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Peer victimization predicts psychological symptoms beyond the effects of child maltreatment

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ABSTRACT

Experiences of peer victimization have been repeatedly associated with psychological symptoms and disorders. However, as peer victimization is correlated with child maltreatment occurring within the family, it remains unclear whether the pathological effect of peer victimization is an artifact that can be attributed to previous aversive events. To separate the effects of peer victimization from child maltreatment, we studied both event types as well as psychological symptoms in a mixed clinical sample of ambulant and psychiatric patients ($N=168$), a self-selected community sample recruited through the internet ($N=995$), and a student sample ($N=272$). Hierarchical regression analyses showed that, after controlling for child maltreatment, peer victimization accounted for an incremental proportion of the variance of different symptom dimensions in each sample. These results indicate that peer victimization is an independent predictor of psychopathology.

1. Introduction

Unlike other types of childhood and youth adversities like sexual and physical abuse, repeated abusive experiences committed by other children and adolescents in the form of peer victimization have long been underestimated as a normal and not typically harmful phenomenon. Recent research work has challenged this view as peer victimization was related to several forms of maladjustment such as symptoms of posttraumatic stress (Storch and Esposito, 2003), loneliness and low self-worth and also to long-term externalizing and internalizing problems, e.g. self-harm, suicidal ideation, borderline personality disorder or psychotic symptoms (for a review, see Hawker and Boulton (2000), Troop-Gordon and Ladd (2005), Herba et al. (2008), Arseneault et al. (2010) and Sansone et al. (2010)). Peer victimization has been subdivided into physical victimization and relational victimization (e.g. ignoring, rejection or exclusion from social activities, attempts to damage the reputation of a peer by spreading rumors, Crick et al., 2002; Crick and Grotpeter, 1995, 1996). Relational forms of victimization perpetrated by peers seem to have a stronger association with psychological maladjustment (Crick and Grotpeter, 1996; Crick and Nelson, 2002; van der Wal et al., 2003) and cause internalizing problems such as depression, social anxiety, and suicidal ideation (Prinstein et al., 2001; van der Wal et al., 2003; Dempsey and Storch, 2008; Benjet et al., 2010).

Peer victimization may be even more detrimental when it occurs within the context of child maltreatment, i.e. experiences of physical abuse, physical neglect, sexual abuse, emotional abuse, and emotional neglect that occur in the family context (Duncan, 1999; Bolger and Patterson, 2001; Richmond et al., 2009). Child maltreatment is a well-established risk factor for maladjustment and psychopathology, including insecure attachment, difficulties in affect regulation, maladaptive self-development, academic problems, and different psychological disorders (for a review, see Cicchetti and Toth (2005); Afifi (2012)) including personality disorders (Johnson et al., 1999). While older studies of child maltreatment have focused on physical and sexual abuse, the sequelae of emotional forms of maltreatment have also been documented recently. Emotional abuse and emotional neglect can have as serious consequences for physical and psychological health as physical and sexual abuse (Glaser, 2002; Rodgers et al., 2004; Egeland, 2009). They can bring about an increase of emotional distress and physical symptoms in adulthood (Spertus et al., 2003) and are associated with several psychological disorders such as anxiety and affective disorders (Gibb et al., 2007; Simon et al., 2009; Wright et al., 2009).

While relational peer victimization and child maltreatment have both been associated with psychopathology, both event types have rarely been studied simultaneously and there is limited knowledge

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about the unique effect of each type of victimization. The exceptional studies are limited to child or student samples. Based on longitudinal data referring to children Fisher et al. (2012) report bullying victimization and maltreatment by adults to be independent predictors of self-harm while Arseneault et al. (2011) not only found that maltreatment and bullying are predictors of psychotic symptoms but also that they have a cumulative effect. Moreover, Gren-Landell et al. (2011) investigated self-reported social anxiety disorder (SAD) in a sample of high-school students and found that peer victimization predicted psychopathology independent of the effects of child maltreatment. Verbal victimization by peers was also independently related to cognitive vulnerability to depression (Gibb et al., 2004). In addition, Duncan (1999) showed that verbal bullying by peers accounted for an additional proportion of variance of psychological symptom distress beyond child abuse in a sample of college students. These findings provide a first indication that peer victimization may be independently associated with psychopathology beyond the well-established effects of child maltreatment. However, the independent effect of peer victimization has not been shown in any other samples, that would allow to investigate another age range, a wide range of psychological symptoms or aversive life events that occurred a long time ago. Moreover, most of the quoted studies did not differentiate between distinct types of maltreatment and peer victimization with the result that no conclusions about the contribution of relational peer victimization can be drawn.

The purpose of this study was to investigate whether retrospective reports of relational peer victimization make a unique contribution to the prediction of different dimensions of concurrent psychopathology after controlling for child maltreatment as well as to study a potential interaction of relational peer victimization and child maltreatment. We hypothesized that relational peer victimization would explain unique variance of several symptom dimensions beyond that accounted for by different types of child maltreatment and that the interaction would predict an additional proportion of variance.

2. Method

2.1. Subjects

The present study included data from three samples. As we aimed at investigating the contribution of child maltreatment and relational peer victimization to the prediction of psychopathology independent of specific sample characteristics we decided to investigate three different samples with varying levels of child maltreatment, peer victimization, symptom distress and age ranges with the help of different sampling strategies. Table 1 summarizes demographics, maltreatment exposure, and psychometrics separated by samples.

The first sample was a mixed clinical sample, representing $N=168$ patients recruited in different German psychiatric hospitals (65%), day hospitals (23%) and an outpatient clinic (13%). Psychiatric diagnoses were assessed via self-report: as main diagnosis 42% of the total clinical sample reported an affective disorder, 8% an anxiety disorder, 12% a personality disorder (75% emotionally unstable personality disorder), 16% disorders due to psychoactive substance use, 2% other disorders and 19% did not respond. 38% of the clinical sample had a part time or a full time job, 10% were pupils, students or apprentices, 4% were house wives, 20% were retired, early-retired or unemployable, and 16% were unemployed (13% did not answer the question).

The second sample ($N=995$) was a self-selected community sample of adults that was recruited through German language web pages dealing with psychological distress and disorders (e.g. schuechterne.org, panik-attacken.de). Data were obtained using an online survey. Out of $N=1691$ who initially started to answer the survey, $N=658$ discontinued before completion and $N=38$ participants were excluded because they were minors (for details see Iffland et al. (2012)). In this sample, 13% of the participants had a part time and 29% a full time job, 38% were pupils or students, 5% were house wives, 6% retired or early-retired and 6% were unemployed. 60% of the sample had previously sought psychological care.

The third sample consisted of $N=272$ students from eight German universities. Participants were advertised and recruited through announcements displayed in the universities, links in online social networks, and mailing lists. The study was also conceptualized as an online survey that could be answered via the internet. Out of $N=490$ individuals that started answering the questionnaires $N=218$ were excluded because they were not students or discontinued before completion. 16% of the sample reported that they had previously sought psychological care.

2.2. Self-report measures

Subjects completed questionnaires including a consent form, a self-administered sociodemographic questionnaire (gender, age, relationship status, employment status, former and actual psychotherapy) and subsequent psychometric questionnaires.

The Childhood Trauma Questionnaire (CTQ, Bernstein and Fink, 1998) is a well-validated 28-item retrospective self-report questionnaire consisting of five subscales (sexual abuse, physical abuse, emotional abuse, emotional neglect, and physical neglect). The items are rated from 1 ("never true") to 5 ("very often true") with some items reverse scored. Studies investigating the psychometric properties of the German version indicate a sufficient to excellent internal consistency concerning most of the subscales (Wingenfeld et al., 2010). Because of the deficient internal consistency of the subscale *physical neglect* and its high intercorrelations with the other subscales (Klinitzke et al., 2012), this subscale was not considered in our analyses. The presence of different types of child maltreatment was established using the empirically validated threshold scores which are based on receiver operating characteristic (ROC) methods: emotional abuse 10, emotional neglect 15, physical abuse 8, sexual abuse 8 (Walker et al., 1999). In our study internal consistency of the CTQ scales was high with Cronbach's between $\alpha=0.89$ (physical abuse, emotional neglect) and $\alpha=0.94$ (sexual abuse) for the mixed clinical sample, between $\alpha=0.86$ (physical abuse) and $\alpha=0.95$ (sexual abuse) for the self-selected community sample and between $\alpha=0.77$ (physical abuse) and $\alpha=0.90$ (emotional neglect) for the student sample.

Experiences of peer victimization were assessed with the Questionnaire on Stressful Social Experiences in the Peer Group (Fragebogen zu belastenden Sozialerfahrungen in der Peergroup, FBS, Sansen et al., 2013), a 22-item event list. Except of one item assessing physical attacks ("Other children or adolescents hit me or attacked me.") all items describe stressful social situations like rejection, exclusion, being laughed at, insulted, and teased by peers (e.g. "In class nobody wanted to sit next to me", "Other children or adolescents banned me from their games or activities"). For each situation, subjects report if the experience happened during childhood (6–12 years), during adolescence (13–18 years) or if they have never experienced it. The responses (0 for "no", 1 for "yes") are summed for a Childhood Scale (0–22), an Adolescence Scale (0–22), and a sum score (0–44). The questionnaire presented with good stability over a 20-month period. Construct validity could be confirmed through correlations between the FBS and psychological distress as well as social anxiety. Subjects with high levels of social anxiety had significantly higher FBS scores compared to subjects with low levels of social anxiety which indicated discriminative validity. The FBS was applied in several studies examining the role of peer victimization in terms of psychopathology before that argue for a good fitness of the instrument (e.g. Iffland et al., 2012; Sansen et al., 2014). In the present study we obtained Cronbach's $\alpha=0.87$ for the Childhood Scale and $\alpha=0.88$ for the Adolescence Scale in the mixed clinical sample, $\alpha=0.89$ for the Childhood Scale and $\alpha=0.88$ for the Adolescence Scale in the self-selected community sample and $\alpha=0.86$ for the Childhood Scale and $\alpha=0.82$ for the Adolescence Scale in the student sample.

The Brief Symptom Inventory (BSI, German version by Franke, 2000) is a 53-item self-report questionnaire measuring psychopathology throughout the past 7 days. The items are answered on a 5-point scale from 0 ("not at all") to 4 ("extremely"). Nine symptom dimensions are assessed: Somatization, Obsession–Compulsion, Interpersonal sensitivity, Depression, Anxiety, Hostility, Phobic anxiety, Paranoid ideation, and Psychoticism. In addition, different global indices of distress can be calculated e.g. the Global Severity Index (GSI). The mean of the GSI in a German norm sample is $M=0.31$ ($S.D.=0.23$) and $M=0.54$ ($S.D.=0.42$) in a student sample (Franke, 2000). Reliability and validity of the German version can be judged as satisfactory (Franke, 2000; Geisheim et al., 2002). Internal consistency in the present study ranged between $\alpha=0.47$ (somatization) and $\alpha=0.82$ (obsession–compulsion) for the mixed clinical sample, between $\alpha=0.75$ (hostility) and $\alpha=0.90$ (depression) for the self-selected community sample and between $\alpha=0.66$ (psychoticism) and $\alpha=0.87$ (depression) for the student sample.

2.3. Procedure

The ethics committee of the psychology department of Bielefeld University approved the study. The online surveys were compiled using Enterprise Feedback Suite (EFS) Survey (Globalpark, 2007). After participants were informed that participation was voluntary, that they could pause and finish participation at any time, that their data would be processed anonymously and that no conclusion concerning their personal data could be drawn they were asked to provide informed consent at the outset of the study.

In the clinical sample, data were collected using paper-pencil-versions of the questionnaires. The online surveys were answered via the internet. Because the online surveys were programmed in a way that each questionnaire item had to be answered to advance to the following question and incomplete data sets were