Reducing Posttraumatic Stress Symptoms in Maltreated Youth through Relationships

Timothy L. Day* and Christopher A. Kearney

Department of Psychology, University of Nevada, Las Vegas, Las Vegas, NV 89144, USA

Abstract: 1. Sense of relatedness and PTSD symptoms were inversely related among maltreated youth; 2. Trust, support, comfort, and tolerance most closely related inversely to PTSD symptoms, but especially tolerance for others; 3. Tolerance related to assertiveness was most closely related inversely to PTSD symptoms; 4. Findings help identify what aspects of resilience may help prevent PTSD symptoms in maltreated youth.

Keywords: Abuse, adolescents, trauma.

INTRODUCTION

The expansion of resilience research within psychology represents a significant step forward to understanding and fostering adaptive responses to adversity and traumatic situations. The relationship between social support and resilience is well documented in adults exposed to adverse situations [e.g., 1, 2]; however, research remains limited in the role of perceived relationships among youth exposed to maltreatment. The purpose of this present study is to expand on this direction of inquiry by investigating a sense of relationship to others among youth exposed to maltreatment. Participants (n = 65) were recruited from a Department of Family Services (DFS)-affiliated clinic in the Las Vegas area. Measures included the *Children's PTSD Inventory* (*CPTSD-I*) and the *Resiliency Scale for Children and Adolescents* (RSCA). Results indicate that a sense of relation to others inversely correlates to total PTSD symptoms. Moreover, tolerance towards others best predicted decreased PTSD symptoms endorsement. Implications are discussed.

REDUCING POSTTRAUMATIC STRESS SYMPTOMS IN MALTREATED YOUTH THROUGH RELATIONSHIPS

Child maltreatment is a pervasive and complex problem with serious short- and long-term effects. Approximately 6.3 million suspected cases of child maltreatment occurred in 2012 within the United States (Administration on Children, Youth, and Families, 2012). Cases of child maltreatment may include physical (18.3%) and sexual (9.3%) and emotional (10.6%) maltreatment as well as neglect (78.3%) [3, 4]. In addition, many maltreated youth experience more than one type of maltreatment [5]. Consequences of maltreatment include increased risk for depression, anxiety, personality disorders, dissociation, and substance use [6-8]. Maltreatment also correlates with insecure attachment patterns, risky sexual behaviors, and, aggression [9-11].

Posttraumatic stress disorder (PTSD) symptoms in particular remain highly prevalent among maltreated youth [12, 13]. Indeed, early maltreatment significantly increases risk for long-term trauma symptoms [14-16]. Furthermore, preexisting syndromes such as depression can enhance risk for PTSD [17]. Trauma symptoms include re-experiencing, negative cognitions, avoidance, hyperarousal, negative affect, and dissociation [18]. Many youth who are physically (27-50%) or sexually (46-66%) maltreated and neglected (30.6%) meet criteria for PTSD [19-21]. In addition, removal from home following maltreatment may result in trauma-related symptoms [22].

Despite these high prevalence rates, approximately 11-33% of maltreated youth remain resilient to PTSD [23-25]. A protective-protective model of resilience proposes that the relationship between trauma and negative outcomes is weakened by the availability of positive environmental and psychological factors [23]. This relationship is further weakened by the addition of each resilience factor [23]. Resilience factors occur across individual, family, and community levels and include personal characteristics and resources such as personality traits and individual coping ability. Resilience factors may also consist of supportive familial relationships, family resources, peer relationships, and religious affiliation [26]. Social support in particular may reduce risk for PTSD. Positive friendship experiences and strong social support networks increase psychological well-being, which may reduce

*Address correspondence to this author at the Department of Psychology, University of Nevada, Las Vegas, Las Vegas, NV 89144, USA;
Tel: 702-895-3305; Fax: 702-895-1095;
E-mails: dayt8@unlv.nevada.edu, chris.Kearney@unlv.edu

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risk for PTSD symptoms [27, 28]. Furthermore, children with increased social support networks and secure attachment relationships typically demonstrate less risk for psychopathology [29, 30]. Conversely, feelings of loneliness erode resilience in adolescents [31].

Despite the association between maltreatment and PTSD, resilience research among this population remains sparse [32, 33]. Many studies explore resilience in isolated clinical cases or in retrospective accounts of adults maltreated during childhood [34]. The present study examined a sense of relatedness to others, trust, support, comfort, and tolerance in relation to PTSD symptoms among diverse maltreated youth. The first hypothesis was that a sense of relatedness would negatively correlate with PTSD symptoms. The second hypothesis was that trust, support, comfort, and tolerance would account for a significant amount of variance in number of PTSD symptoms. The third hypothesis examined individual items comprising a sense of relatedness and predicted a negative correlation with PTSD symptoms.

METHOD

Participants

Youth recruited for this study were in Nevada Child Protective Services (CPS) custody for CPS substantiated maltreatment histories referred for a comprehensive evaluation at a local clinic to determine need for psychological services. Participants included 65 youth aged 9-17 years who endorsed having experienced a traumatic event. Participants were generally male (50.8%) and European American (26.2%), African American (18.5%), multiracial (13.8%), Hispanic (13.8), Asian American (3.1%) or unknown ethnicity (24.6%). Mean age for participants was 13.0 years (*SD* = 2.6). Participants were located in the Las Vegas metropolitan area at the time of assessment and endorsed physical (18.5%) and sexual maltreatment (13.8%), vicarious trauma (18.5%), removal from home (32.3%), and other (16.9%) as primary traumas.

Materials and Procedure

Symptoms of posttraumatic stress were assessed using the *Children's PTSD Inventory* (CPTSD-I); a semistructured interview designed to assess DSM-IV PTSD symptoms in youth aged 7-18 years [35]. The CPTSD-I assesses exposure and reactivity to trauma, reexperiencing, avoidance and numbing, increased arousal, and significant distress. The CPTSD-I has strong internal consistency for each subscale (0.53-0.89). The CPTSD-I was chosen for its clinical utility, strong interrater reliability (Cohen's K 0.84-1.00), and robust convergent and discriminant validity.

The *Resiliency Scale for Children and Adolescents* (RSCA) is a self-report measure included in the study to assess for core personal qualities of resilience in youth aged 9-18 years [36]. The Sense of Relatedness subscale of the RSCA refers to feeling securely connected and comfortable with others in a social context and includes questions within four subtests: Trust, Support, Comfort, and Tolerance. The RSCA is written at a 3rd grade reading level and is scored on a 0-10 Likert-type scale. This measure was chosen as it demonstrates high internal consistency (Cronbach's α 0.89-0.95) and strong construct and convergent validity.

The measures and procedures followed for this study were approved by a university institutional review board and by the regional Department of Family Services (DFS). An approved interlocal contract between the university and DFS was in accordance with county and state laws regarding children in protective custody. Researchers discussed study details and obtained assent to participate from interested youth prior to data collection. Researchers also informed participants about limits to confidentiality and youths' rights as participants. Participants were advised not to answer questions that made them feel uncomfortable and informed they could withdraw from the study at any time without penalty. A trained researcher inquired about demographics and administered the CPTSD-I. Youth then completed the RSCA with the assistance of the researcher. Assessments occurred in a confidential environment without DFS-related staff and were discontinued if youth failed to endorse a traumatic event (*n* = 2).

RESULTS

Hypothesis 1 predicted a negative relationship between a sense of relatedness and total PTSD symptoms. The first step in statistical analysis involved examining the correlation between a sense of relatedness and total CPTSD-I symptom scores. A moderate but significant negative correlation was found ($r = -0.30$, $p < 0.05$), indicating a sense of relationships towards others links to decreased total PTSD symptoms. Hypothesis 2 predicted that the effects of trust, support, comfort, and tolerance would inversely correlate to PTSD symptoms. The second step in statistical analysis applied a linear multiple regression to assess the simultaneous effects of trust, support,

comfort, and tolerance, on PTSD symptoms. These RSCA subscales explained 24% of the variance in CPTSD-I scores (F (4, 60) = 4.82, $p < 0.05$) with tolerance being the strongest negative predictor of total CPTSD-I scores (β = -0.39, $p < 0.05$) (Table **1**).

Table 1: Significance Tests for Independent Variables in the Multiple Regression Analysis

	B	Std. Error	Beta	*T*	Sig.
Trust	-0.45	0.27	-0.32	-1.7	0.10
Support	0.17	0.21	0.13	0.79	0.43
Comfort	-0.03	0.21	-0.02	-0.15	0.88
Tolerance	-0.39	0.19	-0.30	-2.04	0.05

Third, follow-up analyses examined individual items on the sense of relation scale vis-a-vis specific PTSD symptoms. Consistent with hypothesis 2, moderate inverse correlations (Table **2**) were found for items associated with tolerance (e.g., "I can calmly tell others I don't agree with them," I can make up with friends after a fight," "If people let me down, I can forgive them," "I can depend on people to treat me fairly," "I calmly tell a friend if he or she does something that hurts me," and "People know who I really am").

Table 2: Item Level Correlations >0.39

Item	Correlation	Significance	Associated Subscale
Disagree	-0.48	0.01	Tolerance
Make up	-0.43	0.01	Tolerance
Forgive others	-0.40	0.01	Tolerance
Depend On	-0.40	0.01	Tolerance
Tell a friend	-0.42	0.01	Tolerance
People know me	-0.53	0.01	Trust

DISCUSSION

The present study examined PTSD-related symptoms and sense of relatedness among maltreated youth. Results indicated an inverse relationship between youths' sense of relatedness and PTSD symptoms, suggesting that satisfying social relationships may decrease risk for PTSD symptoms in maltreated youth. Furthermore, increased trust in others, comfort, and tolerance of others predicted less PTSD symptoms. Item analyses revealed that youth who were able to assert themselves and engage in behaviors that maintain relationships reported less PTSD symptoms.

These results support the notion that a strong sense of relatedness may reduce risk of PTSD symptoms and are consistent with previous findings indicating that relations to others increases resilience and reduces risk for psychological problems [37]. Furthermore, these results support the developmental view that resilience to adversity derives, in part, from a collection of unique personal characteristics such as trust and tolerance of others likely vary among youth [38]. Maltreated and traumatized youth in particular may struggle developing trust and rapport [39]. Building a sense of relatedness in these youth could mediate some negative effects of maltreatment.

Results from this study should be interpreted with caution due to several limitations. First, the time from the initial trauma occurrence to the time of assessment was not accounted for. This time may moderate the relationship between a sense of relatedness and PTSD symptoms. Second, participants with various maltreatment histories were included together, failing to differentiate maltreatment profiles based on trauma history. Third, the study relied on self-report from youth in DFS custody. Some you failed to endorse traumatic events despite substantiated histories. Future work would benefit by incorporating information from multiple sources. Finally, while this study consisted of diverse sample of individuals living within the United States, the United States largely espouses an individualistic culture. Additional research is therefore needed to examine relational factors in collectivistic cultures that emphasize the importance of relationships.

Despite these limitations, findings from the present study imply that individual characteristics such as social skills may protect youth from some PTSD symptom-based effects of maltreatment. Future research should direct inquiry into the relationship between a sense of relatedness and specific maltreatment experiences as well as investigate the development of trust, comfort, and tolerance in a clinical setting. Findings such as these remain important in progressing and promoting resilience exploration in vulnerable populations, and help lay the foundation for the development for interventions designed to enhance resilience. To this end, the construction of these empirically validated interventions represent a natural next step that carries utility in fostering prevention in at risk populations, and in developing successful coping strategies that may positively affect mental health over a lifespan.

REFERENCES

[1] Feeny N, Rytwinski N, Zoellner L. The crucial role of social support. Facilitating resilience and recovery following trauma. New York, NY, US: Guilford Press 2014: pp. 291-321.

[2] Wu S, Li J, Zhu Z. Individual resilience and its relationship to social support and mental health of survivors with family members lost in Wenchuan earthquake. Chinese Mental Health J. 2010; 24: 309-312.

[3] Administration on Children, Youth and Families (ACYF). Child maltreatment 2012: Reports from the states to the National Center on Child Abuse and Neglect. Washington, DC: U.S. Department of Health and Human Services 2012.

[4] Crooks CV, Wolfe DA. Child abuse and neglect. In: Mash EJ, Barkley RA, Eds. Assessment of childhood disorders 4th ed. New York: Guilford 2007; pp. 639-84.

[5] Mennen FE, Kim K, Sang J, Trickett PK. Child neglect: Definition and identification of youth's experiences in official reports of maltreatment. Chil Ab Neg 2010; 34: 647-58. http://dx.doi.org/10.1016/j.chiabu.2010.02.007

[6] Ford JD, Wasser T, Connor DF. Identifying and determining the symptom severity associated with polyvictimization among psychiatrically impaired children in the outpatient setting. Chil Maltreat 2011; 16: 216-226. http://dx.doi.org/10.1177/1077559511406109

[7] Kim J, Cicchetti D, Rogosch FA, Manly J. Child maltreatment and trajectories of personality and behavioral functioning: Implications for the development of personality disorder. Develop and Psychopathol 2009; 21: 889-912. http://dx.doi.org/10.1017/S0954579409000480

[8] MacMillan HL, Fleming JE, Streiner DL, Lin E, Boyle MH, Jamieson E, ... Beardslee WR.s Childhood abuse and lifetime psychopathology in a community sample. Am J Psychiatry 2001; 158: 1878-1883. http://dx.doi.org/10.1176/appi.ajp.158.11.1878

[9] Riggs S, Kaminski P. Childhood emotional abuse, adult attachment, and depression as predictors of relational adjustment and psychological aggression. J. Agg Maltreat Trauma 2010; 19: 75-104. http://dx.doi.org/10.1080/10926770903475976

[10] Vandenberg B, Marsh U. Aggression in youths: Child abuse, gender and SES. North Am J Psychol. 2009; 11: 437-442.

[11] Wilson H, Widom C. An examination of risky sexual behavior and HIV in victims of child abuse and neglect: A 30-year follow-up. Health Psychol. 2008; 27: 149-158. http://dx.doi.org/10.1037/0278-6133.27.2.149

[12] Burns EE, Jackson, JL, Harding HG. Child maltreatment, emotion regulation, and posttraumatic stress: The impact of emotional abuse. J Agg Maltreat Trauma 2010; 19: 801-19. http://dx.doi.org/10.1080/10926771.2010.522947

[13] Scott KM, Smith DR, Ellis PM. Prospectively ascertained child maltreatment and its association with DSM-IV mental disorders in young adults. Arch Gen Psychiatry 2010; 67: 712-9. http://dx.doi.org/10.1001/archgenpsychiatry.2010.71

[14] Borger SC, Cox BJ, Asmundson GG. PTSD and other Mental Health Problems in Adults Who Report Histories of Severe Physical Abuse and Neglect. In: Corales TA, Corales TA, Eds. Trends in posttraumatic stress disorder research. Hauppauge, New York: Nova Science Publishers 2005; pp. 249-261.

[15] Jovanovic T, Blanding N, Norrholm S, Duncan E, Bradley B, Ressler K. Childhood abuse is associated with increased startle reactivity in adulthood. Depression And Anxiety 2009; 26: 1018-1026. http://dx.doi.org/10.1002/da.20599

[16] Shen A. Long-term effects of interparental violence and child physical maltreatment experience on PTSD and behavior problems: A national survey of Taiwanese college students. Chil Ab Neg 2009; 33: 148-160. http://dx.doi.org/10.1016/j.chiabu.2008.07.006

[17] Bulut S. Prediction of post-traumatic stress symptoms via comorbid disorders and other social and school problems in earthquake exposed Turkish adolescents. Revista Latinoamericana De Psicología. 2013; 45: 47-61.

[18] American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Arlington, VA: American Psychiatric Association 2013.

[19] Ackerman PT, Newton JO, McPherson W, Jones JG, Dykman RA. Prevalence of post traumatic stress disorder and other psychiatric diagnoses in three groups of abused children (sexual, physical, and both). Chil Ab Neg 1998; 22: 759-74. http://dx.doi.org/10.1016/S0145-2134(98)00062-3

[20] Putman SE. The monsters in my head: Posttraumatic stress disorder and the child survivor of sexual abuse. J Counsel Devel 2009; 87: 80-9. http://dx.doi.org/10.1002/j.1556-6678.2009.tb00552.x

[21] Widom C. Posttraumatic stress disorder in abused and neglected children grown up. Am J Psychiatry 1999; 156: 1223-9.

[22] Wechsler-Zimring A, Kearney CA, Kaur H, Day T. Posttraumatic stress disorder and removal from home as a primary, secondary, or disclaimed trauma in maltreated adolescents. J Fam Viol 2012; 27: 813-8. http://dx.doi.org/10.1007/s10896-012-9467-8

[23] Hollister-Wagner GH, Foshee VA, Jackson C. Adolescent aggression: Models of resiliency. J Appl Soc Psychol 2001; 31: 445-466. http://dx.doi.org/10.1111/j.1559-1816.2001.tb02050.x

[24] Cicchetti D, Rogosch FA. The role of self-organization in the promotion of resilience in maltreated children. Develop Psychopathol 1997; 9: 797-815. http://dx.doi.org/10.1017/S0954579497001442

[25] DuMont KA, Widom C, Czaja SJ. Predictors of resilience in abused and neglected children grown-up: The role of individual and neighborhood characteristics. Chil Ab Neg 2007; 31: 255-74. http://dx.doi.org/10.1016/j.chiabu.2005.11.015

[26] Afifi TO, MacMillan HL. Resilience following child maltreatment: A review of protective factors. Canad J Psychiatry 2011; 56: 266-72.

[27] Demir M, Jaafar J, Bilyk N, Ariff M. Social skills, friendship and happiness: A cross-cultural investigation. J Soc Psychol 2012; 152: 379-85. http://dx.doi.org/10.1080/00224545.2011.591451

[28] Harper K, Stalker CA, Palmer S, Gadbois S. Experiences of adults abused as children after discharge from inpatient treatment: Informal social support and self-care practices related to trauma recovery. Families Society 2005; 86: 217-25. http://dx.doi.org/10.1606/1044-3894.2456

[29] Heller S, Larrieu JA, D'Imperio R, Boris NW. Research on resilience to child maltreatment: Empirical considerations. Chil Ab Neg 1999; 23: 321-38. http://dx.doi.org/10.1016/S0145-2134(99)00007-1

[30] Wu C, Chen S, Weng L, Wu Y. Social relations and PTSD symptoms: A prospective study on earthquake-impacted adolescents in Taiwan. J Traumatic Stress 2009; 22: 451-9. http://dx.doi.org/10.1002/jts.20447

[31] Altundağ Y, Bulut S. Prediction of resilience of adolescents whose parents are divorced. Psychol 2014; 5: 1215-1223. http://dx.doi.org/10.4236/psych.2014.510134

[32] Campbell-Sills L, Cohan SL, Stein MB. Relationship of resilience to personality, coping, and psychiatric symptoms in young adults. Behav Res Ther 2006; 44: 585-99. http://dx.doi.org/10.1016/j.brat.2005.05.001

[33] Walsh WA, Dawson J, Mattingly MJ. How are we measuring resilience following childhood maltreatment? Is the research adequate and consistent? What is the impact on research, practice, and policy? Trauma Viol Ab 2010; 11: 27-41. http://dx.doi.org/10.1177/1524838009358892

[34] Parens H., Blum HP, Akhtar S. The unbroken soul: Tragedy, trauma, and human resilience. Lanham, MD: Jason Aronson 2008.

[35] Saigh PA, Yasik AE, Oberfield RA, Green BL, Halamandaris, PV, Rubenstein H, *et al.* The Children's PTSD Inventory: Development and reliability. J Traumatic Stress 2000; 13: 369-80. http://dx.doi.org/10.1023/A:1007750021626

[36] Prince-Embury S. Resiliency Scales for Children and Adolescents: Profiles of personal strengths. San Antonio, TX: Harcourt Assessments 2007.

[37] Žunić-Pavlović V, Pavlović M, Kovačević-Lepojević M, Glumbić N, Kovačević R. The relationships between personal resiliency and externalising and internalising problems in adolescence. Československá Psychologie 2013; 57: 1-14.

[38] Prince-Embury S. The Resiliency Scales for Children and Adolescents as related to parent education level and race/ethnicity in children. Canad J Sch Psychol 2009; 24: 167-82. http://dx.doi.org/10.1177/0829573509335475

[39] Faust J, Chapman S, Stewart LM. Neglected, physically abused, and sexually abused children. In: Hersen M, Reitman D, Eds. Handbook of psychological assessment, case conceptualization, and treatment, Vol 2: Children and adolescents. Hoboken, NJ: Wiley 2008; pp. 473-511.

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