Long-term effects of childhood sexual abuse: Objective and subjective characteristics of the abuse and psychopathology in later life.
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Alfred Lange, Edwin de Beurs, Conor Dolan, Tanja Lachnit, Sandra Sjollema and Gerrit Hanewald (1999)

Long-term effects of childhood sexual abuse: objective and subjective characteristics of the abuse and psychopathology in later life

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Abstract

This study investigates the association between objective and subjective characteristics of childhood sexual abuse and psychopathology in later life. The sample consists of 404 Dutch female adults who had been sexually abused in their childhood or adolescence. The participants were recruited by means of articles about childhood sexual abuse in major Dutch newspapers. The characteristics and severity of the sexual abuse were assessed with the Questionnaire Unwanted Sexual Experiences in the Past (QUSEP). General psychopathology was measured with the Symptom Checklist (SCL-90), the degree of dissociation was measured with the Dissociation Questionnaire (DIS-Q). Stepwise multiple regression analyses showed a moderate association between psychopathology and objective characteristics of the abuse, such as number of different types of abusive events and the duration of the abuse. However, more strongly associated with later psychopathology were variables reflecting coping style, such as the degree of self-blame, and circumstantial factors, such as the emotional atmosphere in the family of origin and the reactions following disclosure. Whether or not the abuse was incestuous did not explain additional variance in later psychopathology.
Introduction

There is abundant evidence that victims of childhood sexual abuse are highly at risk of developing physiological and psychological problems (Beitchman et al., 1991; Briere and Runtz, 1988; Brown and Anderson, 1991; Browne and Finkelhor, 1986; Feinauer, 1989; Lange et al., 1995; Nash et al., 1993a; Palmer et al., 1993; Russell, 1986; Surrey et al., 1990; Williams, 1993; Wozencraft et al., 1991). A review by Finkelhor and Browne (1988) on the long term effects of childhood sexual abuse demonstrated increased risk of sexual disorders, depression, anxiety disorders, auto-mutilation, alcohol- and substance abuse, eating disorders, feelings of isolation and stigmatization, deficiencies in self-esteem, anger towards parents, and prostitution. Furthermore, associations have been found between childhood sexual abuse and sleeping disorders, excessive distrust, borderline personality disorder, dissociative disorders, and psychotic symptoms (Boon and Draijer, 1993; Breyer et al., 1987; Kihlstrom et al., 1993; Surrey, et al., 1990). Various studies provide evidence that the effects of childhood sexual abuse depend on individual characteristics of the victims and interpersonal factors at the age of the abuse and later in life (Finkelhor, 1990; Russell, 1986).

Several variables are hypothesized to play a role in the association between childhood sexual abuse and psychopathology. These include the characteristics of the abuse, the way it is experienced and processed, family factors, and individual characteristics of the victim. At present, little is known about the relative contributions of various aspects of sexual abuse to the development of psychological symptoms and re-victimization later in life. Several studies have identified factors that are predictive of adult psychopathology. These factors include the nature of the sexually abusive events, the age at the onset of the abuse, the duration, the frequency, the relationship with the perpetrator, the difference in age, the number of perpetrators, and the degree of pressure experienced by the victim to cooperate with the abuser (Beitchman et al., 1991; Briere
and Runtz, 1988; Follette et al., 1991; Nash et al., 1993 b; Russell, 1986; Williams, 1993). However, these findings are based on relatively small clinical samples (Finkelhor and Browne, 1988; Mennen and Meadow, 1994; Messman and Long, 1996; Williams, 1993).

In addition to these objective characteristics of the abuse, the subjective experiences of the abuse and related coping behavior appear to be important. Morrow and Sorell (1989) demonstrated that the victims of sexual abuse, who blamed themselves for the abuse, suffered more symptoms of psychopathology than victims who did not blame themselves. The negative effects of self-blame were confirmed in a meta-analysis by Weaver and Clum (1995). Furthermore, a review by Faust et al. (1995) indicated that the emotional atmosphere in the family of origin is related to both the prevalence of abuse and later processing of the traumatic experiences (Nash et al., 1993 a).

Most of the studies mentioned so far focus on a single variable, or on a small number of variables, so that the relative importance of individual variables is hard to gauge. Binder et al. (1996) carried out multivariate analyses to identify variables that predict psychological well-being of female adults who had suffered childhood sexual abuse. Absence of perceived pressure, a short duration of the abuse, and the absence of family conflict emerged as important predictors of well being in spite of past sexual abuse. However, their sample (N=30) was too small to carry out multivariate analyses. Spaccarelli and Fuchs (1997) investigated a sample of 48 girls between 11 and 18 years who were referred for therapy after disclosing sexual abuse. Multivariate analyses showed that reactions to disclosure was the best predictor of the severity of internalizing problems (depression and anxiety).

The aim of the present study is to establish which factors are predictive of psychological functioning in later life in a large sample of respondents. We include a large number of variables relating both to the objective and the subjective characteristics of the abuse. The large number of
respondents and the comprehensive assessment of the abuse allow for multivariate analyses in which the relative importance of each variable is assessed.

**Methods**

*Procedure*
Participants were invited through articles in newspapers and magazines to participate in a study on the sequelae of unwanted sexual experiences. Following the publication of the articles, potential participants contacted the researchers by telephone. They were informed about the goals of the study and were sent questionnaires. Participants were informed that they would remain anonymous. A summary of the results was made available upon request. Provisions were made to offer the participants aftercare, in the event that completion of the questionnaire caused emotional distress.

*Measurements*

1. To assess objective and subjective characteristics of the sexual abuse and relevant coping behavior, the *Questionnaire Unwanted Sexual Experiences in the Past (QUSEP; Lange et al., 1996)* was used. This anamnestic instrument is a revision of the Childhood Unwanted Sexual Events questionnaire (Lange et al., 1995). First, the QUSEP identifies the unwanted sexual experiences. Such experiences are regarded as sexual abuse only if actual physical contact took place between the perpetrator and the victim, not if the respondent only felt sexually unsafe (in the absence of physical contact). In the questionnaire subjects are presented with sexual acts or events of increasing severity. The items range from, e.g., “someone touching your breasts, buttocks, and/or genitals, apparently with sexual intentions” to “sexual intercourse (vaginal and/or anal)”. In addition, respondents are questioned about circumstances surrounding the sexual abuse, such as age at onset, frequency of the abuse, relation of respondent with
perpetrator(s), disclosure of the abuse to family members or friends, etc. Subjective characteristics of the abuse are assessed, such as whether the respondent had felt pressurized by the perpetrator, and how the respondent had experienced reactions surrounding disclosure of the abuse. Finally, the questionnaire assesses how the respondent had coped with the event(s). The relevant items concerns feelings of guilt experienced then and now, feelings of responsibility for the abuse, and the feelings concerning the disclosure of the abuse.

2. The QUSEP-Symptom List (QSL) contains 15 items allowing the respondents to indicate on a scale from 1 to 5 the degree to which they suffer symptoms or problems that might be related to childhood sexual abuse. These include anxiety, memory problems, problems in concentrating, depression, somatic complaints, irritability, relational problems, suicidal thoughts or suicide attempts, eating disorders, automutilation, sexual and gynecological problems, sleep disorder, and substance abuse. The total score on these 15 items was used in the present investigation.

3. The Dutch adaptation of the Symptom Checklist-90-R (SCL-90-R, Derogatis, 1977) by Arrindell and Ettema (1986) was used to measure present psychopathology. The total score on the questionnaire has been shown to be a valid measure of general psychopathology.

4. The Dissociation Questionnaire (DIS-Q, Vanderlinden, 1993) was included to assess the extent of dissociative symptomatology. The questionnaire comprises four sub-scales: Identity Confusion and Fragmentation, Loss of Control, Amnesia and Absorption. Several studies have provided support of the reliability and validity of this instrument (e.g., Vanderlinden, 1993).

5. The Family of Origin Questionnaire (FOQ, Sjollema and Lachnit, 1996) comprises twelve pre-coded items about the atmosphere in the family of origin. Aspects included in the items are the quality of contact with the parents, or caregivers, the quality and extent of care (positive items), the absence of a trustworthy family member, and the incidence of physical abuse, and substance or alcohol abuse, (negative items). Factor analysis revealed that a single common factor model
provided an adequate description of the correlation matrix of the 12 items, suggesting that the
total scale refers to a unidimensional construct. The common factor explained 32% of the
variance. Reliability of the scale is good (Cronbach's $a=.81$).

Results

Participants
A total of 493 women responded to the invitation to participate in the study and were mailed the
questionnaires. Of these, 423 returned the questionnaires (86%). Nineteen of these 423
respondents had not completed all the questionnaires, or did not report unwanted sexual events.
Thus the total sample comprised 404 women. Due to missing values in some of the completed
questionnaires, not all data were used in all the analyses.

The age of the respondents ranged from 16 years to 84 years old (mean=37, $sd = 10.3$).
Compared to the general population, more participants in the study were unmarried (45% vs. 27%
in the population) and more lived alone (37% vs. 23%). Also the participants were better educated
compared to the general population. 38% of the respondents held a university degree vs 17% of
the general population.

Characteristics of childhood sexual abuse
Table 1 contains results concerning the objective characteristics of the abuse. The results clearly
demonstrate that the abuse was generally severe, started at early age, was prolonged, took place
frequently, and involved more than one perpetrator. In most cases the perpetrators were family
members.
Table 1. **Objective characteristics of the abusive events**

<table>
<thead>
<tr>
<th>Type of abuse*</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>perpetrator touching breasts, buttocks and/or genitals</td>
<td>98 %</td>
</tr>
<tr>
<td>victim having to touch perpetrator</td>
<td>74 %</td>
</tr>
<tr>
<td>forced intercourse</td>
<td>73 %</td>
</tr>
<tr>
<td>victim touches perpetrator while he masturbates</td>
<td>71 %</td>
</tr>
<tr>
<td>oral satisfying of perpetrator</td>
<td>44 %</td>
</tr>
<tr>
<td>perpetrator inserts object in vagina or anus</td>
<td>38 %</td>
</tr>
</tbody>
</table>

**Age of onset** (mean = 11.3, sd = 6.9)

<table>
<thead>
<tr>
<th>Age category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>younger than 6 years</td>
<td>21 %</td>
</tr>
<tr>
<td>from 6-11 years</td>
<td>36 %</td>
</tr>
<tr>
<td>from 11-16 years</td>
<td>26 %</td>
</tr>
<tr>
<td>older than 16 years</td>
<td>17 %</td>
</tr>
</tbody>
</table>

**Age difference** (range 0-70, average 25 years)

<table>
<thead>
<tr>
<th>Age difference category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 5 years</td>
<td>13 %</td>
</tr>
<tr>
<td>more than 5 years</td>
<td>87 %</td>
</tr>
</tbody>
</table>

**Duration of the abuse** (range 0-43 years, average 5)

<table>
<thead>
<tr>
<th>Duration</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 years (1 abusive act)</td>
<td>19 %</td>
</tr>
<tr>
<td>1 year or less</td>
<td>27 %</td>
</tr>
<tr>
<td>more than 1 year</td>
<td>55 %</td>
</tr>
</tbody>
</table>

**Frequency of the abuse** **

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>once</td>
<td>19 %</td>
</tr>
<tr>
<td>between once and 20 times</td>
<td>26 %</td>
</tr>
<tr>
<td>more than 20 times</td>
<td>55 %</td>
</tr>
</tbody>
</table>

**Number of perpetrators**

<table>
<thead>
<tr>
<th>Number of perpetrators</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 perpetrator</td>
<td>30 %</td>
</tr>
<tr>
<td>more than 1 perpetrator</td>
<td>70 %</td>
</tr>
</tbody>
</table>

**Relationship to perpetrator**

<table>
<thead>
<tr>
<th>Relationship to perpetrator</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>family member</td>
<td>27 %</td>
</tr>
<tr>
<td>non-family member</td>
<td>32 %</td>
</tr>
<tr>
<td>both</td>
<td>41 %</td>
</tr>
</tbody>
</table>

* the categories are not mutually exclusive, percentages may add up to more than 100%
With respect to a more subjective aspect of the abuse, namely perceived pressure, 77% of the respondents reported that they had been subjected to a lot of pressure to give in to the abuser. Thirty percent reported to have been subjected to verbal pressure only, 9% reported physical pressure, and more than half (57%) indicated that both verbal and physical pressure had been exerted.

Eighty percent of the respondents attributed the responsibility of the abuse mainly or entirely to the perpetrator. Nevertheless, three quarters of the respondents had experienced strong feelings of guilt at the time of the abuse, and almost half of these still experienced strong feelings of guilt to the present day. Only 19% of the respondents reported no, or few, feelings of guilt.

Incestuous versus non-incestuous abuse

Table 2 contains the means and standard deviations of the objective and subjective characteristics of the sexual abuse, variables relating to coping, and to the atmosphere in the family of origin. Results are reported separately for those who had suffered sexual abuse by a family member, henceforth the 'incest group' (n=276), and for those who had suffered abuse by one or more individuals outside the family, henceforth the 'non-incest group' (n=128). Respondents who had been abused by both family-members and individuals outside the family were included in the incest group. The differences in means between these groups were tested. The effect-sizes are expressed in terms of Cohen's $d$ where $d=.20$ represents a small, $d=.50$, a medium, and $d=.80$, or higher, a large effect size (Cohen, 1988).
Table 2. Objective and subjective characteristics of sexual abuse, coping and atmosphere in family of origin for the incest group (n=276) and the non-incest group (n=128)

<table>
<thead>
<tr>
<th>variables</th>
<th>incest group</th>
<th>non-incest group</th>
<th>t</th>
<th>df</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>severity (number of types)</td>
<td>6.50</td>
<td>5.55</td>
<td>4.31**</td>
<td>402</td>
<td>.46</td>
</tr>
<tr>
<td>age at onset</td>
<td>8.77</td>
<td>14.43</td>
<td>-8.54**</td>
<td>383</td>
<td>.88</td>
</tr>
<tr>
<td>duration in years</td>
<td>6.39</td>
<td>1.85</td>
<td>7.47**</td>
<td>382</td>
<td>.95</td>
</tr>
<tr>
<td>frequency</td>
<td>3.35</td>
<td>2.19</td>
<td>9.44**</td>
<td>367</td>
<td>1.02</td>
</tr>
<tr>
<td>difference in age</td>
<td>26.68</td>
<td>20.16</td>
<td>3.83**</td>
<td>359</td>
<td>.43</td>
</tr>
<tr>
<td>number of perpetrators</td>
<td>2.44</td>
<td>2.15</td>
<td>2.39</td>
<td>402</td>
<td></td>
</tr>
<tr>
<td>years passed</td>
<td>22.74</td>
<td>16.48</td>
<td>4.79**</td>
<td>381</td>
<td>.52</td>
</tr>
<tr>
<td>Subjective characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>perceived pressure</td>
<td>3.68</td>
<td>3.73</td>
<td>-.76</td>
<td>390</td>
<td>-</td>
</tr>
<tr>
<td>reactions at disclosure a</td>
<td>2.87</td>
<td>3.39</td>
<td>-4.07**</td>
<td>384</td>
<td>.45</td>
</tr>
<tr>
<td>Coping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>feelings of guilt b</td>
<td>2.65</td>
<td>2.43</td>
<td>1.83</td>
<td>393</td>
<td>-</td>
</tr>
<tr>
<td>attribution of responsibility c</td>
<td>1.70</td>
<td>1.72</td>
<td>-.16</td>
<td>394</td>
<td>-</td>
</tr>
<tr>
<td>years no disclosure</td>
<td>15.60</td>
<td>8.75</td>
<td>5.54**</td>
<td>375</td>
<td>.62</td>
</tr>
<tr>
<td>evaluation of disclosure d</td>
<td>1.50</td>
<td>1.74</td>
<td>-2.98*</td>
<td>389</td>
<td>.33</td>
</tr>
<tr>
<td>Climate in family of origin e</td>
<td>12.44</td>
<td>9.12</td>
<td>6.38**</td>
<td>394</td>
<td>.68</td>
</tr>
</tbody>
</table>

- the more positive the reactions, the higher the score
- the more feelings of guilt, the higher the score
- the more self-attribution, the higher the score
- the more positive the evaluation of disclosure, the higher the score
- the more negative the family climate, the higher the score

* p<.01 (two tailed), ** p<.001 (two tailed)
The results in Table 2 indicate that there were substantial differences between the incest group and the non-incest group. Women in the incest group had suffered a greater variety in the kind of sexually abusive event. The onset of the abuse occurred earlier, it took place more frequently and over a longer period of time. Furthermore, in the incest group, the difference in age between victim and perpetrator was greater, and the victim waited longer before disclosing the abuse. The women in the non-incest group reported that disclosure had elicited more positive reactions. Their own experience of the disclosure was more positive than that of the women who had experienced incest. The women in the incest group, finally, were more negative about the atmosphere in the family of origin, than the women in the non-incest group.

Childhood sexual abuse and psychopathology
Compared to the norms for the general population, the respondents had substantially higher mean scores on the SCL-90-R (Arrindell and Ettema, 1986) and the DIS-Q (Vanderlinden, 1993). T-tests of the differences in means were highly significant with effect sizes exceeding $d = .80$. The average scores of our respondents on the psychopathology variables were close to the averages of psychiatric populations. These findings concur with results of previous research (e.g., Finkelhor and Browne, 1988; Beitchman et al., 1991). Surprisingly, no differences in psychopathology were found between the incest group and the non-incest group.

Univariate analyses
Table 3 provides an overview of the correlations between the objective and subjective characteristics of sexual abuse, the coping variables and family atmosphere, on the one hand, and the measures of psychopathology, on the other. Focusing on the characteristics of the abuse, the results indicate that severity (number of different types of abuse), duration, and frequency of the
abuse appear to have the most detrimental effects. More severe psychopathology, as expressed by
the scores on the SCL-90-R, the QSL, and the DIS-Q, is associated with a greater variety of
abusive events, longer duration and higher frequency of the abuse.

Table 3. Correlations between characteristics of sexual abuse, coping, climate in family of origin
and psychopathology (n=395*)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Scl-total</th>
<th>DIS-Q-total</th>
<th>QSL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>severity</td>
<td>.30**</td>
<td>.31**</td>
<td>.35**</td>
</tr>
<tr>
<td>age of onset in years</td>
<td>-.04</td>
<td>-.05</td>
<td>-.08</td>
</tr>
<tr>
<td>duration in years</td>
<td>.20**</td>
<td>.22**</td>
<td>.24**</td>
</tr>
<tr>
<td>years passed</td>
<td>-.03</td>
<td>-.14*</td>
<td>-.01</td>
</tr>
<tr>
<td>frequency</td>
<td>.19**</td>
<td>.20**</td>
<td>.26**</td>
</tr>
<tr>
<td>relation to perpetrator a</td>
<td>-.11</td>
<td>-.12</td>
<td>-.13</td>
</tr>
<tr>
<td>incestuous or not</td>
<td>.05</td>
<td>.05</td>
<td>.08</td>
</tr>
<tr>
<td>difference in age in years</td>
<td>.06</td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td>number of perpetrators</td>
<td>.16*</td>
<td>.13*</td>
<td>.19*</td>
</tr>
<tr>
<td><strong>Subjective characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pressure</td>
<td>.17*</td>
<td>.08</td>
<td>.15*</td>
</tr>
<tr>
<td>reactions at disclosure b</td>
<td>-.30**</td>
<td>-.19**</td>
<td>-.25**</td>
</tr>
<tr>
<td><strong>Coping</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>feelings of guilt c</td>
<td>.41**</td>
<td>.33**</td>
<td>.30**</td>
</tr>
<tr>
<td>attribution of responsibility d</td>
<td>.08</td>
<td>.19**</td>
<td>.13*</td>
</tr>
<tr>
<td>years no disclosure</td>
<td>.15*</td>
<td>.10</td>
<td>.15*</td>
</tr>
<tr>
<td>evaluation of disclosure e</td>
<td>-.23**</td>
<td>-.11</td>
<td>-.24**</td>
</tr>
<tr>
<td>**Climate in family of origin f</td>
<td>.27**</td>
<td>.19**</td>
<td>.28**</td>
</tr>
</tbody>
</table>

* p < .01  (two tailed); ** p < .001 (two tailed)

The results relating to the coping variables show that feelings of guilt correlate most
strongly with psychopathology: a greater number of symptoms of psychopathology is associated
with more feelings of guilt. Reactions of the persons to whom the respondents disclosed their
experiences, and the respondents own evaluation of disclosure also correlate strongly with the
degree of psychopathology: positive reactions and a positive own evaluation is associated with
fewer symptoms. Finally, the atmosphere in the family of origin is important: current
psychopathology is associated with a negative parental atmosphere.

Analyses for the separate sub-scales of the SCL-90-R and DIS-Q (not presented in the
tables) indicated that the degree of depression and anxiety is especially affected by characteristics
of childhood sexual abuse. Depression and anxiety are associated with the number of abusive
events, feelings of guilt, the reactions of others to disclosure, and the atmosphere in the family of
origin. These characteristics of abuse were also related significantly, but less strongly, to current
somatic complaints, low self-esteem, feelings of social insecurity, and to cognitive dysfunction.
The Pearson's product moment correlation coefficients (henceforth denoted r) vary from $r = .18$
to $r = .41$ (all associated p-values are less than .001). Counter to our expectations, no associations
were found between psychopathology and the age of onset of the abuse, the difference in age of
victim and perpetrator, and the nature of the relationship between the victim and the perpetrator.

The correlation between dissociation and the severity of the abuse (i.e., number of
different types of abuse) and feelings of guilt are significant for all sub-scales. The relevant
correlations vary between $r = .15$ (p < .01) and $r = .31$ (p < .001). The duration, the frequency of
the abuse, and the family atmosphere are most clearly associated with identity confusion and
amnesia. The relevant correlations vary between $r = .19$ and $r = .24$ (all p-values < .001). The self-
attrition of responsibility for the abuse and the experience of negative reactions following
disclosure are associated with identity confusion. The correlations here are $r = .21$ and $r = -.20$,
respectively (p<.001). The participants reported less loss of control as more time had elapsed
since the abuse ($r = -.22$; p < .001).
The correlations between the three measures of psychopathology are relatively high. The correlation between SCL-90-R and the total DIS-Q score is \( r = .77 \), which is similar to the values reported by Vanderlinden (1993). Correlations between the QUSEP Symptom List (QSL), on the one hand, and the SCL-90-R and DIS-Q, on the other, are \( r = .64 \) (n=358) and \( r = .59 \) (n=358), respectively.

*Childhood sexual abuse and psychopathology: the incest versus the non-incest group*

The univariate correlations between psychopathology and the characteristics of the abuse, coping, and family atmosphere were also calculated separately for the incest and non-incest groups. Overall, the associations are higher in the non-incest group. Comparing the correlation coefficients by means of Fisher's z-test (Stevens, 1996) revealed that the frequency of abuse, evaluation of disclosure, and experience of support upon disclosure were significantly more related to psychopathology in the non-incest group than in the incest-group. The z-values range from 2.35 to 3.08 (\( p < .05 \), two tailed test).

*Multivariate analyses: prediction of psychopathology*

Stepwise multiple regression analyses were performed to investigate the contribution of the independent variables to the prediction of psychopathology. The independent variables were entered into the regression in two steps. First the objective characteristics were entered as a set. Subsequently, the subjective characteristics were entered as a set. In this way, we can assess the additional variance explained by the subjective variables, while controlling for the objective variables. The contribution of each independent variable to the prediction of psychopathology is expressed in the standardized regression coefficient, \( b \) (Stevens, 1996). Variables that do not contribute significantly to the explained variance are not discussed. The multiple correlation
The multiple regression analyses were performed on the total scale scores of the SCL-90-R, DIS-Q, and QSL. First, the objective characteristics of the abuse (number of abusive events, age of onset, duration, frequency, number of perpetrators, incest, and age difference) were entered into the regression equation. The variable representing the 'Relationship with the perpetrator' was omitted from the multiple regression analysis, because of its high correlation (r=.84) with the variable 'incest or non-incest'. Because certain characteristics of the abuse may have a different effect if the abuser was a family member, it was deemed desirable to take into consideration the possibility that the variable 'incest versus non-incest' may interact with other objective characteristics of the abuse. Therefore, terms were entered into the regression equation to accommodate the interaction between incest and the other independent variables. Table 4 presents the findings of the regression analyses for the three measures of psychopathology. The number of types of abusive events and duration of the abuse objective characteristics sufficed to explain 10 to 14% of variance in psychopathology. Besides these, none of the other objective characteristics made a significant contribution. Interactions of incest with other objective aspects of the abuse did not explain additional variance in psychopathology. Apparently, whether or not the abuse was incestuous is less important than the severity (i.e. number of types of abuse) and the duration of the abuse for the development of later psychopathology.
Table 4. The prediction of psychopathology by objective and subjective characteristics of sexual abuse, coping and climate in family of origin (n=404)

<table>
<thead>
<tr>
<th>Variables</th>
<th>SCL-90-R</th>
<th>DIS-Q</th>
<th>QSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>severity</td>
<td>.27</td>
<td>.27</td>
<td>.31</td>
</tr>
<tr>
<td>duration in years</td>
<td>.11</td>
<td>.14</td>
<td>.14</td>
</tr>
<tr>
<td>multiple R</td>
<td>.32</td>
<td>.34</td>
<td>.38</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.10</td>
<td>.12</td>
<td>.14</td>
</tr>
</tbody>
</table>

Subjective characteristics

- reactions at disclosure $^a$  
  $- .23$  $- .12$  $- .11$

Coping

- feelings of guilt $^b$  
  $.16$  $.11$  $.21$
- years no disclosure          
  $.19$
- evaluation of disclosure $^c$  
  $- .12$

Climate in family of origin $^d$  

- .22  .15  .17

Interaction incest / frequency  

- .11

- multiple R  
  $.50$  $.45$  $.44$
- $R^2$  
  $.25$  $.21$  $.20$

$^a$ the more positive the reactions were, the higher the score  
$^b$ the more feelings of guilt, the higher the score  
$^c$ the more positive disclosure is experienced, the higher the score  
$^d$ the more negative family climate, the higher the score

Next, the subjective (coping) variables were added to the regression model. Table 4 shows that the addition of the coping variables together with family atmosphere substantially increased the explained variance in later psychopathology. In addition to age of onset and number of types
of abuse, several of the subjective and coping variables contributed significantly to the explained variance. The total explained variance in the SCL-90-R scores increased from $R^2 = 10\%$ to $R^2 = 25\%$. In predicting SCL-90-R scores, reactions to disclosure and family atmosphere made the largest contribution; in predicting the DIS-Q scores, the number of years passed since the abuse is the most important predictor: The more time passed, the less dissociation is reported. This suggests that to a certain degree time indeed is a healer, at least as far as dissociation is concerned. For the QSL-total score, again the atmosphere in the family of origin is an important predictor.

Duration of the abuse did not contribute significantly to the variance in psychopathology in this final version. Severity (the number of types of abusive acts) is the most important objective factor. Again we find that the incestuousness of the abuse appears to be unrelated to the extend of later psychopathology. Only the interaction between frequency and incest contributed significantly to SCL-90-R scores. Inspection of the correlations indicates that frequency is not predictive of psychopathology in the incest group, but it is in the non-incest group.

**Discussion and conclusions**

Few survey studies of the sequelea of childhood sexual abuse have been undertaken. Most studies are limited to clinical samples. The lack of association between objective characteristics of the abuse and psychopathology in later life, that is typically observed in clinical samples (e.g., Lange et al., 1995) may be due to a lack of variance in relevant variables. The findings of the present study, obtained in a more heterogeneous and fairly large sample, provides some support for this notion. Here severity of the abuse (number of different types of abusive acts) is shown to be an important objective factor in the development of psychopathology.
The respondents were recruited through articles in national newspapers, in which women were invited to participate in a study on the consequences of sexual abuse. This method of recruiting subjects may have resulted in a somewhat biased sample, in the direction of psychopathology. It is possible that sexually abused women with many psychiatric symptoms were more eager to participate than abused women with fewer symptoms. If so, the variance in psychopathology in our sample could have been lower than the variance in the general unselected population. This possible restriction of range would have resulted in an underestimation of the correlations, beta weights and the amount of explained variance in the regression analyses. Thus, our results may have yielded too conservative, i.e. too low, an estimate of the association between childhood sexual abuse and psychopathology in later life.

The results of the multiple regression analyses illustrate the importance of investigating relevant variables simultaneously. Whether or not the abuse had been incestuous was thought to be related to later psychopathology. Our initial, univariate, analyses revealed some results supporting this view: compared to non-incestuous abuse, incestuous abuse was more severe, started at a younger age, was more difficult to disclose, and was associated with a more negative atmosphere in the family of origin. However, the stepwise multiple regression analysis regarding the effects of the objective characteristics, showed that the variable 'incest or not incest' did not explain any additional variance in later psychopathology beyond what was already explained by duration and severity of the abuse. The latter two objective characteristics seem to be more important predictors of psychopathology than the relationship with the perpetrator.

An important finding in the current study is that the amount of explained variance in psychopathology scores (SCI-90-R) is more than doubled when the subjective characteristics, the coping variables, and the atmosphere in the family of origin are included in the regression analysis. Negative reactions to disclosure (subjective characteristic), negative evaluation of the
disclosure by the victim and feelings of guilt (coping) emerged as strong predictors of psychopathology. These findings concur with the findings of a meta-analysis by Weaver and Clum (1995) in which objective characteristics and subjective factors were compared.

Morrow and Sorell (1989) emphasized the importance of coping behavior and subjective factors. They demonstrated that victims who attributed the responsibility for the abuse to themselves, reported more psychiatric symptoms compared to those who held the perpetrator responsible. Mennen and Meadow (1994) found victims who had been subjected to great pressure by their fathers (the perpetrator in that study) suffer fewer psychiatric disorders than victims whose father had exerted little pressure. According to Mennen and Meadow, the mediating factor was the degree of self-blame, which was larger in the latter group. We found that 80% of the respondents attributed the responsibility to the perpetrator and only 20% did not experience guilt in the past and in the present. Apparently, victims may know rationally that they are not responsible for the abuse, but they still harbor feelings of guilt about it. Attribution of responsibility involves a cognitive process while the development of feelings of guilt appears to be mostly an emotional process. These two variables also show a different pattern of relationship with psychopathology. 'Feelings of guilt' is a significant predictor of general psychopathology (SCL-90-R) and dissociation (DIS-Q), whereas 'feeling responsible' is not related to later psychopathology.

As expected (Faust et al., 1995; Nash et al., 1993 a; Yama et al., 1993), the atmosphere in the family of origin contributed substantially to the variance of all measures of psychopathology. This finding also corresponds with the results of Spaccarelli and Fuchs (1997), who investigated adolescent victims of childhood sexual abuse. The results of our univariate analyses suggest that this association holds for both non-incestuous and incestuous abuse. This is confirmed in the multivariate analysis, where the contribution of interaction of family atmosphere with
incestuousness to the prediction of psychopathology was not found to be significant. It should be noted that no causal inferences can be made on the basis of the present results. It is quite possible that negative functioning in the present biases the evaluation of past experiences. To address the problem of direction of causality, Brown and Anderson (1991) propose longitudinal studies. Hetero-anamnestic research, investigating the views of family members of the victim, might be another way to investigate the direction of causality underlying these associations. Both methods are difficult to implement, but are certainly worth the effort.

Notwithstanding the sensitivity of the topic, many women were willing to cooperate in the study. Only two women applied for the care that was offered following participation. The study confirms previous findings (Lange et al. 1995; Rodriguez et al., 1997) that women are quite able to express their feelings about sexual abuse using a structured step-by-step questionnaire. A relatively small proportion (14%) of those who had expressed their willingness to participate, failed to return the questionnaire. Moreover, many respondents indicated, in accompanying letters or notes, that they had welcomed the structured approach of the questionnaire. This concurs with findings of Dill et al. (1991) who observed that victims of childhood sexual abuse provided more complete accounts of the abuse that they had suffered, using a self report questionnaire, than they did in a standardized psychiatric intake interview.

Our results suggest that in therapeutic contexts early disclosure is important. This finding agrees with observations by Llewelyn (1997). Our results also indicate that a negative reaction to first disclosure is likely to negatively affect the psychological functioning of the victim in later life. However, this does not imply that therapy should start with processing the traumatic events. In many cases the first step in therapy is to strengthen self-esteem, and help the victim to come to grips with daily problems. Focusing on the past should be delayed until these objectives have been achieved (Busby et al., 1994).
women, Nash et al. (1993 a) found that perceived current family functioning accounted for a good deal of the variance in psychopathology of abused women.

The QUSEP emerged as a useful instrument for early assessing the occurrence, characteristics and related variables of childhood sexual abuse in a manner which cannot be influenced by suggestions by therapists. It provides a relatively easy and objective way to acquire detailed information concerning sexual abuse. It's standardized structure facilitates the statistical analysis of the data. In clinical settings the QUSEP can be routinely administered when women apply for psychiatric treatment. The clinical impressions suggest that this decreases the long duration of non disclosure (average of 14 years in our study). However, controlled studies have to be undertaken to prove the validity of this assumption.

References


