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**Does perceived social support influence
the relationship between childhood maltreatment
and depressive symptoms?**

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Abstract

Objective The main objective of this study is to explore the relationship between perceived social support, childhood maltreatment and depressive symptomatology. Secondly, we want to investigate and clarify whether perceived social support moderates the relationship between childhood maltreatment and depressive symptomatology. According to prior studies, individuals with a history of childhood maltreatment who perceive their social support as adequate, will develop less depressive symptoms in adulthood. If these results are found in the current study we can support the buffer hypothesis of social support.

Methods The sample consisted of twenty-one psychology students of Leiden University. The participants were requested to fill questionnaires about their childhood history, specifically on experiences of maltreatment in their childhood, how they perceive their current social relationships and the current depressive symptoms.

Results Perceived social support was negatively correlated with depressive symptomatology ($r = -0.584, p = 0.007$). Childhood maltreatment and perceived social support appeared to be negatively correlated ($r = -0.558, p = 0.007$). The results of multiple regression analysis of depressive symptoms, perceived social support and the subscales of childhood maltreatment showed that after correction for childhood maltreatment, perceived social support remained a predictor for depressive symptoms except for the subscale physical neglect.

Conclusions Perceived social support is a predictor of depressive symptoms over and above childhood maltreatment. Although we did not find support for the buffer hypothesis of social support, the results show that perceived social support is a strong predictor of depressive symptomatology in individuals who suffered maltreatment in their childhood.

Introduction

Research has demonstrated long-term negative psychological effects in those reporting a history of childhood maltreatment (i.e. emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect; Brown, Cohen, Johnson, & Smailes, 1999; Hinson, Koverola, & Morahan, 2002). More specifically, the relationship between childhood maltreatment and adult depression has been firmly established (Bernet & Stein, 1999; Vranceanu, Hobfall, & Johnson, 2007). Psychological trauma can be defined as an overwhelming event in which individuals experience feelings of helplessness, danger, anxiety and instinctual arousal (Eth & Pynoos, 1985). As van der Kolk (1987) stated, 'Childhood maltreatment is particularly significant because uncontrollable, terrifying experiences may have their most profound effects when the central nervous system and cognitive functions have not yet fully matured, leading to a global impairment that may be manifested in adulthood in psychopathological conditions'. This indicates that individuals who suffered maltreatment in their childhood are at a higher risk to develop psychological symptoms or other maladaptive behavior (Powers, Ressler, & Bradley, 2009). In the review study of Carr, Martins, Stingel, Lemgruber & Juruena (2013) the results showed that the subtypes of Early Life Stress: physical abuse, sexual abuse, emotional abuse, emotional neglect, and unspecified neglect were individual predictors of psychiatric disorders in adulthood. Hence, in this study we focus on exploring the relationship between perceived social support, childhood maltreatment and depressive symptomatology.

According to cognitive theories of depression individuals with a negative cognitive style are at a higher risk for developing depressive symptomatology after the occurrence of negative life events (Abramson, Alloy, Hankin, Haefffel, MacCoon, & Gibb, 2002). The majority of these cognitive theories propose that negative cognitive styles moderate the relation between negative life events and depression. These negative cognitive styles of individuals who suffered childhood maltreatment can be shaped when individuals perceive their social support as adequate and, therefore, social support can potentially buffer against depression (Charuvastra & Cloitre, 2008; Hyman, Gold, & Cott, 2003). Indeed, social support following the stressful event may also facilitate cognitive and emotional processing, allowing victims to reappraise the event in a more adaptive manner (Thoits, 1986; Williams & Joseph, 1999).

In line with these results, we can state that social support is an important protective factor for individuals who suffered maltreatment in their childhood (Powers, Ressler, & Bradley, 2009). Two kinds of social support can be distinguished, namely the size of the social support system and the perceived social support. The study of Thoits (1986) describes social support as a coping assistance for individuals who suffered stressful life events. The presence of social support may act as a buffer to high levels of stress, protecting suffering individuals from developing symptoms of psychological distress including depressive symptomatology and other maladaptive behaviors (Cohen & Wills, 1985). More specifically, perceived social support should be viewed as the perception that one is valued, loved, and has available resources one can turn to for assistance if help is needed (Sarason, Sarason, Shearin, & Pierce, 1987). Many agree that the appraisal of stress is based on what support a person perceives as available rather than on its actual availability (Cohen, Mermelstein, Kamarck, & Hoberman, 1985). In other words, the perception of one's ability to access social support, if needed, is likely more valuable than the actual support received immediately following a stressful event. As stated above the relationship between childhood maltreatment and depressive symptomatology has been clarified. In the current study we want to investigate if social support moderates the relationship between childhood maltreatment and depressive symptomatology. In line with the cognitive theories of depression, we want to investigate whether individuals with a history of childhood maltreatment who perceive their social support as adequate will show less depressive symptoms, than those who perceive their social support as inadequate.

Low levels of social support are not solely related to depression. Recent research also supports the connection between reduced social support and posttraumatic stress disorder in adulthood. Studies in veteran samples and victims of natural disasters indicate that low levels of social support after a traumatic event are related to the development of posttraumatic stress disorder symptoms (Gold, Engdahl, Eberly, Blake, Page, & Frueh, 2000). Further, recent research asserts that individuals newly diagnosed with posttraumatic stress disorder endorse lower levels of social support when compared to controls (Kotler, Iancu, Efroni, & Amir, 2001; Widows, Jacobsen, & Fields, 2000). Brewin, Andrews, and Valantines (2000) confirmed these assertions in a recent meta-analysis of studies assessing populations exposed to trauma in adulthood, where they found that lack of social support was a major risk factor in

the development of posttraumatic stress disorder (Stroud, 1999). This again, underlines the influence of social support on the relationship between childhood maltreatment and psychological symptomatology even further.

Studies that investigated the relationship between childhood maltreatment and social support have shown that individuals who suffered maltreatment in their childhood have smaller social supportive networks, they perceive their relationships as less supportive, and they are less satisfied with their relationships (Gibson & Harthorne, 1996; Harmer, Sanderson, & Mertin, 1999). One potential explanation for these effects is that the maltreatment interferes with children's cognitions regarding themselves and others. These distorted cognitions become internalized, leading to unhealthy adult relationships (Briere, 2002). This social support linkage is important because low social support is consistently related to depression (Brown & Harris, 1987; Cutrona & Troutman, 1986; Dohrenwend, 2000). As cited above, several studies have investigated the relationships of childhood maltreatment, social support and psychological distress in adulthood. To our knowledge, the relationships between the different subtypes of childhood maltreatment (i.e. emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect), adult depressive symptomatology, and perceived social support have not been amply explored.

In the present study the first aim is to investigate how individuals who had suffered maltreatment in their childhood (i.e. emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect) perceive their social support system, rather than investigating the size of their social support system. In addition, this study further explores the relationship between childhood maltreatment including the different subtypes, social support and depressive symptomatology. In the current study we want to investigate whether the different subtypes of childhood maltreatment act differently in relation to perceived social support in predicting depressive symptomatology. Individuals who suffered childhood maltreatment may have a social support system, but may not perceive this as adequate support. As cited above, research has shown that perceived social support could have a protective role in those individuals who suffered maltreatment in their childhood (Charuvastra & Cloitre, 2008; Hyman, Gold, & Cott, 2003). Therefore it is important to understand more about the relationship between childhood maltreatment, perceived social support and depressive symptomatology. The second aim in this study is to investigate and clarify whether perceived

social support moderates the relationship between childhood maltreatment and depressive symptomatology. As cited above, consistent with prior theory and studies, individuals with a history of childhood maltreatment who perceive their social support as adequate, will develop less depressive symptoms in adulthood. If these results are found in the current study we can support the buffer hypothesis of social support. According to the literature it is assumed that individuals who appraise their social support system as adequate, are less likely to develop depressive symptoms. Because childhood maltreatment can put individuals at a higher risk for developing psychological distress and its known consequences on the behavior in adulthood, it is important to take a closer look on the potential influence of perceived social support on the relationship between childhood maltreatment and depressive symptomatology. When these relationships become more clear we hope that the existing interventions for individuals with a history of childhood maltreatment can be adjusted to become more clinically effective. Findings of this study might also have implications in prevention of depressive symptomatology, by monitoring the social development of children suffering childhood trauma more closely, and if needed, by helping these children develop more adequate social skills.

Research hypotheses

In the present study, we explore the relationship between childhood maltreatment, depressive symptomatology, and perceived social support. Secondly, we examine whether perceived social support moderates the relationship between childhood maltreatment and depressive symptomatology.

1. We hypothesized that childhood maltreatment in general, and the subtypes of childhood maltreatment, depressive symptomatology and perceived social support are related.
2. We hypothesized that childhood maltreatment is significant in predicting perceived social support.
3. We hypothesized that perceived social support moderates the relationship between childhood maltreatment and depressive symptomatology.
4. We hypothesized that the different subtypes of childhood maltreatment in relation to perceived social support will act differently in predicting depressive symptomatology.

Methods and Materials

Participants

The screening sample consisted of three hundred and ninety-two first and second year psychology students of Leiden University. The three hundred ninety-two students who filled in and returned the inventories received chocolate bars in return. Before participating in the research all participants provided written informed consent. In the current study twenty-two students met the inclusion criteria of having a childhood trauma and were willing to participate. The sample consisted of twenty-one females and one male. The age ranged from 17 years to 22 years, with mean age of 19.41 years ($SD = 1.5$).

Procedure

The screening took place between October and December 2011. First and second year psychology students of Leiden University were approached during a lecture break. The aim of the study was verbally explained to the students. Afterwards the three hundred and ninety-two students who volunteered to participate were requested to fill in an informed consent and the two inventories that were handed out, respectively the Evaluatievragenlijst Interpersoonlijke Steun (EIS; Renty & Roeyers, 2004) and the Jeugd Trauma Vragenlijst (JTV; Arntz & Wessel, 1996). The three hundred ninety two students who filled in and returned the inventories received chocolate bars in return.

One hundred four students met the inclusion criterion for further research. The inclusion criterion was having a history of childhood maltreatment. Those students who were able and willing to participate in future research and had suffered maltreatment in their childhood, were invited by e-mail for further research ($N=22$, participation rate: 21%). These participants were informed about the procedure at the university research facility and were requested to fill in a written informed consent and the paper version of the Beck Depression Inventory (Bouman, Luteijn, Albersnagel, & van der Ploeg, 1985). Afterwards these participants were debriefed and in return for their participation they received thirty Euros.

Measures

Assessment of perceived social support

To assess the perceived social support we used the EIS (Renty & Roeyers, 2004). This is the Dutch version of the Interpersonal Support Evaluation List (ISEL-General population; Cohen & Hoberman, 1983; Cohen, Mermelstein, Kamarck & Hoberman, 1985). It is a 41-item self-report inventory that measures the current perceived social support. Ratings were done on a four-point scale from definitely false (1) to definitely true (4). The items are evenly divided between positively and negatively worded statements about social relationships. For example, a positive statement is “When I feel lonely, there are several people I can talk to.” An example of a negative statement is “There are very few people I trust to help solve my problems.” Participants were required to indicate whether each statement was probably true or false for them. The last item asks participants to name five social support figures they had in mind while completing the inventory. A total score, ranging from 40 to 160 was computed, with high scores representing a high level of perceived support. The EIS assesses the perceived availability of four separate functions of social support that potentially have the ability to facilitate coping with stressful events. The “tangible” subscale measures the perceived availability of material aid. The “appraisal” subscale measures the perceived availability of someone to talk to about one’s problems. The “self-esteem” subscale measures the perceived availability of a positive comparison when comparing one’s self to others. Finally, the “belonging” subscale measures the perceived availability of companions that one can enjoy activities with. Each function is measured through a 10-item cluster of questions. Construct validity was demonstrated with correlations to other social support measures (Cohen, Mermelstein, Kamarck & Hoberman, 1985). The scale correlated .30 with the total score of the Moos Family Environment Scale (FES; Moos & Moos, 1981). Correlations with FES subscales were .21 with expressiveness, .46 with cohesiveness, and .19 with conflict. In the same study, the ISEL correlated .46 with number of close friends and .42 with number of close relatives. Adequate internal and test–retest reliabilities have been found for the total ISEL scale and subscales in several samples (Cohen, Mermelstein, Kamarck & Hoberman, 1985). The reliability coefficient (i.e. the internal consistency) of the Evaluatievragenlijst Interpersoonlijke Steun (EIS) was found to be high in the current study with Cronbach’s alpha of .92.

The psychometric properties of the subscales of the Evaluatie Interpersoonlijke Steun (EIS) were found to have sufficient reliability when looking at the estimated internal consistency with a Cronbach's alpha of .64 for the subscale "appraisal", a Cronbach's alpha of .88 for the subscale "tangible", a Cronbach's alpha of .56 for the subscale "self-esteem", and a Cronbach's alpha of .73 for the subscale "belonging".

Assessment of childhood trauma

To assess a history of childhood maltreatment we used the Jeugd Trauma Vragenlijst (JTV; Arntz & Wessel, 1996). This is the Dutch version of the Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998; Bernstein et al., 1994). It is a 28-item self-report inventory that measures childhood maltreatment. In the CTQ, a total of 28 items are scored on a 5-point scale, ranging from 1 "never true" to 5 "very often true." The CTQ measures retrospectively five subtypes of childhood maltreatment: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. The CTQ has good psychometric properties, it is a valid and reliable screening questionnaire with Cronbach's alpha for the CTQ subscales being .91 for Physical Abuse, .89 for Emotional Abuse, .95 for Sexual Abuse, .63 for Physical Neglect, and .91 for Emotional Neglect (Thombs, Bernstein, Lobbstaël, & Arntz, 2009). The psychometric properties of the Jeugd Trauma Vragenlijst (JTV) in the current study were found to be reliable with a Cronbach's alpha of .68.

Assessment of Depression

To assess depression we used the Dutch version of the Beck Depression Inventory (Bouman, Luteijn, Albersnagel, & van der Ploeg, 1985). This is a brief 21-item self-report inventory that measures the severity of depressive symptoms. It is a widely and commonly used screening instrument of depressive symptoms in clinical practice and normal populations. The scale has reliable psychometric properties across a variety of clinical and nonclinical samples (Beck, Steer, Ball, & Ranieri, 1996). Internal consistency of the Beck Depression Inventory (BDI) was found to be high in the current study with a Cronbach's alpha of .70.

Statistical Analyses

In the current study analyses were carried out with SPSS version 19 (SPSS Inc., 2010). Preliminary analyses included a review of descriptive statistics and Pearson correlations.

To test the first hypothesis Pearson correlations were computed to investigate the relationship between perceived social support, childhood maltreatment and depressive symptomatology. Consistent to prior studies we expect to find that perceived social support, childhood maltreatment in general, and the subtypes of childhood maltreatment, and depressive symptomatology are significantly related.

To test our second hypothesis we put a linear regression analysis. We expect to find that childhood maltreatment is a predictor of perceived social support.

As formulated in the third hypothesis we expect to find that, consistent with prior theory and studies, individuals with a history of childhood maltreatment who perceive their social support as adequate, this is shown by high scores on the EIS, will report less depressive symptoms. To test the third hypothesis first we centralized the independent variables childhood maltreatment and perceived social support, second by multiplying centralized scores of childhood maltreatment to centralized scores of perceived social support we computed a new variable “EIS/JTV”. Afterwards we used a linear regression analysis. If this moderation effect is found in the current study we can support the buffer hypothesis of social support against depressive symptoms for individuals with a history of childhood maltreatment.

Finally, we used multiple linear regression analysis to investigate whether the subtypes of childhood maltreatment, (i.e. emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect) along with perceived social support could predict depressive symptoms. Statistical significance was set at $p < .05$, using the Bonferroni correction in order to control for family wise error.

Results

Demographic Characteristics

Table 1 shows that the sample consisted of twenty-one females and one male. The age ranged from 17 years to 22 years, with mean age of 19.41 years (SD = 1.5).

Table 1 *Demographic Characteristics*

	N	Minimum	Maximum	Mean	Std. Deviation
Age	22	17	22	19,41	1,501
Valid N	22				

Gender	Frequency	Precent
Male	1	4,5
Female	21	95,5
Total	22	100,0

To test the first hypothesis we investigated the relationship between childhood maltreatment (including all the subtypes), perceived social support, and depressive symptomatology. As shown in Table 2, a significant negative correlation was found for childhood maltreatment and perceived social support ($r = -0.558, p = 0.007$). Secondly, looking at the subtypes of childhood maltreatment negative correlation was found for physical abuse and perceived social support ($r = -0.636, p = 0.001$), a negative correlation was found for emotional neglect and perceived social support ($r = -0.662, p < 0.001$), a negative correlation was found for physical neglect and perceived social support ($r = -0.692, p = 0.001$). Finally, a significant negative correlation was found for perceived social support and depressive symptomatology ($r = -0.584, p = 0.007$).

Table 2

Correlations between childhood maltreatment, the subtypes of childhood maltreatment, perceived social support and depressive symptomatology

	JTV	EMO_AB	PHYS_AB	SEX_AB	EMO_NEG	PHYS_NEG	EIS
BDI							
JTV	-						
EMO_AB	,886**	-					
PHYS_AB	,640**	,420	-				
SEX_AB	,259	,324	-,120	-			
EMO_NEG	,935**	,706**	,610**	,138	-		
PHYS_NEG	,749**	,479*	,653**	,163	,697**	-	
EIS	-,558**	-,217	-,636**	,074	-,662**	-,692**	-
BDI	,221	-,086	,398	-,053	,329	,484*	-,584**

Values in table 2 are Pearson *R* Correlations between childhood maltreatment (JTV), the subtypes of childhood maltreatment: emotional abuse (EMO_AB), physical abuse (PHY_AB), sexual abuse (SEX_AB), emotional neglect (EMO_NEG), physical neglect (PHY_NEG), perceived social support (EIS), and depressive symptoms (BDI) using an alpha of 0.05 to determine the significance of the correlations.** Significant correlations at the $p < 0.01$ level.

The Linear regression analysis on depressive symptomatology showed that perceived social support is a significant predictor of depressive symptoms, as shown in Table 3.

Table 3

Linear regression analysis of depressive symptoms

BDI	<i>B</i>	Std. Error	Beta	<i>t</i>	<i>p</i>
EIS	-.214	.068	-.584	-3.138	.005

Values in table 3 are the results of the Linear regression analysis of depressive symptoms (BDI) (dependent variable) and perceives social support (EIS) (independent variable), using an alpha of 0.05 to determine the significance of the correlations.

As shown in table 4, the Linear regression analysis on perceived social support showed that childhood maltreatment is a negative significant predictor of perceived social support.

Table 4

Linear regression analysis of perceived social support (EIS)

Perceived social support (EIS)	<i>B</i>	Std. Error	Beta	<i>t</i>	<i>p</i>
Childhood maltreatment (JTV)	-.769	.256	-.558	-3.005	.007

Values in table 4 are the results of the Linear regression analysis of perceived social support (EIS) (dependent variable) and childhood maltreatment (independent variable), using an alpha of 0.05 to determine the significance of the correlations.

As shown in Table 5 the results in this sample could not support our third hypothesis.

Table 5

Multiple regression analysis of Depressive symptoms

BDI	<i>B</i>	Std. Error	Beta	<i>t</i>	<i>p</i>
EIS	-.253	.099	-.690	-2.555	.020
JTV	-.081	.121	-.160	-.665	.515
EIS/JTV	.071	.746	.024	.095	.925

Values in table 5 are the results of the linear regression analysis of depressive symptoms (BDI) (dependent variable), childhood maltreatment (JTV) (independent variable), perceived social support (EIS) (independent variable), and de interaction between childhood maltreatment and perceived social support (EIS/JTV) using an alpha of 0.05 to determine the significance of the correlations.

Table 6 shows that after correction for the different subscales of childhood maltreatment, perceived social support remains a significant predictor of depressive symptomatology, except when corrected for the subscale physical neglect.

Table 6

Multiple regression analysis of Depressive symptoms (BDI)

Depressive symptoms	<i>B</i>	Std. Error	Beta	<i>t</i>	<i>p</i>
EMO_AB	-.272	.218	-.236	-1.250	.227
EIS	-.234	.069	-.639	-3.388	.003
PHYS_AB	.241	1.812	.033	.133	.896
EIS	-.206	.092	-.563	-2.240	.038
SEX_AB	-.188	2.873	-.013	-.065	.949
EIS	-.214	.070	-.583	-3.042	.007
EMO-NEG	-.118	.278	-.108	-.424	.676
EIS	-.240	.093	-.656	-2.571	.019
PHYS-NEG	.465	.800	.153	.582	.568
EIS	-.175	.096	-.478	-1.822	.085

Values in table 6 are the results of the multiple regression analysis of depressive symptoms (BDI) (dependent variable), perceived social support (EIS) (independent variable), and the subscales of childhood maltreatment (EMO_AB, PHYS_AB, SEX_AB, EMO_NEG and PHYS_NEG) (independent variables) using an alpha of 0.05 to determine the significance of the correlations.

Discussion

This study aimed to investigate and clarify the relationship between childhood maltreatment, perceived social support and depressive symptomatology. The second aim in this study was to investigate the moderating effect of perceived social support on the relationship between childhood maltreatment and depressive symptomatology. Finally, we also investigated the relationship between the different subtypes of childhood maltreatment, perceived social support and depressive symptomatology.

Our first hypothesis states that, consistent to prior studies, perceived social support, childhood maltreatment in general, and all the subtypes of childhood maltreatment, and depressive symptomatology are significantly related. We expected to find a significant correlation between childhood maltreatment and depressive symptomatology. Although research has shown that having a history of childhood maltreatment puts individuals at a higher risk for developing psychological disorders and is associated with maladaptive behavior (Powers, Ressler, & Bradley, 2009), the results of the current study did not support these findings. One potential explanation for this, is the hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989). According to this cognitive theory, some individuals have a cognitive vulnerability that interacts with stress to produce depression (Haefffel, Abramson, et al., 2007). Specifically, people who are vulnerable to depression because they tend to generate interpretations of stressful life events that have negative implications for their future and for their self-worth. In sum, this would mean that having a history of childhood maltreatment together with a cognitive vulnerability puts individuals at a higher risk for depression.

Although we did not support for the relationship between childhood maltreatment and depressive symptomatology, we did find that perceived social support is a significant predictor of depressive symptoms. Our assumption is that individuals with a history of childhood maltreatment, who perceive their social support as less supportive and inadequate, are at a higher risk for developing depressive symptoms. These findings are consistent with previous research about the protective role of perceived social support. In the study of Thoits (1986) it is stated that social support acts as a coping mechanism for individuals with a history of childhood maltreatment.

Our second hypothesis states that individuals who have suffered maltreatment in their childhood will perceive their social support in their relationships in young adulthood as less adequate. We found a significant negative correlation between childhood maltreatment and perceived social support. This implicates that high scores on the childhood maltreatment measurement (JTV) were associated with low scores on the perceived social support measurement (EIS). We could explain this result in terms of a vicious circle. Individuals who had suffered childhood maltreatment could isolate themselves from social interactions because of losing trust in social relationships as a consequence of childhood maltreatment. This isolation could result in distance in personal relationships. Therefore they can feel lonely and isolate themselves more from others, which can result in the absence of (perceived) social support (Evans, Steel & DiLillo, 2013). Another explanation for the result we found is that individuals who suffered childhood maltreatment are not able to develop social skills in order to build social interactions, because of the lack of trust and self-esteem.

Our third hypothesis states that perceived social support moderates the relationship between childhood maltreatment and depressive symptomatology. In the study of Cohen & Wills (1985) the buffering hypothesis of social support is described as being of protective value. Indeed, social support can protect individuals with a history of maltreatment against developing psychological symptoms and maladaptive behavior. Although we expected to find support for the buffer hypothesis, within this sample we could not find support for this hypothesis. The main reason that this third hypothesis became doubtful, was due to the fact that we did not find a significant correlations between childhood maltreatment and depressive symptomatology. However, the results in the current study showed that perceived social support is significant in predicting depressive symptomatology in individuals with a history of childhood maltreatment.

Our fourth hypothesis states that there are differences between the different subtypes of childhood maltreatment in relation to perceived social support as predictors of depressive symptomatology. We found that perceived social support is mostly a significant predictor of depressive symptomatology except for the subtype physical neglect. As cited in the study of Rose & Abramson (1992) the subtype emotional childhood abuse may be more related to negative self-associations, than the subtypes sexual and/ or physical childhood abuse. They explain this by noting that during emotionally abusive episodes negative self-associations are

explicitly handed to the child, for example by telling a child that he/she is stupid, or by telling a child that he/she is worthless. This is in line with a number of studies indicating that the subtype emotional childhood abuse in comparison with sexual or/ and physical childhood abuse is more strongly related to negative cognitive styles (Alloy, Abramson, Smith, Gibb, & Neeren, 2006; Gibb, 2002; Gibb, Abramson, & Alloy, 2004). Our assumption is that physical abuse less strongly affects cognitive styles of an individual, as the other subtypes appear to do. The presence of a negative cognitive style is indicative of the important role that negative self-associations play in predisposing an individual to the development of psychopathology (Evans, Steel & DiLillo, 2013).

Limitations

Limitations of the present study should be acknowledged. The main limitation is the sample size, which makes the interpretation of the effect of the results difficult. In addition, the participants were psychology students with educated backgrounds this makes it less generalizable (Roberts, Gilman, Breslau, Breslau, & Koenen, 2011). A larger and more diverse sample would give the results more statistical power. Also, the sample consisted of unequal male to female ratio. This could cause limitations for this study while gender differences could result in expressing the consequences of childhood maltreatment differently (Evans, Steel & DiLillo, 2013). Another limitation in the current study was the use of self-reports. The assessment of childhood maltreatment was based on retrospective self-reports, the assessment of perceived social support and current depressive symptoms were also based on self-reports. These are all subjective measurements, without any objective measurements to compare or combine them with (Gibb, Abramson, & Alloy, 2004). Unlike Fergusson, Horwood & Lynskey (1996), in this study we did not collect data on the frequency and the moment of onset of the childhood maltreatment, this information could have been valuable for the results. Considerable evidence indicates that more severe child maltreatment is associated with increased psychological difficulties, including trauma symptoms, among adult victims (Bifulco et al., 2002; Risser et al., 2006; Schenkel et al., 2005). Further, theory and accumulating evidence indicate that perceived social support may buffer against the negative psychological consequences of childhood maltreatment (Dumont et al., 2007; Hyman et al., 2003; Murthi & Espealage, 2005). However, as indicated by recent empirical findings, the buffering effect of social support may vary depending on the severity and complexity of victimization experienced (Salazar et al., 2011; Scarpa et al., 2006). The last limitation in the current study is the absence of measures to investigate and explore the cognitive style of individuals. As cited above individuals who have a negative cognitive style are shown to be more vulnerable to develop depressive symptomatology. Therefore, it would be valuable to integrate cognitive measures in future research.

Implications

This study has shown that individuals benefit from adequate perceived social support when they were exposed to childhood maltreatment. These findings can help to set preventive interventions at youth care centers and schools to protect against the development of depressive symptomology in adulthood.

For example, by improving school protocols for children with a history of childhood maltreatment, more specifically by monitoring the social skills and if needed by helping children in the development of more adequate social skills. Moreover, by observing the interaction of children with siblings and if needed observations of children with their parents. To implement these protocols it may be necessary to train teachers and improve practical guidelines for parents and institutes that participate in the mental health care for children. We also hope that the results can have preventive implications and contribute to clinical interventions. For example by implementing the results in the existing treatment protocols of depression. In sum, it can be useful to combine elements of Interpersonal Therapy and elements of Cognitive Behavioral Therapy.

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