Based on a review of prior research, a causal model was proposed to explain the relationship between child abuse, dissociation, depression, and revictimization. In the model, dissociation and depression were proposed as mediator variables, developing out of child abuse and leading to revictimization. Subjects were 301 male and female university students. Child abuse was measured using the newly developed Child Abuse and Trauma (CAT) scale and was found to be causally related to both depression and dissociation, as well as both directly and indirectly related to revictimization. Dissociation was the only significant mediator between child abuse and revictimization. These findings support and extend those of other researchers, not only from correlation to causality, but also, from effects of child sexual abuse to effects of a more global, psychological maltreatment. Causal modeling was shown to be a practical means of testing theoretical assumptions related to child abuse effects. Furthermore, the CAT scale demonstrated considerable predictive ability as a measure of the underlying traumatic aspects of childhood maltreatment and thus is a promising heuristic tool. This study showed that in a nonclinical population, across all types of abuse and for both males and females, child maltreatment can have devastating effects on the survivor’s life. Further studies are needed to extend the use of this heuristic tool, as well as to continue building a comprehensive theoretical model of the effects of childhood maltreatment. (Author/ABL)
CHILD ABUSE AND REVICTIMIZATION:

DEPRESSION AND DISSOCIATION AS MEDIATOR VARIABLES

Evvie Becker-Lausen¹, Barbara Sanders, and Jack M. Chinsky

Department of Psychology
University of Connecticut
Storrs, CT

¹ Harbor-UCLA Medical Center. Correspondence should be addressed to: Evvie Becker-Lausen, Department of Pediatrics - BIN 437, Harbor-UCLA Medical Center, 1000 W. Carson Street, Torrance, CA 90509.

Running Head: Child Abuse and Revictimization
Abstract

Based on a review of prior research, a causal model was proposed to explain the relationship between child abuse, dissociation, depression and revictimization. In the model, dissociation and depression were proposed as mediator variables, developing out of child abuse and leading to revictimization. Subjects were 301 male and female university students. Child abuse was measured using the newly developed Child Abuse and Trauma (CAT) scale and was found to be causally related to both depression and dissociation, as well as both directly and indirectly related to revictimization. Dissociation was the only significant mediator between child abuse and revictimization. These findings support and extend those of other researchers, not only from correlation to causality, but also, from effects of child sexual abuse to effects of a more global, psychological maltreatment. Causal modeling was shown to be a practical means of testing theoretical assumptions related to child abuse effects. Furthermore, the Child Abuse and Trauma (CAT) scale has demonstrated considerable predictive ability as a measure of the underlying traumatic aspects of childhood maltreatment and thus is a promising heuristic tool for future studies.
The term "psychological maltreatment" has been proposed to convey the underlying destructive element connecting all forms of child abuse and neglect (Garbarino and Vondra, 1987; Garrison, 1987; Hart and Brassard, 1987). At present, the research on long-term effects of psychological maltreatment is in its early stages. Prospective studies are needed, but as yet none have been reported. Thus, what research we have depends upon statistical methodology to determine connections between abuse in childhood and later-life effects.

Dissociation
The association between multiple personality disorder and child abuse has been well-established (Coons & Milstein, 1986; Kluft, 1985; Putnam, Guroff, Silberman, Barban, & Post, 1986). Higher levels of dissociation in adults with a history of maltreatment have also been documented in several recent studies of both clinical and nonclinical populations (Briere and Runtz, 1988a; Chu and Dill, 1990; Coons, Bowman, Pellow and Schneider, 1989; Sanders and Giolas, 1991; Sanders, McRoberts and Tollefson, 1989).

Depression
A number of studies have shown an association between psychological maltreatment and depression (Briere & Runtz, 1988b; Coons, Bowman, Pellow & Schneider, 1989; Jacobson, Fasman & DiMascio, 1975; Webster-Stratton and Hammond, 1988). Sexual abuse, specifically, has also been linked to depression (Briere & Runtz, 1988a; 1989; Browne & Finkelhor, 1986). Furthermore, Putnam, Guroff, Silberman, Barban & Post (1986) in their studies of multiple personality disorder (MPD), found MPD to be "a clinical syndrome characterized by a core of depressive and dissociative symptoms and a childhood history of significant trauma, primarily child abuse" (p. 285; emphasis added).

Revictimization
Anecdotally, clinicians frequently note the striking prevalence of negative experiences in the lives of adults maltreated as children; their life histories suggest that the childhood victim continues to be mistreated by others throughout life. Freud (1954) was struck by what he called the "compulsion to repeat" the trauma. In sociology and criminology research, the fact that some individuals are subject to "multiple victimization" has long been recognized (Walklate, 1989). Attempts to explain this phenomenon, however, have led to such controversial concepts as "victim precipitation" and "victim proneness."

Recent studies of child abuse, specifically studies of adults sexually abused as children, have again raised the issue of multiple victimization, usually referred to in the child abuse literature as "revictimization." Browne and Finkelhor (1986), in their review of the literature on the impact of child sexual abuse, cited several studies which demonstrated a relationship between sexual abuse in childhood and later rape victimization as well as a greater tendency for child sexual abuse victims to become victims of domestic violence in their adult relationships, findings which have been replicated in more recent studies (Briere and Runtz 1987; Coons, Bowman, Pellow and Schneider, 1989; Fromuth, 1985). Kluft (1990a) found, in a study of incest survivors with dissociative disorders, that 78 percent had also been raped as adults.

Although comparable studies have not been carried out examining the relationship between multiple victimization and psychological maltreatment in childhood, a number of studies suggest that there may be some link between childhood maltreatment and later levels of negative life experiences (for example, Webster-Stratton & Hammond, 1988). The link between the two may be the degree to which the individual uses dissociation as a primary defense mechanism, thus creating a specific vulnerability through the memory disturbance characteristic of dissociation. In this manner, the individual would either "forget" past abusive experiences, the recurrence of which (such as shouting or angry words) would trigger a "flight or fight" protective response in a non-dissociative individual, or they would be largely "tuned out" to cues in the present environment that would lead to increased vigilance in a non-
dissociative person (such as walking through a dangerous area). Kluft (1990b) describes this phenomenon as the "sitting duck syndrome" of dissociation.

Hypotheses
The major hypotheses may be stated as follows:

1) The experience of maltreatment in childhood leads to the development of a) depression, b) dissociation, and c) revictimization.

2) Depression and dissociation subsequently act as mediator variables associated with negative life outcomes, specifically revictimization.

METHOD

Subjects
Subjects were 210 female and 89 male university undergraduate students, aged 18 to 22 years. Questionnaires were administered with assurance of anonymity, to encourage veracious reporting. Subjects were only asked to provide age and gender as identifying information.

Analysis
Data generated by the measures described below were tested using path analysis techniques. The proposed structural model is shown in Figure 1. The endogenous variables (dissociation, depression, victimization) are connected as follows: Child Maltreatment (CM) leads to Dissociation (DIS) and Depression (DEP), which in turn lead to Victimization (VIC).

Figure 1. Variables and Their Measures

Child Maltreatment (CM) = CAT scale
Dissociation (DIS) = DES
Depression (DEP) = BDI
Victimization (VIC) = NEC
victimization) were represented by a set of regression equations. Beta weights (or path coefficients) were calculated for each variable, resulting in partial regression coefficients that controlled for the impact of the other predictors. Comparison of the path coefficients established the relative role of each predictor in determining the outcome variable and indicated when a path was unnecessary to the model (Baron & Kenny, 1986).

By subjecting theoretically devised paths to causal analysis, we expected to be able to produce, with greater confidence and precision than in prior studies, a statement of the mechanisms (mediators) by which child maltreatment affects the survivor's adult life. Mediators are "transformational processes internal to the organism," which "explain how external physical events take on internal psychological significance," and "speak to how or why such effects occur" (Baron & Kenny, 1986, p. 1176). Thus, dissociation and depression are proposed as the internal mechanisms by which the negative outcomes of abuse are affected by the individual or, more succinctly, how or why such negative outcomes occur.

**Measures**

**Child Maltreatment Measure**
The Child Abuse and Trauma (CAT) scale (Sanders and Giolas, 1991) is a 38-item measure of the subject's perception of his/her home environment. It includes questions related to sexual maltreatment, physical maltreatment, parental fighting, parental substance abuse, and neglect. Responses are reported on a five-point scale indicating how frequently events or situations occurred in childhood, from 0 equals "never," to 4 equals "always"; five items are scored in reverse. The total CAT score for a subject is a simple mean of all 38 items; the higher the score, the more negative the home environment. This newly developed scale has a test-retest reliability of .89 after six to eight weeks, has produced scores for college students that are consistent across samples and has shown exponential increases with increasing psychopathology (Becker-Lausen, 1991; Sanders and Becker-Lausen, in preparation).

**Dissociation Measure**
The Dissociative Experiences Scale (DES), developed by Bernstein and Putnam (1986), measures the frequency of dissociative experiences by asking the subject to mark a line for each item indicating how often an experience occurs for them (between 0 and 100 percent). The DES has shown internal consistency, discriminates between multiple personality disorder patients and patients with non-dissociative disorders, and has a test-retest reliability of .84 after four to eight weeks.

**Depression Measure**
The Beck Depression Inventory (BDI) is a measure widely used in both research and clinical work. Beck (1972) initially demonstrated the measure's reliability and validity with psychiatric patients. It has also been shown to have good validity as a measure of depression severity in a college population (Bumberry, Oliver & McClure, 1978).

**Victimization Measure**
The Negative Events Checklist (NEC) was designed for this study as a simple survey of what might be considered "victimization" experiences, such as rape, robbery, or being involved with an alcoholic or drug addict. Also included are experiences such as a car accident, which may appear to be more random, but which could be more subtle examples of victimization. The one-page questionnaire is a checklist of 17 items, asking the subject to indicate which events have occurred during "Junior/Senior Year of High School," and "Since High School Graduation."
RESULTS

In the current study, as well as in an earlier sample (Becker-Laussen, 1990), there were no significant sex differences in child maltreatment scores. Dissociation scores in the current sample also did not show significant sex differences, nor did scores for victimization experiences (on the Negative Events Checklist). As has frequently been found in the past (see review by King & Buchwald, 1982), females had significantly higher depression scores than males. On average, females scored slightly above normal, while males were within the normal range on the Beck Depression Inventory.

Correlations for key variables are presented in Table 1.

Table 1. Correlation Coefficients for Key Variables

<table>
<thead>
<tr>
<th></th>
<th>AGE</th>
<th>CM</th>
<th>DIS</th>
<th>DEP</th>
</tr>
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<tbody>
<tr>
<td>CM</td>
<td>.09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIS</td>
<td>.12*</td>
<td>.24***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEP</td>
<td>.01</td>
<td>.40****</td>
<td>.22***</td>
<td></td>
</tr>
<tr>
<td>VIC</td>
<td>.20***</td>
<td>.22****</td>
<td>.21***</td>
<td>.17***</td>
</tr>
</tbody>
</table>

*p < .05  **p < .01  ***p < .001  ****p < .0001

Path Analysis

Having established correlational relationships, the proposed structural model was applied to the data, testing the mediator variables in the manner described by Baron and Kenny (1986; also see Judd & Kenny, 1981). Figure 2 shows the results of the path analysis.

In the initial analyses, dissociation (DIS) and depression (DEP) were each regressed on child maltreatment (CM), yielding Beta weights (path coefficients) for DIS of .24 (p < .0001; R^2 = .06; n=280) and for DEP of .40 (p < .0001; R^2 = .16; n=281).

Victimization (VIC) regressed on child maltreatment (CM) yielded a Beta of .22 (p < .0001), with an R^2 of .05. Adding depression (DEP) and dissociation (DIS) to the model reduced the CM/VIC path coefficient to .16 (p < .05); however, only DIS was significant as a mediator variable (Beta=.15, p < .05). The R^2 increased to .07 in the full model.
DISCUSSION

The Child Abuse and Trauma (CAT) scale proved to be a consistent and reliable measure of child maltreatment, with considerable predictive value. As predicted, child maltreatment was, in a nonclinical population, significantly related to depression and dissociation, in line with findings from previous studies of clinical and nonclinical populations (Briere & Runtz, 1987, 1988a, 1988b, 1990; Sanders & Giolas, 1991; Sanders, McRoberts & Tollefson, 1989; Browne & Finkelhor, 1986; Stiffman, 1989). Also as predicted, dissociation and depression were both significantly correlated with victimization.

Before discussing the results further, it should be noted that although internal, psychological variables such as depression or dissociation are often measured with error, the result is likely to be an underestimate of the mediator effects and an overestimate of the independent variable (child maltreatment), in causal modelling (Baron & Kenny, 1986). Therefore, the results should be considered a conservative estimate of mediator effects.

Similar to the findings reported for child sexual abuse (Browne & Finkelhor, 1986; Kluft, 1990a), child maltreatment was found to be significantly related to later victimization. And, in line with the implications of the studies of child sexual abuse, dissociation was found to be a significant mediator between general child maltreatment and later victimization. Depression did not mediate maltreatment and victimization (despite a significant correlational relationship). Although the path coefficient for DIS/VIC is small, the effect is significant. While the CM/VIC path also remains significant, the
mediation by dissociation reduces that path considerably, and it completely eliminates the effects of depression. Though the variance is small, it is increased by the addition of dissociation.

Thus, the findings support the assertions of dissociation researchers such as Kluft (1990b), who proposed that dissociators become "sitting ducks" by virtue of their "pattern of symptoms, dynamics, relationships, and cognitive compromises" (p. 125). As dissociative individuals learn to detach from reality as a response to childhood maltreatment, they also learn to disregard cues that lead non-dissociators to be "on guard," or to avoid certain circumstances or people. They cannot "learn from experience" to avoid victimization, because the underlying (unconscious) expectancy (learned in childhood) dictates that survival depends upon detachment from present circumstances, as well as from painful feelings. This expectancy is rarely questioned, for to question it literally threatens the individual's survival. And so each new victimization increases the degree to which the individual dissociates, as Kluft (1990b) notes, becoming "more rather than less at risk as they undergo additional life experiences" (p. 125).

This study has shown that, in a nonclinical population, across all types of abuse and for both males and females, child maltreatment can have devastating effects on the survivor's life. These findings support those of other researchers, but notably, extend many of these findings from effects of child sexual abuse to effects of a more global, psychological maltreatment. Causal modeling was shown to be a practical means of testing theoretical assumptions related to child abuse effects. The Child Abuse and Trauma (CAT) scale employed in this study has again demonstrated its ability to identify the underlying traumatic aspects of abuse, and thus allows for a closer examination of the effects of such trauma. Further studies are needed to extend the use of this heuristic tool, as well as to continue building a comprehensive theoretical model of the effects of childhood maltreatment.
References


