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Experience of violation during the past three months, social capital and self rated health: A population-based study

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Abstract

Objective: The objective was to investigate the association between experience of violation during the past three months and self rated health, taking trust (social capital), economic stress and country of birth and parents' country of birth into account.

Design/setting/participants/measurements: The 2008 public health survey in Skåne is a cross-sectional study with 55% response rate. A random sample was approached using a postal questionnaire, and 28,198 persons aged 18–80 responded. Logistic regression models investigated associations between experience of violation during the past three months and self rated health.

Results: A 27.4% proportion of the men and 30.0% of the women reported less than good health. Less than good health was significantly higher in older age groups, among persons born outside Sweden, with low education, economic stress, low trust in other people and experience of violation during the past three months. The group with experience of violation at one occasion during the past three months had odds ratio 1.76 (1.57-1.97, 95% CI) of less than good health among men and odds ratio 1.78 (1.62-1.96) among women, while the group with experience of violation two or more times during the past three months had odds ratio 4.28 (3.36-5.44) among men and 3.54 (2.89-4.35) among women in the final multiple analyses.

Conclusions: Experience of violation during the past three months is significantly associated with less than good health, which is a finding with important policy implications.

Key words: Social capital, trust, economic stress, country of birth, violation, self rated health, Sweden.

Introduction

Discrimination and violation are closely interconnected social phenomena. Discrimination and violation may increase the risk of socially caused trauma (physical, psychological or sexual), increase the risk of economic and social deprivation, and result in decreased access to health care. Discrimination and violation may also result in anger and fear. The physiological panic-flight reaction mobilizes lipids and glucose to increase the access to energy and to raise the level of psychological preparedness. Blood pressure also increases, a physiological reaction which in instances of recurring exposure to discrimination and violation may result in chronic hypertension (1,2,3). Discrimination and violation may also increase the risk of poor mental health (4,5).

Discrimination is “the process by which a member or members of a socially defined group is, or are, treated differently (especially unfairly) because of his/her/their membership of that group” (6). De jure discrimination refers to discrimination sanctioned by the legal system, while de facto discrimination stems from habits and attitudes. Structural discrimination refers to how a society reproduces discrimination, while interpersonal discrimination is the experience of discrimination by individuals. All forms of discrimination hurt economic and social well-being as well as health (3). Self reported discrimination due to racism has been associated with self rated health in studies in the USA (7,8), although surprisingly few international studies have investigated the association between discrimination and self rated health. Most of the literature concerning systematic experiences of discrimination and their long term effects on health through psychosocial, psychological and physiological mechanisms refers to ethnicity and ethnic groups (9), and most studies have been conducted in the USA (3). Fewer studies have been conducted concerning discrimination issues such as for instance age, gender and sexual discrimination, respectively, and health (10), and discrimination may also occur for other reasons.

Violation concerns “dignity and different forms of dignity violation” (11). Dignity may be discerned into the two phenomena human dignity and social dignity. Human dignity is the basic value attributed to being human, while social dignity is a product of the interactions between individuals, groups of individuals, organizations, and

institutions. Social dignity concerns both dignity-of-self, which includes characteristics such as self respect and self-worth and dignity-in-relation (12). Violation has for instance been investigated in relation to health in terms of effects of job insecurity as “the violation hypothesis” (13) and in terms of maltreatment of the elderly (14). Only few studies have investigated violation in relation to self-rated health in specific settings such as the labour market (13), and even fewer in relation to self rated health in the general population.

The aim of health policy is both to increase health and life expectancy in the population *and* to reduce health differences (15). Sweden is currently a multiethnic society with 1.3 million inhabitants born in other countries than Sweden. The proportion born in other countries constituted 13.8% of the 9.3 million total population in 2008 (16). The patterns of health and mortality according to country of birth are diverse. The prevalence of poor self rated health is higher among those born in the fifteen first member of the European Community countries (EU 15), other European countries and outside Europe, compared to the category born in Sweden. In addition, the category born in Sweden but with both parents born abroad also has significantly higher prevalence of less than good self rated health compared to the category born in Sweden. In contrast, the age- and sex-adjusted mortality in 2001-2005 was higher in the category born in the EU 15 than in the category born in Sweden, while it was the same in the category born in other European countries and significantly lower in the category born outside Europe (15). No de jure discrimination exists in Sweden. Furthermore, Sweden also has laws against discrimination covering most areas of human life. On the other hand, de facto discrimination seems to exist for instance within the health care system (17).

In Sweden only few studies have been conducted concerning discrimination, violation and health. One study showed a significant association between perceived discrimination and self rated health among Kurdish immigrants in Sweden (18). Another Swedish study found a significant association between country of birth and less than good self rated health, mediated by socioeconomic status and discrimination among immigrants born in Poland, Turkey and Iran (19). Findings from the national public health survey convey a significant association between repeated discrimination and less than good mental health even after multiple adjustments (20). Some studies

have displayed a significant association between expectation of discrimination on the labor market (by employer) and self rated health (21) and mental health (22), respectively.

Discrimination and violation are strongly associated with social capital. Social capital concerns the *interaction* between individuals, groups of individuals, organizations and institutions rather than the characteristics of each of these entities *per se*. Social capital comprises reciprocity among citizens, civic engagement among citizens, social participation among citizens, generalized trust in other people, and trust in the government and other public institutions of society, and social capital thus fosters social and economic cooperation and progress (23,24). According to Putnam the low levels of social capital and trust in the southeastern parts of the USA have origins extending far back in time from the era of slavery and the following period which entailed de jure discrimination (25). Social capital has been suggested to affect health by psychosocial stress mechanisms, by increased access to health care and amenities, by a decrease in crime and particularly violent crime, and by promoting benevolent norms, values and attitudes concerning behaviours and lifestyles associated with health (26). The proponents of social capital as a determinant of health have been challenged by other scholars who state that general public welfare policies aimed at decreasing socioeconomic differences in life conditions and economic/ material conditions in general are more crucial predictors of health than social capital (27).

Self rated health is a compound measurement of physical and mental health. It is a significant predictor of morbidity and mortality (28).

The hypothesis of this study is that a significant association exists between self reported violation during the past three months and less than good self rated health even after adjustments for country of birth and parents' country of birth, education, economic stress and trust.

The aim of this study is to investigate the association between experience of violation during the past three months and self rated health.

Methods and materials

Study population

The public health survey in 2008 in southern Sweden (Skåne) is a cross sectional study. A total of 28,198 persons randomly selected from the official population registers of people living in Skåne born between 1928 and 1990 answered a postal questionnaire in the period from August to September 2008 (55% response rate). Two reminder letters were also sent. Ethical permission was granted from the Ethical Committee, Lund University (Dnr. 2010/343).

Definitions

Dependent variable

Self rated health was investigated by the question “How do you consider your general health status?” with five alternative answers “very good”, “good”, “neither good nor poor”, “poor” and “very poor”. The answers were dichotomised into good (the two first alternatives) and less than good (the three latter alternatives) self rated health.

Independent variables

Age was divided into the age categories 18-24, 25-34, 35-44, 45-54, 55-64 and 65-80 years.

All analyses in the study were stratified by *sex*.

Born in Sweden/born in other country than Sweden. All participants born in countries other than Sweden were merged into a single category. Respondents born in Sweden were categorized into one category with both parents born in Sweden, one category with one parent born in Sweden and one parent born abroad, and, finally, one category with both parents born abroad.

Education was classified into the categories 13 years or more of education, 10-12 years of education and 9 years of education or less.

Economic stress was investigated with the question “How often during the past twelve months have you had problems paying your bills?” with the alternatives “never”, “occasionally”, “every second month” and “every month”.

Generalized trust in other people measures the individual’s assessment of generalized trust in other people. It was appraised by the item “Generally, you can trust other people” with the four alternatives: “Do not agree at all”, “Do not agree”, “Agree”, and “Completely agree”, and dichotomized with the two first alternatives indicating low trust and the two latter depicting high trust.

Violation during the past three months was assessed with the item “Have you during the past three months been treated in a way that made you feel violated?” The alternative answers were “no”, “yes, on some occasion” and “yes, several times”. The violation variable was dichotomized in the analysis in table 3 with the two latter alternatives collapsed.

Statistics

Prevalences (%) of self rated health, age, country of birth, education, economic stress, generalized trust in other people and experience of violation were calculated (table 1). Prevalences (%) and odds ratios with 95% confidence intervals (OR:s, 95% CI) of less than good self rated health were calculated according to violation during the past three months, age, country of birth, education, economic stress, and generalized trust in other people (table 2). Prevalences (%) and odds ratios with 95% confidence intervals (OR:s, 95% CI) of self reported experience of violation during the past three months were calculated according to age, country of birth, education, economic stress, and generalized trust in other people (table 3). Age-adjusted and multiple adjusted odds ratios and 95% confidence intervals of less than good self rated health were calculated according to experience of violation (table 4). Chi quare and Nagelkerke R^2 were calculated for the models in table 4. The statistical analyses were performed using the SPSS software package version 17.0 (29).

Results

Table 1 displays that 27.4% of the men and 30.0% of the women reported less than good health. The prevalence of age, country of origin, parents' country of origin, education, economic stress, generalized trust in other people and experience of violation variables among men and women are displayed in table 1.

Table 2 shows that the odds ratios of less than good health were significantly higher in higher age groups, among those born in other countries than Sweden, among persons with medium and low education, with economic stress, low generalized trust in other people and experience of violation during the past three months.

Table 3 shows that self reported experience of violation (one or several times) during the past three months was significantly more prevalent among comparatively younger respondents, among men and women born in Sweden with one or both parents born abroad, among men but not women born abroad, among men and women with higher education, among men and women who had experienced economic stress during the past year and among men and women with low generalized trust in other people.

Table 4 shows that among both men and women the significant associations between self reported experience of violation during the past three months and less than good health remained throughout the multiple adjustments. The category with experience of violation at one occasion during the past three months had an odds ratio 1.76 (1.57-1.97, 95% CI) of less than good health among men and an odds ratio 1.78 (1.62-1.96) among women. The odds ratios of less than good health were consistently highest in the category that had experienced violation several times during the past three months, OR 4.28 (3.36-5.44) among men and 3.54 (2.89-4.35) among women.

Discussion

The group with experience of violation at one or several occasions during the past three months retained significantly higher odds ratios of less than good health throughout the multiple analyses. Self reported experience of violation (one or several times) during the past three months was significantly more prevalent in younger age groups, among men and women born in Sweden with one or both parents born abroad,

among men but not women born abroad, among men and women with higher education, among men and women with economic stress and among men and women with low generalized trust in other people.

Experience of violation during the past three months is significantly associated with less than good health even after adjustments for a number of relevant confounders, and the association is also stronger for those who had experienced several incidents of violation during the past three months. The mechanisms behind this association may be both psychological (4,5) and physical (1,2,3). The plausible causal mechanisms connecting violation and health may include increased risks of hypertension and increased levels of blood glucose and serum lipids (1,2,3), i.e. increased risk of chronic exposure to cardiovascular risk factors particularly under conditions of repeated violation. The connection between violation and health also includes psychological and psychosocial problems and diseases such as depression caused by violation and repeated violation in particular (4,5). Previous studies have investigated the association between violation of dignity and health in the contexts of urban geography and urban neighbourhoods (12), mistreatment of the elderly (14), and exposure to temporary employment and job insecurity (13), but only the latter study measured the health outcome as self rated health. The present study concerns a general item concerning violation as repeated violation in a random sample of a general population in southern Sweden, an item and a design which may be regarded as a strength of this study.

The fact that the associations in the present study remain robustly significant even after multiple adjustments as well as the high prevalence of experience of violation even among respondents born in Sweden with both parents born in Sweden (23.0% among men and 29.8% among women born in Sweden with both parents born in Sweden) suggests rather generally spread experiences of violation in Swedish society.

Self perceived experience of violation during the past three months may have been caused by discriminatory verbal insults and other adverse treatment that may have been directed towards the respondent for reasons of gender, age or ethnicity/country of birth and parents' country of birth. In this study we have analyzed the association between country of birth as well as parents' country of birth and self rated health. We

found a significant association between age, being born in another country and parents' country of birth, respectively, and less than good health (table 2). In the final analyses of the association between self reported experience of violation during the past three months and self rated health we adjusted for age, country of origin and parents' country of origin, education, economic stress and generalized trust in other people, and stratified for gender. The association between violation and less than good self rated health remained statistically significant with considerably higher odds ratios of less than good health among respondents with several experiences of violation. The results suggest that there may also be other reasons behind the association between experience of violation and self rated health than country of birth, parents' country of birth, age and gender.

The results suggest that absence of de jure discrimination and legislation directed against de facto discrimination in Sweden have not abolished experience of violation. A 24.4% proportion of all men and 31.2% of all women in our study had experienced violation/insults at one or several occasion(s) during the past three months. These experiences of violation are, in turn, associated with increased odds ratios of less than good health. The finding of a significant association between self reported violation during the past three months and less than good self rated health suggests that policy measures against discrimination also should be included in health policy. Such measures include education, information and an ongoing discussion in order to increase knowledge and awareness.

Strengths and limitations

The response rate was 55%, a response level commonly found in current surveys in most western countries, but the distribution of most social and demographic variables, with the exception of the born abroad category which was under-represented by four per cent units, corresponded well with the general distribution of these social and demographic characteristics in public registers. The risk of selection bias is thus probably comparatively small.

Confounders such as age, country of birth, parents' birth country, education, economic stress and trust were adjusted for in the multiple logistic regression models, and stratification was conducted for sex in all analyses.

Self rated health has been studied regarding validity in a number of previous studies. It has been found to be a good and valid predictor of prospective morbidity and mortality, e.g. for incidence of cardiovascular diseases (30). The generalized trust in other people as well as the experience of violation items are self reported and thus difficult to validate. The item concerning generalized trust in other people has been used in earlier international studies (23,26).

It is impossible to infer causality from studies with cross-sectional design, although results from such studies may well form at least some smaller part of the basis for causal inference. Furthermore, the item concerning violation refers to experience during the past three months while the self rated health item concerns the feeling of general health at the point in time when the cross-sectional study was conducted. Still, fully valid conclusions concerning causality can only be drawn from future studies which are longitudinal in design.

Conclusions

Experience of violation during the past three months is significantly associated with less than good self rated health, which is a finding with important policy implications.

Competing interests

The authors declare that they have no competing interests.

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Table 1. Prevalence (%) of self rated health, demographic characteristics, education, economic stress, generalized trust in other people, and experience of violation during the past three months. Men (n = 12,726), women (n = 15,472), and total (n = 28,198). The public health survey in Skåne 2008.

	Men (n = 12,726)	Women (n = 15,472)	Total (n = 28,198)
Self rated health			
Good	72.6	70.0	71.2
Less than good	27.4	30.0	28.8
(Missing)	(250)	(396)	(646)
Age			
18-24	8.3	9.1	8.8
25-34	12.3	13.9	13.2
35-44	16.4	17.2	16.9
45-54	17.7	18.5	18.1
55-64	21.2	19.3	20.1
65-80	24.2	21.9	22.9
(Missing)	(0)	(0)	(0)
Born in Sweden or other country/birth country of parents			
Sweden, both parents born in Sweden	79.6	78.7	79.1
Sweden, one parent born abroad	4.9	5.3	5.2
Sweden, both parents born abroad	1.6	1.8	1.7
Other country	13.9	14.2	14.0
(Missing)	(273)	(282)	(555)
Education			
13-year	33.2	41.2	37.5
10-12 years	41.9	38.3	39.9
-9 years	25.0	20.4	22.5
(Missing)	(1098)	(1631)	(2729)
Generalized trust in other people			
High	66.1	64.3	65.2
Low	33.9	35.7	34.8
(Missing)	(522)	(685)	(1207)
Economic stress			
Never	79.5	76.5	77.8
Occasionally	14.1	15.7	15.0
Half the year	3.1	3.6	3.4
Every month	3.3	4.2	3.8
(Missing)	(307)	(335)	(642)
Experience of violation during the past three months			
No	75.6	68.8	71.9
Yes, at some occasion	21.1	27.3	24.5
Yes, several times	3.3	3.9	3.6
(Missing)	(304)	(406)	(710)

Table 2. Prevalence (%) and odds ratios (OR, 95% CI) in bivariate analyses of less than good health according to age, country of origin, education, economic stress, generalized trust in other people and experience of violation during the past three months. Men (n = 12,726) and women (n = 15,472). The public health survey in Skåne 2008.

	Men (n=12,726)		Women (n=15,472)	
	%	OR(95%CI)	%	OR(95%CI)
Age				
18-24	14.3	1.00	20.5	1.00
25-34	16.0	1.15 (0.92-1.43)	19.5	0.94 (0.79-1.11)
35-44	19.2	1.43 (1.16-1.75)	23.8	1.21 (1.04-1.42)
45-54	27.5	2.28 (1.89-2.77)	27.9	1.50 (1.28-1.74)
55-64	33.0	2.96 (2.44-3.58)	36.2	2.20 (1.90-2.56)
65-80	38.6	3.77 (3.12-4.56)	42.3	2.84 (2.46-3.30)
(Missing)	(250)		(396)	
Born in Sweden or other country/birth country of parents				
Sweden, both parents born in Sweden	26.7	1.00	28.8	1.00
Sweden, one parent born abroad	23.6	0.85 (0.70-1.03)	26.7	0.90 (0.76-1.06)
Sweden, both parents born abroad	16.8	0.55 (0.38-0.80)	25.2	0.83 (0.63-1.10)
Other country	33.2	1.33 (1.19-1.48)	37.1	1.46 (1.32-1.60)
(Missing)	(499)		(682)	
Education				
13-year	17.7	1.00	20.5	1.00
10-12 years	25.2	1.57 (1.41-1.74)	30.0	1.66 (1.52-1.82)
-9 years	41.5	3.31 (2.96-3.70)	45.7	3.26 (2.95-3.60)
(Missing)	(1267)		(1920)	
Economic stress				
Never	24.1	1.00	26.5	1.00
Occasionally	33.1	1.56 (1.40-1.74)	34.8	1.48 (1.34-1.63)
Half the year	46.2	2.70 (2.20-3.33)	42.9	2.09 (1.75-2.49)
Every month	59.6	4.66 (3.80-5.73)	59.1	4.01 (3.40-4.73)
(Missing)	(491)		(669)	
Generalized trust in other people				
High	22.6	1.00	24.1	1.00
Low	34.8	1.83 (1.69-2.00)	38.7	1.99 (1.85-2.14)
(Missing)	(706)		(1010)	
Experience of violation during the past three months				
No	24.3	1.00	26.4	1.00
Yes, at some occasion	32.6	1.51 (1.37-1.66)	34.1	1.44 (1.34-1.56)
Yes, several times	57.3	4.19 (3.41-5.14)	54.7	3.37 (2.84-4.00)
(Missing)	(478)		(735)	

Table 3. Prevalence (%) and odds ratios (OR, 95% CI) in bivariate analyses of self reported violation during the past three months according to age, country of origin, education, economic stress and generalized trust in other people. Men (n = 12,726) and women (n = 15,472). The public health survey in Skåne 2008.

	Men (n=12,726)		Women (n=15,472)	
	%	OR(95%CI)	%	OR(95%CI)
Age				
18-24	37.1	1.00	50.1	1.00
25-34	31.9	0.80 (0.67-0.94)	42.9	0.75 (0.65-0.86)
35-44	30.6	0.75 (0.64-0.87)	37.0	0.58 (0.51-0.67)
45-54	27.0	0.63 (0.53-0.73)	33.4	0.50 (0.44-0.57)
55-64	22.2	0.48 (0.41-0.56)	24.7	0.33 (0.29-0.37)
65-80 (Missing)	11.7 (311)	0.22 (0.19-0.27)	14.0 (407)	0.16 (0.14-0.19)
Born in Sweden or other country/birth country of parents				
Sweden, both parents born in Sweden	23.0	1.00	29.8	1.00
Sweden, one parent born abroad	30.8	1.50 (1.25-1.78)	43.4	1.80 (1.56-2.08)
Sweden, both parents born abroad	34.3	1.75 (1.30-2.36)	42.5	1.74 (1.36-2.23)
Other country (Missing)	29.0 (490)	1.37 (1.22-1.54)	31.6 (628)	1.09 (0.98-1.20)
Education				
13-year	27.2	1.00	36.9	1.00
10-12 years	26.4	0.96 (0.87-1.06)	31.8	0.80 (0.74-0.86)
-9 years (Missing)	17.1 (1263)	0.55 (0.49-0.62)	18.6 (1876)	0.39 (0.35-0.44)
Economic stress				
Never	20.7	1.00	26.1	1.00
Occasionally	35.1	2.08 (1.86-2.32)	43.5	2.18 (1.99-2.39)
Half the year	45.2	3.17 (2.58-3.91)	55.0	3.46 (2.91-4.12)
Every month (Missing)	48.6 (478)	3.63 (2.97-4.44)	54.1 (607)	3.34 (2.83-3.93)
Generalized trust in other people				
High	19.3	1.00	25.5	1.00
Low (Missing)	34.7 (592)	2.23 (2.05-2.43)	41.9 (807)	2.10 (1.96-2.26)

Table 4. Age-adjusted and multiple adjusted odds ratios (OR, 95% CI) of less than good health according to experience of violation/insults during the past three months. Men (N=12,726) and women (N=15,472). The public health survey in Skåne 2008.

	OR(95% CI) ^a	OR(95% CI) ^b	OR(95% CI) ^c	OR(95% CI) ^d	OR(95% CI) ^e
Men					
Experience of violation during the past three months					
No	1.00	1.00	1.00	1.00	1.00
Yes, at some occasion	1.96 (1.77-2.16)	1.93 (1.74-2.13)	2.04 (1.83-2.27)	1.85 (1.66-2.07)	1.76 (1.57-1.97)
Yes, several times	6.08 (4.91-7.54)	5.88 (4.73-7.31)	6.10 (4.86-7.67)	4.88 (3.85-6.19)	4.28 (3.36-5.44)
Nagelkerke R ²	0.097	0.102	0.135	0.163	0.167
Chi square	p<0.001	p<0.001	p<0.001	p<0.001	p<0.001
Women					
Experience of violation during the past three months					
No	1.00	1.00	1.00	1.00	1.00
Yes, at some occasion	1.93 (1.77-2.10)	1.93 (1.77-2.10)	2.09 (1.90-2.29)	1.90 (1.73-2.09)	1.78 (1.62-1.96)
Yes, several times	4.79 (4.01-5.72)	4.89 (4.08-5.86)	4.92 (4.05-5.96)	4.12 (3.38-5.04)	3.54 (2.89-4.35)
Nagelkerke R ²	0.086	0.092	0.121	0.152	0.160
Chi square	p<0.001	p<0.001	p<0.001	p<0.001	p<0.001

a Adjusted for age.

b Adjusted for age and country of origin and parents' country of origin.

c Adjusted for age, country of origin and parents' country of origin and education.

d Adjusted for age, country of origin and parents' country of origin, education and economic stress.

e Adjusted for age, country of origin and parents' country of origin, education, economic stress and generalized trust in other people.