to disrupt the development of positive attachment systems (Hildyard & Wolfe, 2002; Müller et al., 2019). Therefore, it is evident that neglect operates differently on psychosocial outcomes depending on the specific dimension being examined.

### **Sociability as a protective factor**

Sociability refers to the tendency for an individual to prefer social situations to being alone (Cheek & Buss, 1981). Although tapping similar notions, sociability and social competence are two distinct constructs. Sociability refers specifically to an individual's disposition, whereas social competence refers to an individual's ability to function adaptively in social situations. Larson et al. (2007) found that individuals who report being more sociable have been rated by their peers as being more socially competent in their respective social groups. Theoretically, sociability could provide the motivation for individuals to develop the social skills needed to attain adaptive social competence, even in the case of neglected children for whom this might be more difficult. Thus, highly social children may be less impaired by neglect by virtue of their social nature. Further, being highly social may offer more varied opportunities for these children to obtain the social competence skills needed with peers and non-familial adults. Indeed, children who take part in social withdrawal behaviors in kindergarten and 2<sup>nd</sup> grade are more likely to report feeling less socially competent later in 4<sup>th</sup> and 5<sup>th</sup> grade (Rubin et al., 1989). Further, socially withdrawn children have been found to attribute successful social interactions to outside forces and attribute failed social interactions to deficits in their own social skills (Wichmann et al., 2004). These negative attributional patterns could explain the difficulties less sociable children have in acquiring social competence, particularly among neglected children, for whom there are fewer opportunities to have these varied interactions.

### **Locus of control**

Locus of control refers to the degree in which individuals believe they are in control of important life outcomes (Rotter, 1966). Traditionally, an internal locus, or the perception that one has control, has been associated with positive outcomes such as fewer internalizing problems and adaptive coping (Bolger & Patterson, 2001; Luthar, 1991). Meanwhile, an external locus has been associated with higher reported levels of stress, depression, hopelessness, lower levels of self-esteem (Asberg & Renk, 2014), and difficulties coping with stress (Carton & Nowicki, 1994). Although locus of control may not directly be associated with social competence (Piazza-Wagoner et al., 2004), one study did reveal that children

who have difficulties interpreting nonverbal social information tend to be externally controlled (Nowicki & Duke, 1992). Further, in successful social interactions, socially withdrawn children tend to attribute their success to luck or outside forces (Wichmann et al., 2004). If externally controlled children attribute their intermittent social successes to external forces, positive social behaviors will not be reinforced. In turn, internally controlled children are better able to recognize their own capabilities and build upon them by continually practicing them. Locus of control, therefore, has the potential to play a crucial role in protecting against the effects of neglect on social competence.

Further, the extent to which sociability acts as a protective factor in the association between childhood neglect and social competence may vary in the context of an internal or external locus of control. As a disposition, sociability is a tendency to behave in a certain way but does not determine social behavior. The tendency to be social, coupled with the ability to perceive the extent of one's own agency in interactions, could lead highly social individuals to engage in more social opportunities. Thus, a highly sociable individual with an internal locus of control may experience the greatest degree of protection from the negative impact of childhood neglect on social competence.

### **The present study**

With the aforementioned literature in consideration, we proposed three hypotheses:

**Hypothesis 1:** We sought to replicate the existing literature which predicted physical and emotional neglect would be associated with lower levels of social competence.

**Hypothesis 2:** Sociability would moderate the relationship between neglect and social competence such that more highly sociable individuals would have a weaker relationship between neglect and social competence.

**Hypothesis 3:** Locus of control would moderate the aforementioned model such that for individuals with more internal loci, the protective influence of sociability would be stronger.

### **Methods**

#### ***Participants***

Participants were 405 introductory psychology students from a public Southern California university (68.4% female, 30.6% male, and 1% declined

to answer; 47.2% Hispanic, 25.2% White, 15.1% Asian, 5.9% Black, 5.7% mixed race, and 1% declined to answer;  $M_{\text{age}} = 19.44$ ,  $SD = 2.12$ ). Participants were recruited via the university's research management pool and were compensated with course credits. To be eligible for this study students must have been 18 years old or older at the time of recruitment.

### **Procedure**

Participants were supervised as they completed a series of surveys on individual computers in a campus computer lab. The current study utilizes measures that are a part of a larger study on multidomain regulation. Participants gave verbal informed consent to take part in the study and were informed that all responses were anonymous and confidential. Participants were required to stay for a full hour in the computer lab, regardless of how quickly they finished, as to avoid incentive to rush through the questions. Procedures were reviewed and approved by the university's institutional review board.

### **Measures**

*Emotional & Physical Neglect.* Childhood emotional and physical neglect were assessed using the Childhood Trauma Questionnaire – Short Form (CTQ-SF; Bernstein et al., 2003). The CTQ-SF is a measure consisting of 28-items, 25 clinical and 3 validity items, that is used to assess experiences of childhood abuse and neglect. The measure is comprised of 5 clinical scales with 5 items per scale: physical, emotional, and sexual abuse, and physical and emotional neglect. Responses are rated on a 5-point scale ranging from Never True to Very Often True. All items from the emotional neglect scale are reverse coded as are 2 from the physical neglect scale. Each item begins with the stem “When I was growing up.” Example items from the emotional neglect scale include “Felt loved” (R) and “Family was a source of strength” (R);  $\alpha = .887$ . Example items from the physical neglect scale include “Parents were drunk or high” and “Got taken care of” (R);  $\alpha = .673$ .

*Social Competence.* Social competence was assessed using the Resilience Scale for Adults (RSA; Friberg et al., 2003). This 33-item measure of protective resilience factors has five subscales including the 7-item social competence scale which was used for the present analyses. Response options range from 1 to 7 with higher scores reflecting higher levels of the respective factor. Example items from the social competence subscale include “It is easy for me to think of good conversational topics” and “It is easy for me to make other people laugh.”  $\alpha = .863$ .

*Sociability.* Sociability was assessed using the sociability subscale of the Adult Temperament Questionnaire – Short Form (ATQ – SF; Rothbart et al., 2000). The ATQ – SF is a 77-item measure that assesses 5 general

temperament factors such as negative affect, extraversion/surgency, effortful control, and orientating sensitivity. Item responses on all subscales range from 1 (extremely untrue) to 7 (extremely true). The present analysis utilizes the sociability subscale that is drawn from within the extraversion/surgency subscale. There are 5 items in the sociability subscale and sample items include “I like conversations that include several people” and “I usually like to spend my free time with people;”  $\alpha = .738$ .

*Locus of Control.* Locus of control was assessed using Rotter’s Locus of Control Scale (LOC; Rotter, 1966). The LOC scale is a measure consisting of 29 pairs of statements. Participants respond to the statements by indicating which statement they “agree with most.” Lower total scores are indicative of an Internal Locus of Control, and higher total scores are indicative of an External Locus of Control. A sample statement pair includes “‘Many of the unhappy things in people’s lives are partly due to bad luck’ vs. ‘People’s misfortunes result from the mistakes they make.’;”  $\alpha = .553$ .

### **Data preparation and analytic plan**

All variables were sufficiently normal so as to render parametric statistics appropriate (Afifi et al., 2007). Of the original 500 participants recruited for the study, 1% were missing data on emotional and physical neglect. Locus of control and social competence were also missing for a small proportion of participants – 6.6% and 18.6% respectively – who failed to complete the survey. Little’s missing completely at random (MCAR) test (Little, 1988) revealed data to be missing completely at random,  $\chi^2(12) = 13.432, p = .338$ ; therefore, only complete cases were used in the analysis for the present study ( $N = 405$ ). Two separate three-way interaction models evaluating the effects of physical and emotional neglect on social competence were analyzed. Sociability served as the first moderator from neglect to social competence and locus of control served as the secondary moderator on the effect of sociability. Hayes (2017) SPSS PROCESS 3.5 was used to conduct the interaction models.

## **Results**

### **Descriptive statistics and bivariate correlations**

Table 1 presents descriptive statistics and bivariate correlations for all variables. At the bivariate level, higher levels of emotional neglect were correlated with higher levels of physical neglect. More internal locus of control was associated with higher sociability and higher social competence. Higher social competence was also associated with lower levels of emotional neglect and increased sociability.



**Table 1.** Descriptive Statistics and Correlations among Study Variables.

	1	2	3	4	5	Mean	SD	Range
1. Emotional Neglect	-					9.367	4.340	5–24
2. Physical Neglect	.525**	-				6.800	.444	5–21
3. Sociability	-.033	.034	-			24.779	5.681	8–35
4. Locus of Control	.094	-.016	-.152**	-		11.794	3.317	2–22
5. Social Competence	-.130**	-.068	.595**	-.189**	-	27.876	5.056	9.33–35

Note. \*\* Correlation is significant at the .01 level (2-tailed).

Predictor variables were transformed and centered for analyses. Original means and ranges prior to transforming and centering are displayed here.

### Regression analyses

Two separate regression analyses were conducted, one for emotional neglect and one for physical neglect. In the regression examining emotional neglect (Table 2), there was a significant negative main effect of childhood emotional neglect on adult social competence. Further, there was a significant negative effect of locus of control on social competence, and a positive effect of sociability. There were no significant interactions in this regression.

The regression for physical neglect (Table 3) revealed a significant negative main effect of childhood physical neglect on adult social competence. Locus of control and sociability were both also found to be significant predictors of social competence. In addition, the three-way interaction between physical neglect, locus of control, and sociability was significant (see Figure 1). At lower, more internal, levels of locus of control, there was no relationship between physical neglect and social competence among individuals with medium or high levels of sociability. However, there was a strong negative association between childhood physical neglect and adult social competence among individuals with lower sociability. At higher, more external, levels of locus of control, there was no relationship between physical neglect and social competence among individuals with low or medium levels of sociability. However, there was a strong negative association between physical neglect and social competence among those with higher sociability.

**Table 2.** Emotional neglect regression analyses predicting social competence.

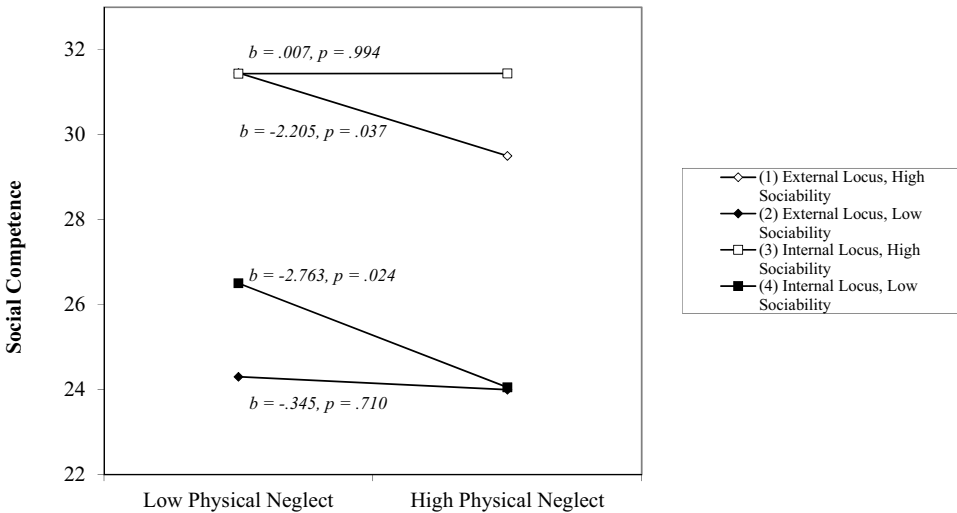
Predictor	<i>b</i>	<i>SE</i>	$\beta$	<i>p</i>
Emotional Neglect	-.121	.048	-.104	.012
Locus of Control	-.146	.062	-.096	.020
Sociability	.516	.037	.580	<.001
Emotional Neglect x Locus of Control	-.007	.015	-.020	.635
Emotional Neglect x Sociability	-.005	.009	-.024	.587
Locus of Control x Sociability	.005	.010	.022	.595
Emotional Neglect x Locus of Control x Sociability	-.002	.003	-.040	.369

Note. The analyses were also run controlling for physical neglect and the main effect of emotional neglect was no longer significant, but the interactions and other findings remained the same as presented here. Full models are presented here because high multicollinearity between IVs can be problematic for the models..

**Table 3.** Physical neglect regression analyses predicting social competence.

Predictor	<i>b</i>	<i>SE</i>	$\beta$	<i>p</i>
Physical Neglect	-1.317	.474	-.116	.006
Locus of Control	-.149	.062	-.098	.016
Sociability	.521	.036	.586	<.001
Physical Neglect x Locus of Control	.009	.151	.002	.954
Physical Neglect x Sociability	.020	.084	.010	.815
Locus of Control x Sociability	.002	.010	.008	.836
Physical Neglect x Locus of Control x Sociability	-.055	.023	-.099	.018

Note. The analyses were also run controlling for emotional neglect and the main effect of physical neglect was no longer significant, but the interactions and other findings remained the same as presented here. Full models are presented here because high multicollinearity between IVs can be problematic for the models..



**Figure 1.** Three-way interaction between physical neglect, locus of control, and sociability.

**Discussion**

The current study sought to examine the protective influence of sociability on the relationship between experiences of childhood maltreatment and adult social competence. Further, locus of control was hypothesized as a potential protective factor that might mitigate the harmful effects of neglect on social competence. Two separate three-way interaction models were conducted to examine the effects of these protective factors on later adult social competence. No significant interaction between the aforementioned factors were discovered for the emotional neglect model. A significant three-way interaction between sociability and locus of control for the physical neglect model was revealed.

The study’s first hypothesis was supported. Increased levels of physical and emotional neglect were found to be associated with decreased levels of social competence. Consistent with prior research (Manly et al., 1994; Raby et al., 2019), childhood experiences of physical and emotional neglect have a detrimental effect on social competence well into adulthood. Emotional

neglect deprives children of their primary source for establishing necessary social skills to explore the world effectively. Despite being less directly connected to social interactions, physical neglect still plays a nuanced role in the development of social competence. First, physical neglect arises from a caregiver's inability to provide for a child and thus is associated with financial hardship and poverty. The strain of economic hardship may negatively affect a caregiver's well-being, and by extension the parent-child relationship. Disruptions in this relationship may negatively impact children's developing social expectations and abilities. This model aligns with extant literature linking economic hardship with children's social adjustment via caregiver wellbeing (Mistry et al., 2002). In addition, economic hardship may directly impact children's confidence in social situations with variably-advantaged peers.

Further, there was found to be a negative main effect of external locus of control on social competence. This is consistent with prior research suggesting that an external locus of control is generally maladaptive and linked with an increased risk for depression (Benassi et al., 1988), including increases in behavioral problems (Liu et al., 2000). In contrast, an internal locus of control may protect individuals by allowing them to perceive negative social situations as within their power to fix or control.

Analyses revealed a significant three-way interaction between physical neglect, locus of control, and sociability. For those with an internal locus of control, there was a strong negative relationship between physical neglect and social competence only when sociability was lower – thus sociability served as a protective factor, as expected. In contrast, for individuals with an external locus of control, for whom we simply expected sociability to be less protective, higher sociability became a risk factor, strengthening the association between physical neglect and social competence. These findings have important implications for our understanding of how interpersonal factors influence the development of social competence. Consistent with prior research (e.g., Larson et al., 2007), sociability did indeed serve as a protective factor for some individuals. As anticipated, internally controlled individuals saw the most protection stemming from high sociability. This may be because when successful interactions are attributed to one's own abilities it affords the individual the confidence to continue seeking out opportunities to interact, thus building upon their existing skill set and bolstering their social competence. For less sociable individuals, an internal locus may be less salient because of their difficulties in having successful interactions and the limited opportunities to practice social skills.

On the other hand, individuals with an external locus of control did not see the same protection, and instead were at higher risk from physical neglect when sociability was higher. Externally focused children, particularly those who seek opportunities to socialize, may be at risk for attributing their

successes to outside forces. Unable to recognize their own competence, they may end up ceasing efforts to socialize, even though it is highly desired. Further, when an individual perceives their circumstances of neglect as dynamic, they may feel more agency in improving their situation. However, for children who attribute neglect to external forces, these inclinations might feel futile. Thus, neglect poses a significant issue when a child is highly sociable but has an external locus of control.

It is worth noting that distinct results were found in the present study between the emotional and physical neglect models. Previous literature has demonstrated the robust negative effects of emotional neglect on social competence (Egeland, 1987; Loos & Alexander, 1997). The findings from this study are also robust, in that no interactions were detected for emotional neglect, consistent with this previous literature. However, in the present study, physical neglect was only selectively detrimental (i.e., more or less problematic depending on individual factors). One explanation for this finding could be due to the nature of physical neglect, in that it may not always be associated with relational failures on the part of caregivers, but rather an inability to provide tangible supports. Indeed previous studies have shown physical neglect to be less detrimental and emotional neglect to be more salient in negative outcomes (Dubowitz et al., 2004; Herruzo et al., 2020). Thus, the effects of physical neglect may be more susceptible to risk and protective factors stemming from individual traits. As in the present study, children who can compartmentalize themselves from their negative circumstances may fare better as they persist in trying to interact with others, which may be more feasible in the context of physical vs. emotional neglect.

### **Limitations**

Despite the importance of these findings, some limitations are worth noting. First, data used for this study was all self-report. This is of special concern for the measurement of childhood neglect because of the difficulties inherent in recalling childhood experiences. However, research has shown retrospective reports of maltreatment experiences to be largely accurate (Hardt & Rutter, 2004). The issue with retrospective reports stems not from their accuracy but more from their underestimation during recall. This could be problematic for the current study as the experiences found might be underestimated. Importantly, previous authors note that maltreatment reports are suitable for use unless one is probing for specific details of said incidents. Further, these reports have also been found to be reliable over time (Dube et al., 2004). Another limitation of note is the current study's generalizability. The use of a college student sample, although ethnically/racially diverse, does not reflect how the effects would operate in a high risk or clinical sample. College

students are relatively high functioning compared to the broader population of those who have experienced childhood neglect.

### **Implications**

Emotional and physical neglect have enduring effects in the lives of maltreated individuals, but their effects are not entirely uniform. In the case of social competence, the current study has showcased the importance of individual traits and perceptions in protecting against the deleterious effects of childhood maltreatment. The development of social competence can be either thwarted or enhanced by cognitive perceptions. To protect the development of social competence and adaptation in general it would be prudent for practitioners to remind children of the harmful effects of external attributions and encourage agency. Studies have demonstrated shifts in domain specific locus of control following interventions, such as in patients coping with panic attacks and in recovering alcoholics (Katerndahl, 1991; Sharp et al., 1997). Thus, it might be possible to intervene on social competence outcomes via locus of control training within the domain of social skills. Perhaps integrating locus of control training within existing social skills training models would prove fruitful (Spence, 2003).

Future research should examine the nuances of how locus of control effects everyday social domains in the context of childhood adversity. Moreover, it would be crucial to examine how domain specific locus of control coincides or differs with other similar domains and to that of the individual. Given that extant literature has documented shifts in domain specific locus of control it is prudent to examine and develop potential interventions within the domain of sociability. As demonstrated in the current study, sociability was shown to be a protective factor that can mitigate the influence of neglect on social competence. However, this finding was not uniform across all sociable children, only those who were internally controlled. It is still evident that being socially inclined can afford children more opportunities to engage with the world and improve their social abilities. It is crucial to continue examining interpersonal factors in the context of childhood adversity to evaluate how their interactions can help the individual thrive.

### **Disclosure statement**

No potential conflict of interest was reported by the authors.

### **ORCID**

Christian O. Garcia  <http://orcid.org/0000-0002-6979-1838>

Sara R. Berzenski  <http://orcid.org/0000-0003-2435-0411>

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