Personality and Social Sciences

Traumatic stress and psychological adjustment in treatment-seeking women sexually abused in childhood: A follow-up

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The objective of this study was to assess post-traumatic stress disorder (PTSD), psychological distress, and risk factors among women sexually abused in childhood (CSA) after six months in therapy. Thirty in-treatment CSA survivors reported their abuse history and filled out several questionnaires. Comparisons were made to a non-CSA in-treatment sample. Although, 50% of the CSA women still had PTSD, there was a remarkable decrease in PTSD symptoms (Cohen’s $d = 1.06$). A considerable change in self-worth and in attachment styles was found. It was concluded that CSA survivors benefit much from 6 months of weekly treatment. However, it is recommended that treatment should continue for a still longer period.

Key words: Treatment, childhood sexual abuse survivors, PTSD, attachment style, prospective study.

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INTRODUCTION

In a Danish national youth probability study ($n = 390$) investigating the prevalence of various traumatic events, including childhood sexual abuse (CSA), Elklit (2002) reported that 2.6% of the females and 0.5% of the males in the 8th grade had been victims of incest, defined as enforced sexual acts by a family member. The similar numbers were 5.8% and 2.0% for Icelandic adolescent females and males, respectively (Bödvarsdóttir & Elklit, 2007), and 6.5% and 3.8% for Faroese adolescent females and males, respectively (Elklit, Petersen & Olesen, submitted).

A meta-analysis of 37 studies published between 1981 and 1995 involving more than 25,000 people provides clear evidence for a link between CSA and subsequent negative effects including: PTSD, depression, suicidality, early sexuality (promiscuity), victim-perpetration cycle, and poor academic performance (Paolucci, Genuis & Violato, 2001). Kemp (1998) found a prevalence of 30% of childhood sexual abuse among 64 inpatients in an adult psychiatric unit. A study of 89 outpatient CSA survivors showed a PTSD prevalence of 89% (Owens & Chard, 2003). In the abovementioned study of various potentially mediating variables such as gender, socioeconomic status, type of abuse, age when abused, relationship to perpetrator, and number of abuse incidents, Paolucci and colleagues (2001) did not find any statistically significant differences in effect sizes. For this reason, it was decided to include a number of sociopsychological factors in the present study in order to investigate their association with the degree of traumatization and general psychological distress.

Attachment

A review of the interpersonal and family functioning of female survivors of CSA based on community samples by Rumstein-McKean and Hunsley (2001) gives an indication that CSA survivors experience problems with attachment. In convenience samples Alexander (1993) and Whiffen, Judd and Aube (1999) found that CSA survivors showed evidence of insecure attachment. Hanna (2003) found that adult female CSA survivors were rated significantly higher on fearful attachment compared to non-abused women. On the other hand, Cooper (2006) in a study of 245 female university students found that significantly more of those with a history of CSA were characterized of a dismissive attachment style. Some studies indicate that adult attachment style might mediate the effects of CSA on adult psychological functioning (Kutil, 1999; Roche, Runtz & Hunter, 1999), while Whiffen and Clark (1997), contrary to their expectations, were not able to demonstrate attachment as a mediational link between CSA and depression. According to the review of Rumstein-McKean and Hunsley (2001), no studies have yet examined the attachment styles of female CSA survivors in clinical samples.

Cognitions

Cognitions about the benevolence of the world, self-worth, and meaningfulness of the world constitute another group of potential mediators. According to the theories of Janoff-Bulman (1992) and McCann and Pearlman (1990) shattered assumptions and disturbed schemas are likely outcomes of profound early adverse experiences.
A study by Wenninger and Ehlers (1998) of US and German convenient CSA survivor samples gave strong evidence that dysfunctional cognitions mediate the relationships between CSA and post-traumatic symptoms.

Social support
The effect of social support perceived by adult victims of CSA was investigated by Stroud (1999), who found that intrafamilial victims reported less family support than extrafamilial victims. Wyatt and Mickey (1987) examined the support of non-abusing parents and others and found that the effects of CSA alleviated if parents and others supported the victims upon the disclosure of the incident. Similarly, Hinson (2001) demonstrated an inverse relationship between perceived social support and depression in a sample of adult Latino CSA survivors.

Treatment
Empirical effect studies of psychotherapies with female CSA survivors are sparse and according to a review of Rumstein-McKean and Hunsley (2001) there is a scarcity of CSA survivor studies that apply appropriate control/comparison groups. A study by Rodriguez, Ryan, Kemp, and Foy (1997) of help-seeking women demonstrated substantial differences in PTSD prevalence between CSA survivors and women who sought treatment for relationship problems. Therefore, in the present study data from 129 treatment-seeking women, without a history of sexual abuse in their childhood (the non-CSA sample) was used for comparison. Studies focusing on PTSD in women sexually abused in childhood are also sparse even though PTSD might be the most common diagnosis in this population (Owens & Chard, 2003). Moreover, effect studies of this population reporting descriptive diagnoses according to the standard diagnosis systems are sparse (Peleikis, Mykletun & Dahl, 2005).

The rationale and aims of study
The goal of the present study was in the CSA sample to (a) describe the nature of sexual abuse, (b) to assess the prevalence of PTSD, factors associated with traumatization and psychological distress at the beginning of the treatment and six months later by means of standardized measures. Specific risk factors were derived from prior CSA research and from theory on PTSD in line with Paolucci et al. (2001), whose meta-analysis supports a multifaceted model of CSA related traumatization. Furthermore, the aim was (c) to compare CSA survivors with a group of women in treatment who were not sexually abused.

METHOD

Sample
Women eligible for the study were all consecutive clients (n = 70) during one year at the only existing Danish treatment center for women sexually abused in childhood, Incestcenter Funen. The recruitment rate was 99% (n = 69). Six months later 44% (n = 30) of the women initially participating in the study (T1) accepted to participate in the follow-up study (T2).

The mean age of the sample was 33.3 years (SD 10.5; range 18 to 50 years). All women were Caucasian. Fifty percent were married or cohabiting and had been so for 4.4 years on average (SD 1.2; range 1 to 5 years). The average number of years of education was 13.4 (SD 2.4; range 9 to 18 years). Sixteen (53%) had children. Chi² analyses revealed no significant sociodemographic differences between the T1 and the T2 samples.

A comparison group consisting of 137 women participated in the study. Eight of them were excluded from the analyses, since they reported having been exposed to sexual child abuse. The non-CSA sample (n = 129) also received outpatient psychological treatment; they received crisis intervention, via their health insurance, after recent exposure to traumatic events, such as death of a colleague or a relative, or physical assault. At the time of the study, the non-CSA women were 16–77 years old, with a mean age of 39.1 years (SD 12.9). The mean number of years of education was 12.9 (SD 3.2; range 7 to 22 years). Sixty-nine percent had children and 62% were married or cohabiting.

Procedure
The CSA survivors who came to the center for therapy were interviewed during the first session and informed that in the next session they would fill out a number of questionnaires on which basis the therapy would be planned. All the participants received weekly individual, psychodynamic oriented therapy with interpersonal and trauma foci. In addition to the therapy, social counseling was offered according to need. The non-CSA sample received a trauma focused crisis intervention focusing on individual acute stress reactions and readjustment to the work and family situation, and reactions from family and colleagues. After the first session the women filled out the questionnaire. The average number of sessions was four. Six months later both the CSA and the non-CSA samples answered a second questionnaire.

Measures
Patients completed a questionnaire consisting of several parts – of relevancy to this report were demographic information, as mentioned under subjects, and questions about their abuse history. Exposure to traumatic events (besides CSA), modeled after the National Comorbidity Survey (Kessler, Sonnega, Bromet, Hughes & Nelson, 1995) was also rated. The participants were thus asked which of the following events they had been exposed to: rape, physical assault, threatened with a weapon, accidents, shock because someone close was traumatized, fire, witnessing a trauma, childhood physical abuse, childhood neglect, death of someone close, and other traumas. The participants were also asked whether they had experienced serious life events, such as illness, bereavement, divorce, relocation, or dismissal during the year prior to the study (T1) and the preceding six months (at T2). Additionally, they were asked to fill out standardized questionnaires about traumatization, psychological distress, social support, coping, attachment style, and cognitive schemata.

Traumatization and psychological distress
The Harvard Trauma Questionnaire (HTQ; Mollica, Caspi-Yavin, Bollini, Truong, Tor & Lavelle, 1992) was applied for estimation of the occurrence of PTSD at the time of the study. The HTQ-Part IV has been used extensively in Denmark (Bach, 2003) and provides an assessment of whether or not a person suffers from PTSD. The HTQ consists of 30 items, 17 of which correspond to PTSD symptoms in the DSM-IV (APA, 2007). The items were scored on a four-point Likert Scale (1 = not at all; 4 = extremely). HTQ measures the intensity of the three core symptom groups of PTSD (intrusion, avoidance, and arousal). Only scores ≥ 3
applied for the diagnosis. A subclinical level of PTSD is considered present if the respondent met two out of three criteria and missed the last criterion by only one symptom. The latter did not apply to the intrusion subscale, which must be reached. The subscales were scored separately. Both Mollica and colleagues (1992) and Bach (2003) reported good reliability and validity for the HTQ. A shame and guilt subscale was composed of four items from a revised edition of the HTQ (Mollica et al., 1992). One of the questions asked directly about survivor’s guilt (“feeling guilty for having survived”). The other three questions asked about blame and feelings of shame and of guilt in the context of the trauma.

The Trauma Symptom Checklist (TSC) was used to measure current trauma symptoms and owes its origin to Briere and Runtz (1989). The answers were rated on a four-point Likert scale from “no” (= 1) to “very often” (= 4). The TSC has good psychometric qualities and appears to be a valid instrument in measuring the distress effects associated with traumatization. On the basis of a factor analysis based on 4,152 respondents (Krog & Duel, 2003), two subscales were used: negative affectivity and somatization.

Social support

The Crisis Support Scale (CSS; Joseph, Andrews, Williams & Yule, 1992) rated the experience of perceived social support after a traumatic event using seven items. The items include: perceived availability; received emotional support; received practical support; contact with people in a similar situation; the ability to express oneself; the experience of being let down; and general satisfaction with social support. The items were rated on a seven-point Likert scale, ranging from “never” to “always.” The CSS has been used in several disaster studies and has a good internal consistency as well as a good discriminatory power. Elklit, Pedersen and Jind (2001) analyzed 4,213 CSS questionnaires from 11 studies, and the results confirmed the psychometrical reliability and validity of the CSS.

Coping

The Coping Styles Questionnaire (CSQ; Roger, Jarvis & Narajan, 1993) was used to measure coping strategies. CSQ in its original form includes 60 items, measuring four primary coping styles: rational, emotional, avoidance, and detached. A validation study of the CSQ (Elklit, 1996) confirmed the existence of the four styles. The study also found, however, that there was only partial agreement on the composition of the detached component and suggested that one should “stay with items which positively, with a substantial weight and, in several studies, have contributed to the same factor structure.” In concordance with this, the CSQ is reduced to 37 items, preserving the four primary coping components: rational coping (11 items), emotional coping (10 items), detached coping (6 items), and avoidance coping (10 items). All items are scored on a four-point Likert scale.

Attachment style

The Revised Adult Attachment Scale (RAAS), developed by Collins and Read (1990) and Collins (1996), is based on attachment theories (Bowlby, 1988). The scale consists of 18 items, which were scored on a five-point Likert scale. The scale contains three subscales (closeness, dependency, and anxiety). The subscales were used for the categorization into attachment styles by the Collins’ algorithm. The reliability and validity of the scale is good (Collins & Read, 1990).

Cognitive schemata

The World Assumption Scale (WAS; Janoff-Bulman, 1989) is a 32-item checklist of assumptions, in which respondents are asked to indicate on a six-point Likert scale, ranging from “strongly disagree” to “strongly agree”, the degree to which they consider a certain statement appropriate. A validating study (Elklit, Shevlin, Solomon & Dekel, 2007) suggested that the WAS had adequate psychometric properties for use in both clinical and research settings. The WAS is composed of eight subscales, each consisting of four items. However, reliability tests resulted in an exclusion of four subscales due to very low Cronbach’s alpha (DeVillis, 2003), with the remaining subscales being: self worth (α = 0.62), luck (α = 0.84), benevolence of the World (α = 0.59), and control (α = 0.83).

Statistics

Nominal variables were compared with χ² tests. A 0/1 (no/yes) coding was used for dichotomous variables. Correlations were estimated with Pearson's correlation coefficient. Demographic, treatment, and life event variables were analyzed in relation to all scales with one-way ANOVA. To reduce the risk of Type 1 errors, only symptom total scores were used in subsequent analyses. T-tests were conducted to examine change over time in the socio-psychological variables. A one-way repeated measure and a two-way between-groups analysis of variance was conducted to explore the impact of time and sample and the interaction between these two factors. The analyses were performed by means of SPSS-PC, version 14.0.

RESULTS

The following section first contains subsections presenting the results from the descriptive analyses of the exposure to recent life events and previous trauma. Detailed description of the sexual abuse is presented elsewhere (Elklit, submitted). Subsequently, the descriptive results and results from paired t-tests of the socio-psychological variables are presented. Analyses are conducted of the scores to compare those who participated at T1 with those who participated at both T1 and T2.

Initial analyses

Descriptive analyses of the sexual abuse. The mean age for the onset of CSA was 6.6 years (SD = 4.7; median: 6 years; range 1–18 years). The mean duration of CSA was 43.3 months (SD = 56.8; median 24 months; range 0.3–216 months). The mean age for the disclosure of CSA was 23.5 years (SD = 12.2; median 21 years; range 7–47 years). Further descriptions of the sexual acts are reported elsewhere (Elklit, submitted). The demographic factors were not associated with PTSD severity at T1 and T2. Also, there were no significant differences according to number or types of sexual acts and other characteristics about the sexual abuse between the T1 and the T2 group.

Recent serious life events and previous trauma exposure. Forty percent of the CSA women had had a serious life event (e.g. the death of someone close to them, divorce, illness, losing a job) in the year preceding the beginning of therapy. The prevalence of lifetime traumas reported was: childhood neglect 60%, death of someone close 33%, physical assault 27%, rape 23%, childhood physical abuse 23%, shock because someone close was traumatized 17%, threatened with a weapon 20%, accidents 17%, fire
Attachment styles. Changes in the therapy group
demographic, or psychological variable. Between the T1 and the T2 samples. Further, one-way ANOVA showed no significant differences according to attachment style at T1, had achieved a secure attachment style at both T1 and T2. Of those, one-third that did not have a secure attachment style at T1, had declined to 23% (Elklit, 2000). The effect size for the non-CSA sample was somewhat smaller: 0.71 (Cohen's $d$), with a mean score at T1 (86) = 64.20; SD = 16.35), and at T2 (86) = 52.47; SD = 16.64).

A one-way repeated measures ANOVA was conducted to compare scores on the HTQ total at T1 (at the start of the intervention) and T2 (six-months follow-up). The means and the SDs are presented in Table 1. There was a large significant effect for time (Wilks’ Lambda = 0.48; $F(1, 104) = 112.85$, $p < 0.0005$; multivariate partial eta squared = 0.52). A two-way between-groups analysis of variance was conducted to explore the impact of time and group on levels of PTSD severity at T2. There was a large significant effect of group ($F(1, 104) = 31.2$, $p < 0.0005$; multivariate partial eta squared = 0.25). There was a small, but significant interaction effect for time * group ($F(1, 104) = 5.22$, $p < 0.05$; multivariate partial eta squared = 0.05).

10%, having witnessed a trauma 10%, and other traumas 23%. Chisq analyses showed no significant differences in the two groups according to types of lifetime traumas. One-way ANOVA did not show any difference in either number of lifetime traumas or in number of serious life events in the year prior to the study.

Descriptive analyses of psychological and social variables. The means, standard deviations, and internal consistency values for the scales and the subscales are shown in Table 1. Chi² analyses showed no significant differences according to attachment style between the T1 and the T2 samples. Further, one-way ANOVA showed no significant differences in T1 and T2 scores in degree of traumatization measured with the HTQ, degree of distress (TSC), coping styles (CSQ), world assumptions (WAS). In sum, the two groups did not differ with regard to any other CSA, demographic, or psychological variable.

Changes in the therapy group

Attachment styles. Twenty-one subjects had a complete RAAS at both T1 and T2. Of those, one-third that did not have a secure attachment style at T1, had achieved a secure attachment style at T2. One-third that had a fearful attachment style at T1 still had a fearful attachment style at T2.

Traumatic symptoms and psychological distress. The endorsement of PTSD cluster symptoms among the participating women is shown in Table 2. Fifty percent ($n = 15$) of the CSA survivors met the three core criteria of the PTSD diagnosis, and 13% ($n = 4$) met the criteria for a subclinical PTSD diagnosis. The t-tests for the CSA group moreover showed a significant fall in fulfilling the criteria for the PTSD diagnosis ($t(27) = 3.67$, $p < 0.001$) at T2. The psychological distress experienced by the participating women is shown in Table 1. Furthermore the results from paired t-tests are shown in Table 1 and there is a significant fall in traumatization after a half year in therapy. The effect size was 1.06 (Cohen’s $d$) for those 24 subjects who had endorsed the full HTQ at T1: (mean HTQ total score (24) = 87.3; SD = 16.34) and at T2 (mean HTQ total score (24) = 69.34; SD = 17.55). The T1 PTSD prevalence for the non-CSA sample was 38%; six months after this figure had declined to 23% (Elklit, 2000). The effect size for the non-CSA sample was somewhat smaller: 0.71 (Cohen’s $d$), with a mean score at T1 (86) = 64.20; SD = 16.35), and at T2 (86) = 52.47; SD = 16.64).

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<table>
<thead>
<tr>
<th>Test Variable</th>
<th>Scale reliability (T2)</th>
<th>Acute study (T1)</th>
<th>Follow-up (T2)</th>
<th>Paired samples t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inter-Item α</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Difference t P</td>
</tr>
<tr>
<td>HTQ Intrusion</td>
<td>0.45 0.76</td>
<td>10.48 (2.49)</td>
<td>8.38 (2.77)</td>
<td>2.10 4.54 0.0005</td>
</tr>
<tr>
<td>Avoidance</td>
<td>0.21 0.65</td>
<td>21.90 (6.74)</td>
<td>16.03 (3.96)</td>
<td>5.86 5.28 0.0005</td>
</tr>
<tr>
<td>Hypervigilance</td>
<td>0.21 0.57</td>
<td>15.55 (2.64)</td>
<td>13.41 (2.69)</td>
<td>2.14 4.15 0.0005</td>
</tr>
<tr>
<td>Total</td>
<td>0.30 0.93</td>
<td>87.29 (16.34)</td>
<td>69.38 (17.55)</td>
<td>17.92 7.41 0.0005</td>
</tr>
<tr>
<td>TSC Total</td>
<td>0.33 0.86</td>
<td>52.64 (10.93)</td>
<td>42.28 (12.36)</td>
<td>10.36 6.32 0.0005</td>
</tr>
<tr>
<td>CSQ Rational</td>
<td>0.26 0.80</td>
<td>24.54 (5.86)</td>
<td>24.96 (5.16)</td>
<td>−0.42 −0.39 ns</td>
</tr>
<tr>
<td>Emotional</td>
<td>0.49 0.91</td>
<td>24.73 (5.67)</td>
<td>22.38 (6.78)</td>
<td>2.35 1.90 ns</td>
</tr>
<tr>
<td>Detached</td>
<td>0.29 0.71</td>
<td>10.22 (2.87)</td>
<td>10.70 (2.58)</td>
<td>−0.48 −1.05 ns</td>
</tr>
<tr>
<td>Avoiding</td>
<td>0.13 0.60</td>
<td>21.42 (4.15)</td>
<td>19.73 (3.33)</td>
<td>1.69 2.30 0.05</td>
</tr>
<tr>
<td>RAAS Closeness</td>
<td>0.26 0.68</td>
<td>17.19 (5.87)</td>
<td>19.89 (4.96)</td>
<td>−2.70 −2.80 0.01</td>
</tr>
<tr>
<td>Dependency</td>
<td>0.37 0.78</td>
<td>14.31 (4.40)</td>
<td>16.12 (5.08)</td>
<td>−1.81 −1.90 ns</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.36 0.77</td>
<td>20.54 (5.44)</td>
<td>18.31 (5.37)</td>
<td>2.23 2.16 0.05</td>
</tr>
<tr>
<td>Self-worth</td>
<td>0.24 0.62</td>
<td>19.66 (4.79)</td>
<td>21.66 (4.41)</td>
<td>−0.20 −3.25 0.005</td>
</tr>
<tr>
<td>Luck</td>
<td>0.57 0.84</td>
<td>14.74 (12.56)</td>
<td>14.07 (4.85)</td>
<td>0.67 0.33 ns</td>
</tr>
<tr>
<td>Benevolence of the world</td>
<td>0.17 0.59</td>
<td>28.32 (6.10)</td>
<td>29.39 (4.98)</td>
<td>−1.07 −0.97 ns</td>
</tr>
<tr>
<td>Control</td>
<td>0.41 0.83</td>
<td>18.04 (5.03)</td>
<td>18.39 (5.95)</td>
<td>−0.36 −0.38 ns</td>
</tr>
<tr>
<td>CSS Total</td>
<td>0.29 0.74</td>
<td>29.26 (7.10)</td>
<td>31.67 (7.85)</td>
<td>−2.41 −2.00 ns</td>
</tr>
</tbody>
</table>

Table 2. Percentage of PTSD symptom criteria and PTSD clusters fulfilled in the clinical sample of CSA survivors at six months ($n = 30$; pretreatment percentages in parentheses)

<table>
<thead>
<tr>
<th>Test Variable</th>
<th>Percentage (%)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>2 ≥ 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrusion</td>
<td></td>
<td>30</td>
<td>7</td>
<td>27</td>
<td>17</td>
<td>20</td>
<td>(23)</td>
</tr>
<tr>
<td>Avoidance</td>
<td></td>
<td>10</td>
<td>–</td>
<td>17</td>
<td>–</td>
<td>(7)</td>
<td>(13)</td>
</tr>
<tr>
<td>Hypervigilance</td>
<td></td>
<td>10</td>
<td>3</td>
<td>13</td>
<td>–</td>
<td>7</td>
<td>(10)</td>
</tr>
<tr>
<td>PTSD criteria</td>
<td></td>
<td>10</td>
<td>–</td>
<td>27</td>
<td>3</td>
<td>13</td>
<td>(7)</td>
</tr>
</tbody>
</table>
Associations between CSA variables, previous trauma, life events, and traumatic symptoms after six months in therapy. Because of the very high prevalence of PTSD, the HTQ total score was used to preserve more information in identifying variables related to PTSD symptomatology. Using continuous symptom measures will be less subject to biasing the results in terms of underestimating the impact of exposure compared with using categorical diagnostic measures (Ozer, Best, Lipsey & Weiss, 2003).

No significant associations between PTSD intensity (measured by the HTQ total) after six months in therapy and any demographic variables were identified. Neither were any significant associations found between the PTSD intensity at T2 and the following stressors: onset of the sexual abuse, duration, who the perpetrator was, whether it had any judicial consequences for the perpetrator, whether the perpetrator admitted the abuse, what age the women had disclosed the CSA, or to whom they told it, whether the women had a forewarning, whether they subsequently had been placed outside their homes, and the number of sexual assaults.

Correlational analyses between the CSA exposure and the PTSD intensity identified significant associations between threats about taking part in sexual acts and PTSD at T1 ($r(24) = 0.66; p < 0.0005$), and PTSD at T2 ($r(24) = 0.57; p < 0.001$). Sexual teasing was also associated to PTSD at T1 ($r(24) = 0.55; p < 0.005$) and PTSD at T2 ($r(24) = 0.37; p < 0.05$). Penetration was associated with PTSD intensity at T1 ($r(23) = 0.47; p < 0.05$), but not at T2. And having been sexually addressed or spoken of was associated to PTSD at T2 ($r(24) = 0.42; p < 0.05$). No significant relationships were found between the endorsement of life events prior to starting in therapy and T2 PTSD intensity.

One way ANOVA analyses showed that the shame and guilt subscale at T2 were significantly higher among subjects exposed to two types of sexual acts: sexual teasing ($F(30) = 5.80; \text{mean} = 9.43; p < 0.05$) and threats about taking part in sexual acts ($F(30) = 7.9; \text{mean} = 10.38; p < 0.01$), and almost significantly higher for those exposed to genital intercourse ($F(30) = 3.72; \text{mean} = 9.86; p = 0.06$).

Associations between psychosocial variables and traumatic symptoms after six months in therapy. Analyses showed significant negative associations between T2 PTSD intensity and WAS self-worth ($r(30) = -0.56, p < 0.001$) and WAS luck ($r(29) = -0.41, p < 0.05$) at T1. No significant associations were found between T2 PTSD intensity and the three attachment subscales measured at T1. On the other hand, all three attachment subscales measured at T2 showed significant associations to T2 PTSD intensity: Closeness ($r(29) = -0.51, p < 0.005$) and Dependency ($r(27) = -0.48, p < 0.01$) showed a negative association, and Anxiety ($r(29) = 0.68, p < 0.0005$) showed a positive association to PTSD at T2. Both emotional coping at T1 ($r(28) = 0.40, p < 0.05$) and at T2 ($r(28) = 0.51, p < 0.005$) were significantly associated to T2 PTSD intensity.

Social support at the time of the sexual abuse and at T1 showed no significant associations to T2 PTSD intensity. On the contrary, four T2 measures of social support showed a negative association to T2 PTSD intensity: someone listening ($r(28) = -0.60; p < 0.001$), ability of expressing feelings ($r(28) = -0.38; p < 0.05$), received sympathy ($r(28) = -0.48; p < 0.01$), and general satisfaction ($r(28) = -0.61; p < 0.001$). The current feeling of being let down showed a positive association to T2 PTSD intensity ($r(28) = 0.54; p < 0.005$).

**DISCUSSION**

**Revictimization**

CSA was not the only adversity in life to which women in the present study were subjected. Rather, the group would be better characterized as a multiple traumatized group with a high incidence of exposure to various forms of previous traumas. CSA has been recognized as a major risk factor for later sexual revictimization in several studies (Chu, 1992; Koss & Dinero, 1989; Schumm, Hobfoll & Keogh, 2004). Rodriguez et al. (1997) advocated that help-seeking populations should be assessed for exposure to different types of traumas in childhood and later adulthood. The present study showed a significant association between number of previous traumas and T2 PTSD intensity.

**Demographic factors**

Consistent with several other studies (e.g. Briere & Runtz, 1989; Rodriguez et al., 1997; Wenninger & Ehlers, 1998), this study showed no significant associations between demographic factors and PTSD. The explanation for this might be the passage of time and the growing impact of other variables, such as coping style or cognitive attributions, in maintaining symptoms.

**Sexual acts**

Four specific CSA acts were, however, associated with PTSD intensity at T1 and T2, respectively. Having been sexually addressed or spoken to was not associated with PTSD intensity at T1, but was at T2. Teasing about sexual development and threats about taking part in sexual acts were associated with PTSD at both T1 and T2, and there were relative small changes in those associations. Penetration was associated with PTSD intensity at T1. This association, though, seems to vanish during therapy.

Several previous studies have reported higher PTSD rates for survivors who experienced penetration (e.g. Saunders, Villepontaux, Lipovsky, Kilpatrick & Veronen, 1992), while others have failed to find such an association (e.g. Rodriguez et al., 1997). Vaginal penetration might resemble closeness, and this assumed closeness might represent an internalized guilt-provoking problem for the survivor. Consistent with this hypothesis, Wenninger and Ehlers (1998) documented that when the perpetrator misrepresented the sexual abuse as affection and attention, survivors had higher symptom scores than in other cases. This is in line with the present study where subjects exposed to one of the following four types of sexual acts – sexual teasing, threats about taking...
part in sexual acts, genital intercourse and genital intercourse attempt – had significantly higher scores on feelings of shame and guilt.

**Attachment**

Many (90%) of the participating women in the present study were initially characterized by insecure attachment styles. In a qualitative study based on 23 interviews, Hanna (2003) found that adult sexual child abuse and child physical abuse survivors attributed the development of their insecure attachment styles to the abuse; and furthermore concluded that addressing attachment in treatment of CSA survivors is of great importance for the outcome. The present study showed that attachment style at the early assessment did not associate with T2 PTSD intensity. Present attachment style, on the other hand, was found to be associated with PTSD at T2. Moreover, there was a considerable change in attachment style after six months in therapy, and those with a secure attachment style after six months also had lower HTQ scores. Roche, Runz and Hunter (1999), in contrast to Alexander (1993), found that attachment is of great importance in predicting post-traumatic symptoms, and that attachment style mediated between CSA and later psychological adjustment.

**PTSD**

The high prevalence of PTSD (50%) among the women sexually abused in childhood after six months of therapy is consistent with similar findings from other treatment studies of adult CSA survivors (O’Neill & Gupta, 1991; Rowan, Foy, Rodriguez & Ryan, 1994). Schumm, Hobfoll and Keogh (2004) found that the CSA had a direct effect on current PTSD intensity and furthermore, that CSA also had an indirect effect on PTSD, as women sexually abused in childhood were at greater risk of being raped in adulthood, which in turn predicted PTSD. In the present study there was a considerable decline in subjects who fulfill the criteria for PTSD after six months of therapy. The fact, though, that 50% of the subjects still can be diagnosed with PTSD could also be support for the argument that the duration of the therapy with CSA survivors must be longer than six months. The current study showed a HTQ effect size of 1.10, which is in line with other studies. In their review of 23 studies, Peleikis and Dahl (2005) found a great variation in treatment effect sizes, ranging from 0.19 to 1.99, with a mean effect size of 0.63 (95% CI). According to Peleikis and Dahl there was no clear pattern that could explain this heterogeneity, but some studies indicated that higher education had a positive influence on the result (ibid.). The impact of education on PTSD level was not supported by the present study. Peleikis et al. (2005) made an examination of current mental health among female CSA survivors, who formerly (mean 5.1 years ago) had a minimum of six sessions of outpatient therapy for depression or anxiety disorders. The results indicated a rather poor mental health, which was significantly worse than the comparison group consisting of women in the same therapy but without a CSA history (ibid.).

**Limitations and strengths**

This study has several limitations: a large number of measures was used on a relatively small number of subjects and the response rate at the follow-up study was 43% of the group initially participating in the study. However, the two groups – the participating and non-participating subjects – did not differ in exposure to sexual acts, with respect to a number of sociopsychological variables nor to the degree of traumatization. Therefore, it is possible to argue that the women at the follow-up study were representative for the whole group. Most of the measures were self-report with the possibilities of a memory bias embedded in some of them and a considerable overlap and intercorrelation among them. The similar, future study could be strengthened by including a waiting list control group of CSA cases and by the use of a manualized treatment protocol.

This study, though, also has several strengths: the study is prospective and the first measures were made before the treatment started. Other strengths are: the consecutive selection, the use of validated measures, and use of a comparison treatment sample.

**CONCLUSION**

The preliminary findings of this study confirm the highly stressful nature of CSA. Therapy enhances the quality of life for the CSA survivors; they report of a decline in traumatization symptoms, an enhanced self worth, and one-third achieved a secure attachment style. There are, though, still women that fulfill the criteria for PTSD and therefore the importance of providing therapy of long duration and follow-up examinations must be underlined.

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