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Title: Association between experiencing rape, police reporting and self-reported health among women visiting three gynecology clinics in Sweden.

Running title: Rape, Police Reporting and Health.

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Abstract

Objective: To describe the frequency of police reporting among rape victims based on two hypotheses: 1. Victims of rape more often report poor health than those who have not been victims of any abuse, and 2. victims who report abuse to the police are more likely to state poor self-reported health than those who do not report any abuse.

Design: Cross-sectional questionnaire study.

Setting: Three Swedish departments of obstetrics and gynecology.

Sample: From an original sample of 2439 women, those who had experienced rape and those who had no history of abuse were included (n = 1319).

Method: Analysis of associations between self-reported poor health, rape and police reporting among rape victims were assessed by multivariate models adjusted for type of abuse, perpetrator and sociodemographic factors.

Main outcome measures: Odds ratios for poor health among rape victims.

Results: Rape was seldom reported to the police (23.5%, 44/187). Both hypotheses were confirmed; rape victims more often state poor health than non-abused women (adjusted OR 3.9; 95% CI 2.4-6.3), and women who had reported abuse to the police stated poor health more often than those who had not reported abuse to the police (adjusted odds ratio 3.0; 95% CI 1.1-8.1)).

Conclusions: Three of four rape victims had not reported any abuse to the police, and those who had were more likely to report poor health. Rape myths are prevalent in society and affect how victims of sexual abuse are treated both by formal and informal support providers, which in turn may affect the recovery and health of victims. Our results send an urgent message to the current debate on sexual abuse against women: Why do women not report rape to the police?

Keywords: rape, self-reported health, crime victims, rape myths, social behavior

Introduction

Over the past three decades the number of reported rape incidences to the police has increased more than five times in Sweden. Almost 13 000 sex crimes were reported in 2007; one-third was rape (1). The increase is partly accounted for by changes in legal definitions and by an altered propensity to report (2), but it is also likely that the number of rapes committed have increased (3).

Even though the willingness to report rape to the police has grown it could rightfully be assumed that reported cases of rape are still just the top of an iceberg. In a Swedish survey of men's violence against women only 8% of women who reported sexual violence as their last victimization had reported that incident to the police (4). In the USA the frequency of police reporting has been found to be only 15% among victims of rape or attempted rape (5).

Sexual abuse affects both the physical and mental health of victims (6-11). The effect is long-lasting and the severity and duration of abuse have been shown to be predictive of health problems (11). Post-traumatic stress disorder (PTSD) is one of the documented mechanisms explaining why raped women have poorer self-reported health than women not exposed to such violence (12, 13).

Characteristics of the context in which rape takes place influence the social perception of it (14). Rape myths can be defined as prejudicial, stereotyped, or false beliefs about rape, rape victims, and rapists and contribute to the perception of a climate hostile to rape victims (15). Rape myths characterize rape as an act of violent, forceful penetration committed by a stranger during an attack in a public or deserted place (16, 17). The stereotypical victim is a morally upright woman who was physically injured while resisting. Other prevalent rape

myths are that women lead men on and therefore deserve to be raped, that women often make false accusations of rape, and that no woman can be raped against her will (16-18).

In reality, in the Swedish context, a partner or a former partner is the perpetrator in 32% of all reported rape cases and 60% of such events occur in the home of the victim or the perpetrator. Only 20% of rapes reported to the police are committed by a stranger (2). Physical violence in association with rape is often reported to have been limited (2, 19). The same pattern is seen in studies from the USA, in which acquaintance rape is much more common than stranger rape (20, 21), and only a few per cent involve the use of a weapon (21).

Reactions and attitudes from people in the victims' vicinity have been reported to affect the recovery after sexual abuse. Negative and hostile reactions can contribute to an increased feeling of danger and helplessness for the victim, as well as more intense post-traumatic stress symptoms, while supporting attitudes can reduce the intensity of trauma symptoms (20, 22). In studies from the United Kingdom and New Zealand, only about 50% of rape victims were satisfied with the police handling of their case (23, 24). When interviewing rape victims spokesmen, Campbell found that victims tended to be more satisfied with the legal system and the health care system if they and the abuse fitted into stereotypes, than if they did not (25).

Our aim was to describe the frequency of police reporting among rape victims. Furthermore, we had two hypotheses: 1. Victims of rape more often report poor health than those who have not been victims of any abuse, and 2. Victims who report an abuse to the police are more likely to state self-reported poor health than those who do not report abuse.

Material and methods

Eligible for the study were 3000 consecutive women visiting on their own accord or referred to three departments of obstetrics and gynecology at hospitals in south-eastern Sweden from from October 1st 1999 until February 28th 2000 in acute and non-acute circumstances.

Excluded were obstetric patients, women not speaking/understanding Swedish and those under the age of 18. Not only women with disease or symptoms were included, - cancer screening and infertility problems were common reason for appointments at the clinics. Most patients had an outpatient appointment, and only a minority were admitted to a ward.

The patients were invited to the study by the reception staff, and given a letter which included information on where to turn with questions or what to do if help was needed. All who did not decline participation received an additional information letter and the NorVold Abuse Questionnaire (NorAQ) by postal mail within two weeks. Two reminders were used. A more detailed description of the data collection has been presented earlier (26).

The response rate was 81% (N = 2439) in the original sample. Only raped women and women not exposed to any kind of abuse were included in the present study (n = 1319). Women who reported physical and/or emotional abuse, but not rape were excluded (n=1120).

Measurement

The NorAQ was developed for a Nordic study on gender violence and ill-health (27-29). The questionnaire has eight parts, of which the first three consist of questions about the women's social background, reproductive health, general health and medical history. Parts four to seven cover abuse of an emotional, physical, or sexual nature, or abuse in health care. In the last part

there are general questions about the aftermath of abuse, such as whether the woman has ever reported abuse to the police. All questions about abuse in NorAQ have been validated with good results (29).

In the Swedish penal code rape is defined as a forced sexual intercourse or an act that with regard to the nature of the violation and the circumstances in general, is comparable to enforced sexual intercourse, e. g. oral or anal sexual acts or forcing an object or a body part into the vagina, mouth or rectum. There is no demand that penetration should have occurred for the crime classification to be “rape” (30, 31). Using the law as a benchmark, rape was in our study operationalised as an affirmative answer to the following question: “Has anybody *against your will* put his penis into your vagina, mouth, or rectum or tried any of this; put in or tried to put an object or other part of the body into your vagina, mouth, or rectum?”

Raped women were further subdivided into women who had only experienced rape and women also subjected to severe physical and/or severe emotional abuse. Severe emotional abuse was operationalised as an affirmative answer to the following question: “Have you experienced living in fear because somebody systematically and for a longer period has threatened you or somebody close to you?” Severe physical abuse was operationalised as an affirmative answer to the question: “Have you experienced anybody threatening your life by, for instance, trying to strangle you, showing a weapon or knife, or by any other similar act?”

Eleven items were used to create a self-reported health sum score for each woman during the past 12 months:

- 1) Self-reported general health had the following answer alternatives: Very good = 0; Rather good = 1; Rather poor = 2; Very poor = 3.

- 2-8) Anxiety, depression, sleeping problems, and physical complaints, (e.g. stomach ache, headache, dizziness, or muscular pain) and three questions measuring post-traumatic stress symptoms (flashbacks, avoidance, and numbing) all used the answer alternatives: No = 0; Yes, but rarely = 1; Yes, sometimes = 2; Yes, often = 3.
- 9-11) Health care utilization was measured by numbers of consultations to a physician: 1-3 visits = 1; 4-6 visits = 2; 7 visits or more = 3. Reports on ever having consulted a psychiatrist or psychologist were categorised into: No = 0; Yes, earlier, but not for the last 12 months = 1; Yes, during the last 12 months = 2. Having been on sick leave for more than two weeks during the last 12 months was dichotomised into No = 0; Yes = 1.

All variables contributed according to the figures above to generate a sum score (range 1-26; n=1319). The 74th percentile was used as an agreed but arbitrary cut-off, and all scores equal to or above that level were operationalised as self-reported poor health.

Social background variables were age (18-34; 35-49; ≥ 50), civil status (partner or single), education (≤ 9 years, 10-12 years and ≥ 13 years), and occupation (employed/student, housewife, pregnant/parental leave, unemployed, welfare recipient or other). These variables were used to describe women who had been raped, and to compare those who had reported an abuse to the police and those who had not.

Statistical analyses

All statistical analyses were performed in the statistics program SPSS version 14.0 for Windows. Pearson's chi square test was used to evaluate whether there were any differences in sociodemographic characteristics among rape victims who had reported abuse to the police

and those who had not reported any abuse. Two binary logistic regression analyses were computed to determine associations between self-reported poor health and (1) rape and (2) police reporting. The multivariate models were adjusted for type of abuse (rape or rape and severe physical and/or emotional abuse), perpetrator (unknown or known) and statistically significant sociodemographic factors. The significance level was set at $p < 0.05$ (95% confidence interval).

Results

In this study 190 women had been raped. Three of them did not answer the question about police reporting and were therefore excluded. Of the remaining 187 women, 23.5% (n = 44) had reported abuse to the police; of them 12 had reported rape and 32 had reported rape, physical and/or emotional abuse. The women who had reported to the police were younger than those who had not (Table I).

Table I. Characteristics of rape victims who had/had not reported abuse to the police (n = 187).

	Not reported to the police		Reported to the police		<i>p</i>
	n = 143		n = 44		
	n	%	n	%	
Age					<i>0.002</i>
18–34	35	24.5	23	52.3	
35–49	64	44.8	15	34.1	
>50	44	30.8	6	13.6	
Civil state					<i>0.253</i>
Partner	109	76.8	30	68.2	
Single	33	23.2	14	31.8	
Education					<i>0.632</i>
≤ 9 years	40	28.0	14	32.6	
10–12 years	52	36.4	17	39.5	
≥ 13 years	51	35.7	12	27.9	
Occupation					<i>0.097</i>
Employed/Student	96	67.1	22	50.0	
Housewife/Pregnant/Parental leave	4	2.8	3	6.8	
Unemployed	6	4.2	6	13.6	
Welfare recipient	34	23.8	12	27.3	
Other	3	2.1	1	2.3	
Kind of abuse					<i>0.008</i>
Rape	68	50.0	12	27.3	
Rape + severe physical and/or emotional abuse	68	50.0	32	72.7	
Perpetrator					<i>0.431</i>
Unknown	20	14.1	8	19.0	
Known	122	85.9	34	81.0	

Note: Internal dropout = 0–7 (0–3.7%).

The first binary logistic regression analysis showed that having experienced rape was strongly associated with self-reported poor health (adjusted odds ratio (OR) = 3.9; 95% confidence interval (CI) = 2.4–6.3) (n=77/1244) and in the group of women who reported severe physical and/or emotional abuse as well as rape the association was even stronger (adjusted OR = 11.7; 95% CI = 7.0–19.4) (n=98/1244) (Table II).

Table II. Odds ratios (OR) for self-reported poor health, adjusted for all included variables (n = 1244).

		<i>n</i>	Adjusted OR	CI
Age	18–34	326	1.4	0.9–2.0
	35–49	370	1.4	1.0–2.0
	≥ 50	548	1	
Civil state	Partner	1085	1	
	Single	159	1.0	0.7–1.5
Occupation	Employed/Student	917	1	
	Housewife /Pregnant/Parental leave	67	1.0	0.5–1.9
	Unemployed	49	2.3	1.2–4.4
	Welfare recipient	198	3.1	2.1–4.5
	Other	13	3.5	1.0–11.5
Kind of abuse	None	1069	1	
	Rape	77	3.9	2.4–6.3
	Rape + severe physical and/or severe emotional abuse	98	11.7	7.0–19.4

Note: * Significant $p = 0.05$ Model summary, Cox and Snell R-square = 0.14. Internal dropout = 75 (5.7%). CI = 95% confidence interval.

When analyzing only women who had experienced rape, the second binary logistic regression showed no significant association between self-reported poor health and known/unknown perpetrator or age. Women who had reported abuse to the police more often had poor self-reported health than those who had not reported to the police (adjusted OR = 3.0; 95% CI = 1.1–8.1) (n=42/171).

Discussion

Far from all cases of sexual abuse are reported to the police. In our study only 24% of rape victims had reported abuse to the police. Still this is a higher figure than the 8% previously reported from a Swedish sample (4). However, that study also included less severe forms of abuse and it is therefore not surprising that the prevalence is higher in our sample, consisting only of raped women. The question about reporting abuse to the police in NorAQ does not specify what kind of abuse was reported; theoretically women may therefore have been subjected to rape but reported only a physical or emotional abuse to the police, meaning that the frequency of reported sexual abuse may be even lower.

Studies from the USA have indicated that rapes consistent with rape myths (i.e. the perpetrator is a stranger, there are multiple assailants or violence is explicit as evidenced by use of weapons and victim injury) are more likely to be reported to the police (5, 32). We found no significant difference in the propensity to report abuse depending on if the perpetrator was known or unknown to the victim. We did find that those who reported abuse to the police were significantly younger than those who did not. This might reflect a change in attitude in society, with the younger generation regarding sexual abuse as a crime even if it does not fit the rape myths, thus being more likely to report it.

We found that victims of rape more often had poor self-reported health than women who had not been abused. This was a confirmation of our first hypotheses and in concordance with results from other studies (6-10). As could be expected, exposure to combinations of severe abuse (i.e. rape and/or severe physical and/or severe emotional abuse) was even stronger

associated to poor self-reported health. Unexpectedly, there was no association between self-reported health and whether the perpetrator was known or unknown to the victim.

It is known that many women subjected to rape are also subjected to other kinds of abuse, which could influence their health. We have tried to take this into consideration by only including women who have experienced rape or no abuse at all in the study. However, dividing abuse into different kinds of abuse is merely a theoretical construct for research purposes. One abusive episode in reality may consist of emotionally, physically *and* sexually abusive aspects. Furthermore, there is a dose response relation between the frequency of violence exposure and illness; i.e. the more a woman is exposed to abuse, the more somatic symptoms and diseases she will report (7).

Our second hypothesis was also confirmed as we found that victims of rape who had reported abuse to the police had poor self-reported health more often than those who had not reported to the police. Due to the study design, it can not be ruled out that it is the extremely severe kinds of abuse that are reported to the police, explaining the association between police reporting and poor health, i.e. the association may be confounded by the severity of abuse. The design of our study was not optimal for analyzing this dose response relation or how reporting an abuse more precisely affected self-reported health in rape victims. A qualitative approach could have been more and differently informative.

Our results might indicate that the police and the legal system do not always give victims proper support. Earlier research has shown that rape victims are more likely to receive positive reactions from informal support providers (friend, partner etc) than from formal

support providers such as policemen or doctors. Victims were even more likely to receive negative than positive reactions from formal support providers (33).

Rape myths have a significant influence on how people respond to rape victims (17, 34). Frese et al. report that people with a high rape myth acceptance attribute more guilt to the victim, assume the victim's trauma to be less severe, and are less likely to recommend reporting of the rape to the police than people with a low rape myth acceptance (14).

Since the reactions from people in the victims' vicinity will influence her recovery, it is critical that people entrusted with the woman's story, such as family, friends, and professionals, do not blame her, but validate that what happened to her was traumatic and not her fault (35). Treating the victim differently (e.g. pulling away from her), taking control of the situation, or trying to distract her by telling her things like "go on with your life" are related to poorer self-rated recovery and more psychological symptoms, while being listened to is related to better self-rated recovery and fewer psychological symptoms (21).

A new finding was that 76% of those women who had experienced rape had not reported any abuse to the police, and that those rape victims who had reported abuse to the police suffered from poorer health than those who had not done so. Our results send an urgent message to the current debate on sexual abuse against women: Why do women not report rape to the police?

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