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'It is still so deep-seated, the fear': psychological stress reactions as consequences of intimate partner violence

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'It is still so deep-seated, the fear': psychological stress reactions as consequences of intimate partner violence

The negative mental health consequences of intimate partner violence have been well documented in recent years. One aim of the present study was to examine psychological distress and mental problems in assaulted women who have left their relationships. Another aim was to explore these women's sense of coherence (SOC). A combination of qualitative in-depth interviews and quantitative measurement instruments was used. Data were collected from 14 assaulted women with a mean age of 38, living in different places in Sweden. Impact of event scale-revised and symptom checklist-90-R show that the violence creates long-term psychological stress reactions and confirm previous research on the subject. Twelve of the 14 women have symptoms of post-traumatic stress disorder (PTSD). The result of the interviews confirmed complex PTSD and disorders of extreme stress not otherwise specified. On the other hand we found a surprisingly high SOC level among several of the respondents, a fact which could explain why these women finally managed to leave mainly by their own efforts. We call for more both qualitative and quantitative studies on this serious public health issue.

Keywords: intimate partner violence, women's mental health

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Introduction

Intimate partner violence (IPV) comprises all kinds of behaviour that results in sexual, physical or psychological harm to the partner and is considered by World Health Organization (WHO) as a global public health problem (Krug *et al*. 2002). Violence against women was defined by Heise *et al*. (1994) as a public health issue as early as 1994. Findings from a WHO multi-country study on women's health and domestic violence confirm that IPV is still widespread (WHO 2005).

After the Vietnam War, for the first time in history a systematic, large-scale investigation of the long-term psychological effects of trauma from combat was undertaken. In 1980 the characteristic syndrome of psychological trauma became a 'real' diagnosis, called post-traumatic stress disorder (PTSD). Criteria for PTSD are exposure to a traumatic event involving intense fear, terror or helplessness including symptoms such as intrusion, avoidance and hyperarousal (Herman 2001, Flouri 2005). But PTSD is not the only consequence. Authors proposed a specific diagnostic category called complex PTSD (Herman 1992) or disorders of extreme stress not otherwise specified (DESNOS, Van der Kolk *et al*. 2005) for persons suffering from a range of symptom clusters more complicated than those of PTSD.

In 1991, one of the first studies examining IPV as a traumatic event and the occurrence of PTSD was published (Houskamp & Foy 1991). In recent years the negative mental health consequences of IPV have been well documented and show that symptoms of PTSD and other psychological stress reactions are long-term mental health consequences of IPV. From a study of 397 Swedish women, 15.6% reported being abused as an adult, and these experiences reached statistical significance in their association with a high level of common symptoms (Krantz & Östergren 2000). A prospective case-control study in a national sample of American women showed that the women with IPV, compared with women without IPV, experienced a higher degree of depressive symptoms and functional impairment, and less self-esteem and life satisfaction (Zlotnick *et al*. 2006). In a meta-analysis of 11 studies, it was reported that 31–84.4% of women who had experienced IPV had symptoms of PTSD (Golding 1999). Pico-Alfonso (2005) showed from a case-control study that psychological IPV is the strongest predictor of PTSD. In a Swedish study, 20 female primary care patients of different ages, seeking care for undefined musculoskeletal pain disorders, were asked if they had experienced violence or abuse. Eleven of the 20 women reported such experience (Hamberg *et al*. 1999). For more research on the subject: Risberg *et al*. (1999); Lundgren *et al*. (2001); Stein & Kennedy (2001); Campbell (2002); Lang *et al*. (2002); Helweg-Larsen & Kruse (2003); Nixon *et al*. (2004); Romito *et al*. (2005); Woods (2005); Loxton *et al*. (2006); Pico-Alfonso *et al*. (2006); Renck (2006); Schei *et al*. (2006).

In recent years several studies have also shown that abused women do in fact try to solve their situation for example, by leaving, and are not passive victims (Hydén 1999, Ellsberg *et al*. 2001, Holmberg & Enander 2004, Ruiz-Perez *et al*. 2006).

Aaron Antonovsky was interested in salutogenic factors that protected human beings in high stress situations and formulated the concept sense of coherence (SOC) about 20 years ago. SOC consists of three components: comprehensibility, manageability and meaningfulness, and according to Antonovsky, SOC is determined during childhood and early adulthood and stabilized around the age of thirty. Generalized resistance resources, such as money, social support, ego identity and cultural support construct a strong SOC. There are close points of similarity between SOC and the concept of coping. People with a strong SOC tend to manage the stressors of life better than people with a weak SOC (Antonovsky 1987, 1991). To our knowledge there are only a few studies examining SOC with special reference to IPV (Hensing & Alexanderson 2000, Krantz & Östergren 2000). Dutton *et al*. (2006) call for new technologies and interdisciplinary efforts to apply new findings to improving the health of those affected by IPV.

Objectives

One aim of this study was to examine, within a Swedish context and in heterosexual relationships, women's psychological distress and mental problems caused by IPV. Another aim was to explore these women's SOC as a coping factor and personal resource.

Methods

The study was conducted using a combination of qualitative and quantitative methods. Qualitative in-depth interviews were used to obtain a richer and deeper understanding of the psychological stress reactions caused by the violence. Three different quantitative measurement instruments were used at the time of interviews to examine, on the one hand, symptoms of PTSD [impact of event scale-revised (IES-R), Weiss & Marmar 1997] and psychological problems [symptom checklist-90-R (SCL-90-R), Derogatis 1983] and, on the other hand, sense of coherence (SOC scale Antonovsky 1987). Triangulating makes it possible to look at phenomena from different angles and to achieve a broader understanding (Starrin *et al*. 1997). Denzin (1971) concludes that triangulation makes the data and findings credible and that the uncertainty of the interpretations is greatly reduced.

Data were collected between October 2005 and October 2006 from 14 women who had been living in violent relationships in different places in Sweden. Several of the relationships involved physical and psychological violence on a daily basis. In one case, apart from some sexual violence, there was only psychological violence. Ten of the 14 cases involved some form of sexual violence. In several of them the sexual violation was of a severe kind. Contact with the respondents was gained through shelters for battered women, from crime victim shelters, from one lawyer and from private contacts. At the time of the data collection, all of the women had, at least physically, left their relationships, which was the criterion for participating. The relations had endured from about 1 year to about 16 years and the definitive break up had taken place some time during the last 5 years, except from one relation that ended earlier. The respondents' characteristics varied by age (from 25 years to 50 years, with a mean age of 38 years) and socio-economic status. Eight of the 14 women were educated at university level. The majority of respondents were born in Sweden. One woman was born in Norway and one woman in an Arabian country. Twelve of the women have children, either from an earlier relationship or with the

abuser. The interviews varied in time from 1 h to about 3 h, and they were taped and subsequently transcribed verbatim. After each interview, each woman was asked to fill in the three measurement instruments. None of the women had any objections to doing so.

Interviews

The interviews were analysed with the aid of qualitative content analysis as a flexible method for analysing text data. There are several specific types of content analysis. For the present study, a direct content analysis has been used. Direct content analysis is a suitable method when existing theory or previous research on a phenomenon is incomplete and needs further description to validate or extend theories or frameworks (Hsieh & Shannon 2005). Open-ended questions were used to emphasize the respondents' narratives of their experiences and to increase trustworthiness, but also with targeted questions concerning already existing knowledge (Hsieh & Shannon 2005). Only a few questions were formulated in advance in order to give the women an opportunity to freely discuss their feelings and experiences; questions like: How did you feel and react during the relationship? What happened then? How did you feel and react after the break up? The definitions of IPV was not given forehand to the participants, but were defined by themselves through their narratives.

The first step in the analysis was a repeated reading of all the material and memo writing in order to obtain a sense of the whole. Key concepts or variables connected with psychological stress reactions and SOC were then derived as initial predetermined coding categories, by applying a deductive category approach. Data that could not be coded in this way were used to represent new codes. Different codes were then related to each other and sorted into emergent categories to form a complete result which ended in supporting and/or not supporting evidence from previous research and theories (Hsieh & Shannon 2005).

Quantitative measurements

IES-R

The IES-R (Weiss & Marmar 1997) is a self-report measure designed to assess subjective distress produced by life events. It consists of 22 items constituting the subscales of intrusions, avoidance and hyperarousal, the three main characteristics of psychological dysfunction after traumatic life events. Seven items have being added to the original 15-item IES-Total (Horowitz *et al*. 1979). Respondents are asked to rate each item in the IES-R on a scale of 0 (not at all), 1 (rarely), 3 (sometimes) and 5 (often). IES-Total (avoidance + intrusion) can be interpreted in the following dimensions: 0–8, subclinical range; 9–25, mild range; 26–43, moderate range and 44+ as severe range (IES 2007).

SCL-90-R Scales

The SCL-90-R (Derogatis 1983) is a 90-item self-report questionnaire designed to screen for a broad range of psychological problems and physical symptoms. Each of the 90 items of the inventory is rated on a 5-point scale of distress, ranging from 0 (not at all) to 4 (extremely). The 90 items are scored and interpreted in terms of nine primary symptom dimensions/subscales (somatization, obsessive compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism) and a total index [global severity index (GSI)]. A high score in a given dimension indicates high expression of the corresponding distress. For the present study, three subscales were tested: somatization (12 items), anxiety (10 items) depression (13 items) and the total index GSI. Fridell *et al*. (2002) standardized the instrument for Swedish conditions and calculated a Cronbach's alpha between 0.75 and 0.91 for the different subscales.

SOC scale

Personal resources and coping capacity were measured using the short form of the SOC scale, a 13-item semantic differential scale, said to be applicable across gender and culture (Antonovsky 1987). Responses are made on a 7-point scale from 'never' (1 point) to 'very often' (7 points). The scale has five items on comprehensibility, four on manageability and four on meaningfulness. The total score ranges from 13 to 91. In terms of scoring, higher scores indicate stronger levels of SOC. A high value seems to show salutogenic properties (Lundqvist *et al*. 2006).

Analytical strategy

In order to compare psychological problems and physical symptoms measured with SCL-90-R, one clinical group of female psychiatric both inpatients and outpatients with mixed diagnoses and ages, and one normal group were used (Fridell *et al*. 2002). Sign's test one-tailed was used to analyse differences between the groups. To analyse correlation, Spearman's rho correlation coefficients were computed.

Ethical considerations

Before each occasion on which data were collected the women were informed verbally and in writing about the purpose of the study, they were told that participation was voluntary, that they had the right to withdraw at any time

and that data would be handled confidentially. Preparations were made to provide care for the informants if the interview or the questionnaire raised questions of such a sensitive nature that the informants needed to discuss them further. This did not occur. The study was approved by the local Research Ethics Committee at Karlstad University, Sweden (UFO2004/251).

Findings

Interviews

The analysis reveals that *fear/uncertainty* and *shame/guilt* were central themes in the informants' narratives, which in the violent relationships were twisted together into a sense of chaos, leading to varying psychosomatic and psychological reactions. We also found a *high inner strength* among several of the respondents and a surprising capacity to act. The present study does not include physical injuries as a consequence of physical violence, for example, bruising, broken fingers, jaw injuries, hearing injuries and marks of grey hair as a result of being hit on the head. Even though several of the informants had been regularly and severely physically abused, they described the psychological and sexual abuse as causing the deepest and most enduring scars. Concerning the psychological violence one informant said: 'I know that I some times begged him to hit me instead'. Another informant put it like this:

> That's when your mind suffers most I reckon, you are so exalted only for them suddenly to push you down, push you down so low.

The sexual violence also left deep scars on the women, as is apparent from their narratives. One woman recounted that during the last few years of the relationship she had stomach ache every time they had had sex. Another woman commented that during the police inquiry she spoke about '. . . everything except the sexual, because I could not tackle that'. The interviews reveal that some of the women have experienced earlier traumas in their lives, such as rape and sexual abuse in childhood.

Fear and uncertainty

Fear/uncertainty is one of the central themes in the women's narratives. The onset of violence caused a lot of fear, uncertainty and, at the same time, the hope of change. The relationships were permeated with these feelings and they find expression in many different ways when the women talk about the violence, their partner, children and the separation. The majority of the informants describe how they passed their days in constant fear and uncertainty, as one of the women put it:

> It is still so deep-seated, the fear of what he will do that you have no chance of warding it off, you have no idea what will enrage him since you are abused for everything . . . the daily terror is so deep-seated, not being safe in your own home, it makes me tremble as I sit here . . . it was like falling from heaven right down to hell.

In all the relationships the violence occurred in a more or less insidious and gradual manner at first in the form of psychological violence, for example controlling behaviour, threats, jealousy and disparaging comments about the woman her relatives and/or friends, which continued throughout the relationship and created an uneasy feeling, confusion and anxiety.

Often the first physical violence came as a shock to the women. One woman describes how she felt on the first occasion: 'so shocked . . . since it was so brutal all at once'.

A constant oscillation between violence and tenderness on the part of the man caused a situation for the woman which involved trying to avoid the violence, and a constant fear of the next outbreak of violence. One of the women observed: 'The whole of my relationship with him involved trying to eliminate the causes (of the violence)'. Another of the respondents described how she constantly had to maintain a balance between the man and the children to make sure that the children had peace and quiet and that the man was satisfied. One woman described her fear and uncertainty in these terms: 'Then you knew OK, how long will this (the calm) last, two days, three, a week, you never knew'. The fear and uncertainty meant always being on guard, a tension described by one of the women like this: 'Being so tense that it was like standing up although you were lying in bed'.

A common factor in the respondents' narratives is the thoughts about death, and the fear of actually being killed by the man. One woman said: 'Then I feel that I am going to die, and his eyes are absolutely empty, there's nothing there . . .'. Another recounted that she was convinced that she would be killed on every occasion violence erupted. Finally two of the respondents did not even dare to fall asleep while the man was awake from fear of being killed:

> And I feel with the situation we were in then, I daren't go to sleep until he was asleep for I was scared he would kill me in my sleep.

Many of the women described how they had thoughts of suicide as there seemed to be no way out. Three of the women even had thoughts of hurting or killing the man as a final and desperate solution as one of the women expressed it: 'I had an iron bar at home under my bed'.

The analysis shows that, in the majority of the cases, the psychological violence such as threats and stalking got even worse after the woman had broken up, as one respondent

put it: 'That really did it'. Another woman describes her feelings after the break up in this way: '. . . being afraid wherever you went'. One woman describes a situation involving tremendous fear, even though it took place several kilometres from her home:

> And I stumbled in and out of the shop clinging to the shopping cart and feeling that I was going to collapse here but I have to get home with the food. And bought a lot and got into the car, threw myself in, locked all the doors and just broke down, and sat there shaking and scared to death in the car where I locked myself in.

Shame and guilt

According to the narratives, the majority of the respondents had always regarded themselves as strong persons. Therefore, they were severely ashamed of being manipulated and violated, and had strong feelings of guilt for having placed themselves in such a situation and for having failed with the relationship. One woman said that she could not manage to keep in contact with friends and former colleagues:

> I changed my telephone number, as I couldn't answer, what should I say . . . it all went to hell . . . yes, there was this frightful shame, I felt a terrible guilt. I saw no way out, you see . . . didn't know what to do.

It took long time for most of the respondents to tell other people about the violence. Keeping these circumstances secret as long as possible and maintaining a front of normality even with relatives and close friends entailed enormous tension and pressure: 'I learnt to put on a face though I was crying inside'.

The narratives also revealed that shame meant that the women did not want to seek treatment for their physical injuries, and to tell to the hospital staff what had caused the injuries. One woman, however, felt forced to seek hospital care, after she had been viciously raped a short while after a late abortion and was bleeding severely. She said:

> That was the first time I broke down, I can say . . . and what you feel is why couldn't they catch it then, so to say, what is it, why are you like that.

Many of the women also said that they blamed themselves for the violence, partly because the men blamed them for causing the violence, by, for instance, not taking proper care of the home, being too fat or too ugly or being stupid. One woman commented that she 'would feel guilty the whole time'. Another woman put it in these terms:

> I gradually started doing what I could to please . . . so I started thinking, if I give him the food that he likes, that he wants, if I look after the house so it is perfect, and I try to do everything I can not to arouse his anger and attention, perhaps it might be reasonably quiet and calm.

However, from all the interviews it is clear that it did not matter what the women did or how they acted, the violence occurred anyway.

Several of the respondents also said that they felt and still feel guilty towards the children for not having succeeded in leaving the man earlier and/or for not having been able to protect their children from witnessing the violence or being abused themselves. The analyses also show that these feelings last long after the break up. One woman noted:

> I have terrible feelings of guilt towards the children . . . that I didn't manage to get of this earlier for their sakes.

The narratives reveal how living with constant fear/uncertainty and shame/guilt, as some of the respondents had done for a long time, causes deep scars with enduring consequences for health as a result.

Psychosomatic problems

The women we interviewed suffered various kinds of physical symptoms as a result of the mental violence/abuse. A couple of them said that they had suffered weight loss. One woman said she only weighed about 38 kg the day she married the man: 'I was like a zombie'. Others told us how they started to console themselves by eating because of the trauma they were subjected to. One woman said that she gained a tremendous amount through this overconsumption and that she suffered from pains in her joints. One of the respondents noted that even several years after breaking up from the relationship she still had 'pains in every bone in my body'. Another commented:

> Since May, when I could no longer cope and my whole body collapsed, I have had muscle inflammation and pains everywhere.

One woman, who was subjected to severe mental, physical and sexual terror over a period of several years commented on the stomach pains she suffered:

> I realize today that I at least had chronic gastritis, if not a stomach ulcer . . . I crept on all fours between the bedroom and toilet since my stomach hurt so much.

Psychological reactions

It is apparent from the interviews that the traumata the women were subjected to have far-reaching mental consequences that last long after the women have broken up from the relationship; as one woman put it: 'You can't live like this, you go mad, because you are exhausted from fear.' Another said: 'you become ill, you dare not say anything, dare not open your mouth, dare not even look at anyone'.

The majority of the women had been or were still on sick leave because of the violence. Several of them

commented that, having been so betrayed by a person they were very much in love with, they found it difficult to be able to trust other people again:

> What has been crushed most of all I think is my trust and belief in other people.

Several of the respondents talked about traumatic pregnancies and deliveries. One woman said that she cried every day during her pregnancy. Another described her traumatic delivery:

> As they said that they had never seen anyone who had such terrible pain or who suffered such anxiety, they gave me any amount of anaesthetics.

Several of the women said that they had suffered from memory loss and concentration problems. One of them noted that having moved to a secret location, with a new identity, she tried to begin studying at university, '. . . but it didn't work, as I couldn't concentrate.' Another put it this way:

> This business of information is terribly difficult, sometimes still (more than two years after the break up) it's like difficult to cope, for there is so much else in my head.

One woman observed that during the police interrogation she had difficulty in remembering various events because of the mechanism of repression. She simply did not want to remember as 'when you remembered it, then the anxiety really began to come back'. Repressing and, as it were, shutting off feelings was a strategy that many of the women used to cope with the situation. After a period of violence, several of the women suffered from depression. This is described very clearly by one of them in these terms: 'I simply gave up, I just lay in bed sleeping all day'.

Several of the women indicated that they had had sleeping problems both during and after the relationship. Some of them also commented that, on the other hand, after breaking up from the relationship, they were able to sleep as much as they liked, as they could finally relax. As one woman said, 'I could just sit and suddenly fall asleep . . . it was just the feeling of release.' One woman recounted that several years after the break up she continued to relive the trauma in her sleep: 'My [present] husband says that I kick and fight in my sleep'.

The analysis shows that fear and behaviour resulting from this fear remain with many women a long time after they have left the relationship. One woman noted that several years after breaking up, her hands would start sweating profusely if someone said something that reminded her of the situations that used to trigger the violence. Several others described a form of persecution mania which they experienced after breaking up. One expressed this feeling in the following terms: 'As soon as a car came up behind me I thought I was going to be run over.' A third woman formulated this lasting fear and behaviour as follows:

> But it is not until now after . . . in principle three years that I no longer expect . . . to be hit when I disagree. I still find myself ducking and expecting him [the new man] to start shouting and getting furious like the other did as soon as anything came up.

Self-esteem

The majority of the respondents said that they basically perceived themselves as strong individuals with a strong sense of self-esteem and thus found it difficult to understand how they could be so manipulated, brainwashed and mentally broken and how they remain so long in a relationship full of oppression, humiliation and violence. One woman put it in these terms: 'So I have always been a woman who could manage on her own . . . and then come here like this [mentally broken to the trauma clinic]'.

Several of the woman said that they thought their strong self-esteem and their stable background were among the factors that enabled them to get out of the relationship and not be completely broken both mentally and physically, and that quite simply enabled them to survive. One woman observed:

> And I was really in a very bad way . . . had I not had this strong inner self, then it would, it would have all gone to hell.

Several of the women indicated that they understood the whole time that what the man did was wrong and that there was some fault in his personality but they found it difficult to cope with. This insight, as many of them pointed out, also contributed to the fact that the man never got at their inner being; as one of the women put it: 'He never got at my innermost self'. It is apparent from the analysis that, despite the trauma the women had been exposed to, they demonstrated surprising capacity for action. The majority of the interviewees made repeated attempts in various ways to leave the man before they finally succeeded.

Quantitative measurements

Table 1 shows the mean values of the IES-R three subscales: intrusion, avoidance and hyperarousal, where intrusion reached the highest score (23.29), and a total mean value in intrusion and avoidance of 45.79, which is within the severe range level. The IES-R-Total mean score reached 66.57. The frequencies at four levels show that, at the time of this measurement, 12 of the 14 women had symptoms of PTSD. Eleven of them reached the severe range level of 44 or higher.

Physical and psychological symptoms measured by means of SCL-90-R within the subscales somatization,

Table 1
Self-reported symptoms according to IES-R[1] and frequency at four levels of distress on IES-Total[2] in assaulted women ($n = 14$)

Variable	M	SD	Range
IES-R[1]			
Intrusion	23.29	9.14	1–35
Avoidance	22.50	8.50	6–38
Hyperarousal	20.79	8.24	1–33
Total score	66.57	23.27	9–106
IES-total (intrusion + avoidance)	45.79	15.49	8–73
			Frequency
IES-Total[2]			
Subclinical range (0–8)			1
Mild range (9–25)			1
Moderate range (26–43)			1
Severe range (44-)			11

[1]IES-R = impact of event scale-revised: intrusion (0–35), avoidance (0–40), hyperarousal (0–35).
[2]IES-Total = impact of event scale (intrusion + avoidance) could range from 0 to 75.

depression, anxiety and GSI, and a comparison between our sample, a clinical group and a normal group (Table 2) show that our study group reached the highest mean levels in all three subscales and in GSI. Somatization is the most outstanding and in our group reached the highest mean score with 2.33. For somatization, the difference between our group and the other two groups is significant ($P < 0.001$).

The results of self-reported 'SOC' show a range of 21–82 and a mean value of 55.57. A comparison between SOC, IES-R and SCL-90-R raw scores shows that the women with the highest levels of SOC have quite low levels of both IES-R and SCL-90-R whereas the women with the lowest levels of SOC show high levels of both IES-R (rho = –0.515, $P = 0.06$) and SCL-90-R (rho = –0.609, $P = 0.02$) (Table 3). A negative correlation means that high scores of SOC are associated with a low rating on IES-R and SCL-90-R, and vice versa.

Discussion

The aim of this study was to use a combination of qualitative and quantitative methods to examine on the one hand, women's psychological distress and mental problems caused by IPV, and on the other these women's personal resources measured by means of SOC. The results from the in-depth interviews show that violence creates feelings of fear/uncertainty and shame/guilt, and causes a range of long-term psychological stress reactions among the respondents. At the same time, we found high self-esteem among several of the women.

The results from the quantitative measurements IES-R, SCL-90-R and SOC correspond quite well with the results of the in-depth interviews. The frequency at four levels of distress on IES-Total (avoidance + intrusion) shows that 12 of the 14 women had symptoms of PTSD. The mean values from SCL-90-R, GSI and the subscales somatization, depression and anxiety show poorer health compared to a normal group and even compared with a clinical group of female psychiatric patients with mixed diagnoses and ages (Fridell *et al*. 2002). The results from the 13-item SOC scale show a broad range, from 21 to 81, and a mean level of 55.57. The results reveal a pattern and a negative correlation between low SOC and high IES-R-Total and SCL-90-R levels. In contrast, high levels of SOC are followed by lower IES-R and SCL-90-R levels. The results from IES-R and SCL-90-R, were expected and confirm former studies of psychological stress reactions from IPV (Houskamp & Foy 1991, Heise *et al*. 1994, Golding 1999, Risberg *et al*. 1999, Krantz & Östergren 2000, Lundgren *et al*. 2001, Stein & Kennedy 2001, Campbell 2002, Lang *et al*. 2002, Helweg-Larsen & Kruse 2003, Nixon *et al*. 2004, Pico-Alfonso 2005, Romito *et al*. 2005, Woods 2005, Loxton *et al*. 2006, Pico-Alfonso *et al*. 2006, Renck 2006, Schei *et al*. 2006, Zlotnick *et al*. 2006). The results from the interviews and SCL-90-R confirm complex PTSD and DESNOS (Van der Kolk *et al*. 2005), for example, through the respondents' feelings of shame and guilt, thoughts about death and their psychosomatic symptoms, which are not measured in IES-R.

On the other hand, the results on the SOC scale were quite surprising as we had expected lower values. Nine of the 14 women reached a level higher than 50. To our knowledge, there are only a few studies examining SOC in relation to IPV in particular. A study by Hensing & Alexanderson (2000), using the longer form of the SOC scale, shows that women exposed to domestic violence or sexual abuse had lower SOC than those never exposed. Krantz & Östergren (2000), also using the 29-item scale, found a relation between low SOC and exposure to violence or abuse in adulthood.

According to Antonovsky (1987), SOC is built up during childhood and early adulthood and stabilized around the age of thirty. This has been discussed and several studies have shown that SOC might change as a result of radical and lasting changes in life. In a study of unemployed people, using the 13-item scale, Starrin *et al*. (2001) show that the mean score for women was 55.19 (for men 54.41). The SOC score for a random selection of the Swedish population was 64.02 among women (among men 65.04) (Larsson & Kallenberg 1996). In an American study the mean value for homeless women was 50 (Ingram *et al*. 1996).

Supposing that IPV is at least as traumatic and distressful an event as unemployment and homelessness, the

Table 2
Physical and psychological symptoms measured by SCL-90-R. Comparison between the study group, a clinical group and a normal group

SCL-90-R variables	Study group $n = 14$ M (SD)	Clinical group[1] $n = 955$ M (SD)	Normal group[2] $n = 707$ M (SD)
Somatization	2.33 (0.90)	1.11 (0.87)***	0.49 (0.48)***
Depression	2.05 (1.02)	1.64 (0.95)	0.72 (0.74)**
Anxiety	2.08 (0.91)	1.31 (0.90)*	0.56 (0.54)***
GSI total index	1.75 (0.74)	1.21 (0.73)*	0.49 (0.44)***

SCL-90-R, symptom checklist-90-R; GSI, global severity index.
[1]Female psychiatric both inpatients and outpatients with mixed diagnoses and ages (Fridell *et al*. 2002).
[2]Normal group of women (Fridell *et al*. 2002).
*$P < 0.05$; **$P < 0.01$; ***$P < 0.001$.

Table 3
Scores of SOC compared with scores of IES-R-Total and SCL-90-R in 14 assaulted women

	SOC (13–91)	IES-R-Total (0–110)	SCL-90-R (0–360)
1	56	83	85
2	67	66	116
3	41	75	220
4	54	68	204
5	42	70	140
6	73	9	21
7	52	72	174
8	60	81	168
9	21	106	285
10	82	30	71
11	50	55	179
12	57	72	176
13	75	71	184
14	48	74	183
	M (SD)	M (SD)	M (SD)
	55.57 (15.76)	66.57 (23.27)	157.5 (66.95)

SOC, sense of coherence; SCL-90-R, symptom checklist-90-R; IES-R, impact of event scale-revised.
SCL-90-R is presented in raw scores.
Spearman's rho SOC/IES-R-total = –0.515, $P = 0.06$.
Spearman's rho SOC/SCL-90-R = –0.609, $P = 0.02$.

majority of the women in the present study achieved an unexpected high level of SOC, with a mean level of 55.57 and if SOC is not as stable as Antonovsky suggests, these women's SOC ought to have been at an even higher level before the occurrence of this distressful part of their lives. Four of the women have a SOC level higher than 65. It is perhaps because of these women's relatively strong SOC, which is also apparent from their narratives, that they did not break down completely and that they finally managed to break up from the relationship by their own efforts to a greater extent than the rest of the group. And it is perhaps possible for these women to reach a higher level some time again. At the same time, the results from this study show that IPV has enormous negative psychological consequences even for women with quite a high SOC. This raises a question about the psychological consequences for women who had a low SOC even before the violence occurred. Four of the women in the present study had low SOC scores. These women also reached quite severe levels of IES-R and SCL-90-R. Three of these women's narratives actually provide a picture of earlier traumas in their lives. The woman with the lowest SOC score and highest IES-R and SCL-90-R scores is the woman who was born in an Arabian country. Her narrative reveals how she suffered from a double burden of moving to Sweden, without her relatives at a very young age with all the consequences that entails, and of having been oppressed and violated by her husband on a daily basis. One woman, who also reached quite severe levels on the measurement scales, mentioned during the interview that she had been raped earlier in life. A third woman said that she had been sexual abused in childhood. Earlier traumas in life might explain these women's low SOC scores. In a study of 81 women with a history of childhood sexual abuse, many of them reported extremely low SOC levels (Renck & Rahm 2005). A qualitative study of these women shows that the effect of shame influences their lives negatively (Rahm *et al*. 2006).

Limitations

In this study we used a fairly small sample and the questions cannot fully be answered. Another limitation is that the women's narratives and scores from the measurements may vary depending on earlier traumas in life, how severe the violence was, the duration of the relationship and how much time had passed since they left the relationship. There is always a risk that deductive analysis might have influence on the results by repeating earlier concepts and definitions of IPV and psychological reactions. However, one aim of using a combining of methods was to avoid such bias and to increase the credibility of results.

Implications

The contribution of the present study may, besides from confirming former studies on IPV and psychological stress

reactions, lie in the combination of methods and the results of the SOC measurements and DESNOS, which have not been frequently discussed in earlier research concerning IPV, the qualitative part resulting in a more complex picture with the women describing their SOC and their psychological stress reactions in their own words, rather than could be achieved by just using scale measurements.

The World Health Organization states that the fundamental goals of public health are to preserve, promote and improve health (Krug *et al*. 2002). The findings have implications for public health and interventions directed towards abused women. These findings contribute to our understanding of the importance of a high self-esteem and SOC, but also the importance of early intervention to prevent longer-term PTSD and DESNOS. A prevalence study among 10 000 Swedish women showed that women if subjected to IPV most commonly seek help from the medical services. Twelve per cent applied to a psychiatrist (Lundgren *et al*. 2001). Healthcare providers are a valuable resource for early identification, intervention and treatment of high risk women. It must be of great importance to encourage medical staff to dare to see and dare to ask so that they can provide adequate assistance when they suspect an individual of being subjected to IPV. The findings can be used in further education for psychiatric teams. But the findings are also of importance for non-governmental organizations (e.g. women's refuges and victim support centres), acting as intermediary to health care and the police.

It would be of interest to conduct another study on this subject with a larger sample, and we call for more studies combining both qualitative and quantitative methods to provide greater knowledge of this serious public health issue.

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