

ORIGINAL ARTICLE

HEALTH AMONG LIFETIME VICTIMIZED MEN

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Received 20 March 2007; Accepted 11 July 2007

ABSTRACT

Objectives. We examined differences in demographics/socio-economics, lifestyles and mental/physical health between victimized/non-victimized men, and identified/quantified factors associated with mental/physical health.

Study design. The study design was cross-sectional.

Methods. The men were assessed in various areas (e.g., depression) by means of a questionnaire.

Results. The univariate analyses showed that victims compared with non-victims were younger. They also had higher intermediate education levels, were more often blue-collar/low white-collar workers, were on student allowances and financially strained, smoked more, had a lower BMI, and reported headaches, depression, tension and cognitive difficulties more frequently. The regression analyses showed that financial strain rather than violence was a more important factor for ill-health. Only headaches and cognitive difficulties were associated with violence.

Conclusions. Quite an number of men were in a poor physical/mental state, but there were few differences between victims/non-victims. Financial strain was determined to be a more important factor for ill-health than violence. Our data indicate that violence had little effect on men's health. Our findings do not generally support a relationship between poor health and the abuse of men. (*Int J Circumpolar Health* 2007; 66(4):351-364).

Keywords: violence, physical/mental health, financial strain, general population

INTRODUCTION

The health effects of violence are receiving increasing attention worldwide, but the focus is mainly on women, with studies showing that their health is negatively affected by violence (e.g., 1–4).

Apart from workplace samples, the impact of violence on men's health has not attracted much attention. Yet men (except for sexual abuse) may be at higher risk than women for violent victimization and are more likely to experience relationship violence (e.g., 5–8). Some studies have nevertheless examined the health effects of violence on men and tend to report more health problems (e.g., depression) among victimized than among non-victimized men (6,9–18). In one study (19), there were no differences in health indicators between abused and non-abused men. However, these studies have limitations. For instance, the assessment of mental health varies, with some studies using standardized instruments (9,12) and others not (11,18).

Apparently, there is limited research about the health effects of violence on men among the general population. This is evident in Sweden where there are no such studies. The scarcity is puzzling, considering that there are various Swedish surveys about workplace violence against men and its consequences, mostly in the health care sector (e.g., 20,21). Moreover, in a violence survey over the past 12 months with a general population sample, 8% of men and 9% of women reported abuse (8), and about 68% of the men in the present study reported abuse during their lifetime (22) as well as experiencing a poorer quality of life (23).

Thus, an examination of the health impact of violence on men from the general popula-

tion could be useful as this issue has not been addressed in Sweden, and the abuse of men seems to be common and results in a reduced quality of life (22,23). It is possible that the health of the victimized men was negatively affected considering that findings from elsewhere have reported such association (6,9–18). Furthermore, the examination of the health situation of abused men in Sweden could be helpful for comparisons with findings from other countries. For instance, these data may be important to clarify whether the health experiences of abused men in Sweden differ or are similar to those reported by men from other countries. Finally, victimized men in Sweden are not being systematically helped, although a crime/violence prevention program was proposed in the 1990s (24). Hence, by exploring the health effects of the abuse of men, we may provide reliable information on their situation that could assist health providers in the development of interventions for targeting violence and its consequences.

The present study focuses on men. Comparing women with men concerning the health effects of violence may not be satisfactory as prevalence rates of many conditions vary between the sexes independently of violence (e.g., 25–28). For example, a lack of association between violence and depression among men could relate to depression being less reported among men generally, and the experience of violence may not change this pattern.

As in other studies (e.g., 9), we scrutinized the linkage between violence and depression. We also addressed associations between violence, hopelessness and burnout. Hopelessness may not be uncommon in community/general population samples and has been connected to factors such as poor subjective health and

reduced self-confidence (e.g., 29–31). Victimized men may experience acts of abuse as intrusive, uncontrollable and harmful, and they may feel helpless. This could lead to negative expectations about themselves and their future lives. Thus, high levels of hopelessness may not be an unexpected outcome of violence. Burnout has been associated with stress and health problems (e.g., 32). Given that violence is likely to cause strain, at least among certain individuals, one could envisage that it might be connected to burnout. In addition, we analyzed connections between violence and lifestyle, physical health and demographic/socio-economic variables.

In this study, we examined the differences in demographics/socio-economics, lifestyles and mental/physical health between victimized and non-victimized men and identified/quantified factors associated with mental/physical health.

MATERIAL AND METHODS

Subjects

The subjects were 1,000 randomly selected men from the general population living in Stockholm County, though representative of those aged 18–64 years. Of the contacted 1,000 men, 520 took part in the study (59%). We excluded 120 men because they had moved to unknown addresses or did not speak Swedish fluently, and 360 declined participation. Participants and non-participants did not differ in age. Of the participating men, about 68% ($n=353$) reported abuse during their lifetime and slightly over 32% ($n=167$) reported no abuse (22). Accordingly, the men were divided into two groups, that is, exposed and non-exposed to lifetime violence.

Measures

This study focused on demographics/socio-economics, lifestyles and mental/physical health. The data on violence are shown elsewhere (22).

Depression was assessed with the General Health Questionnaire (GHQ-12, 33), which is as sensitive to depression disorders as any of the specially designed depression scales (34). The GHQ consists of 12 items. Scores 0–2 indicate no depression and scores 3–12 indicate increasing depression levels. The data were also divided into 3 categories (0–2=no depression; 3–5=low/moderate depression levels; and 6+=elevated depression levels). Cronbach α for the victims was 0.74 and for the non-victims 0.75.

Men's negative expectations about the future were assessed with the Hopelessness Scale (35), which is a 20-item scale containing statements about one's self and one's future. Statements are rated true/false and given 1 or 0, depending on the direction of the statement. High scores correspond to high hopelessness. Furthermore, scores can be transformed into norms (36) indicating hopelessness levels (0–3=no/minimal; 4–8=mild; 9–14=moderate; 15–20=severe). Cronbach α for the victims was 0.86 and for the non-victims 0.82.

The Shiron-Melamed Burnout Questionnaire (SMBQ, 37), which is a 22-item scale, assessed the burnout syndrome (burnout, tension, listlessness, cognitive difficulties). Items are graded from almost never to almost always, 1–7. High scores correspond to high burnout. An overall burnout index for each man (mean sum of the subscales) was also calculated. Cronbach α for the victims was 0.79 and for the non-victims 0.77.

Violence was assessed with 6 main questions (with 23 derived subquestions) in a "yes/no" format covering the following aspects: exposure

to violence (e.g., over a lifetime, never to often); consequences of violence (physical injuries; none, light, severe); places of violence (e.g., at home); forms of violence (e.g., physical); perpetrators of violence (e.g., intimates); and objects of violence (e.g., guns). The violence questions have been used in various studies (e.g., 20, 22) and have satisfactory content validity and reliability (e.g., 20).

We also assessed, using a “yes/no” format, whether the men suffered from diseases (e.g., diabetes), pain (e.g., backpain, >3 months), complaints (e.g., tinnitus), and whether they used medication (e.g., anxiolitics) and alcohol/cigarettes. These items were largely derived from the Pain Questionnaire (38,39), which has many questions about pain and health problems unrelated to pain and has been validated in various studies (e.g., 38–40). Furthermore, we computed a Body Mass Index (BMI) for each man with the formula kg/m². Finally, we assessed various demographic/socio-economic items (e.g., financial strain). The items were largely derived from a classification system concerning socio-economics used in Sweden (41).

Design/procedure

The study design was cross-sectional and data were collected during 8 consecutive weeks, with two reminders in-between. The addresses were obtained from AdressKompaniet in Stockholm, which provides data on populations living in Sweden. The sample was chosen using a random selection. Questionnaires were sent to the men at their home addresses, together with a letter giving information about the study; they were asked to return the questionnaire by mail. All men were volunteers and gave their informed consent. Confidentiality

was emphasized. The Ethical Committee at the Karolinska Institutet, Stockholm, approved the study.

Statistical analyses

Differences in the various variables (e.g., depression) between victimized/non-victimized men were examined with ANOVAs and χ^2 tests. Associations between the various mental (e.g., depression) and physical health variables (e.g., pain) were analysed with Pearson correlations. The significance level was set at $p < 0.05$.

Multivariate logistic and linear regression analyses were computed among all men to examine associations between variables. In the logistic regression, the dependent variable was headache and the independent factors were variables that differentiated the men in the univariate analyses (age, education, occupational status, current financial support, financial strain, smoking and BMI). We also included overall violence. Three linear regressions were conducted, with depression, tension and cognitive difficulties as the dependent variables. The independent variables were the same as those mentioned above. Results for the logistic and linear regressions are expressed in odds ratio and standardized betas, respectively. Single data were lost for a number of variables, as indicated by the N's and degrees of freedom.

RESULTS

Demographics/socio-economics

As shown in Table I, victims were younger than non-victims. They also had higher intermediate education levels, were more often blue-collar/low white-collar workers, were on student allowances and were financially strained.

Physical health and lifestyle variables

As shown in Table II, victims smoked more and more often had headaches and a lower BMI than non-victims.

Depression/hopelessness/burnout

As shown in Table III, victims reported higher mean depression scores than non-victims

(2.9 ± 2.6 vs. 2.2 ± 2.3). An examination of depression levels showed moderate depression levels (3–5) among 35% and 26% of the victims and non-victims, respectively, and elevated depression levels (6+) among 17% and 12% of the victims and non-victims, respectively. Victims did not differ from non-victims in mean scores (4.5 ± 3.9 vs. 3.9 ± 3.2) and levels of hope-

Table I. Demographic/socio-economic characteristics of life-time victimized (n=353) and non-victimized (n=167) men.

| Characteristics | Victimized (n=353) | | Non-victimized (n=167) | | test/p-value |
|---|-----------------------|----|------------------------|----|---------------------------|
| | n | % | n | % | |
| Age (yrs) mean \pm SD (n) | 40.2 \pm 12 (350) | | 44.5 \pm 12 (166) | | F(1,514)=14.2, p<0.001 |
| Marital status (n) | (352) | | (167) | | ns |
| Single | 96 | 27 | 36 | 22 | |
| Married/cohabiting | 225 | 64 | 119 | 71 | |
| Divorced/separated | 26 | 8 | 10 | 6 | |
| Widower | 5 | 1 | 2 | 19 | ns |
| Foreign background (n) | (350) | | (163) | | ns |
| Yes | 68 | 19 | 25 | 15 | |
| No | 282 | 81 | 138 | 85 | |
| Education level (n) | (352) | | (165) | | $\chi^2(2)=13.4, p<0.001$ |
| Low ^a | 63 | 18 | 42 | 25 | |
| Intermediate ^b | 159 | 45 | 47 | 29 | |
| High ^c | 130 | 37 | 76 | 46 | |
| Children at home (n) | | | | | ns |
| Yes | 141 | 40 | 70 | 42 | |
| No | 212 | 60 | 97 | 58 | |
| Occupational position (n) | (313) | | (153) | | $\chi^2(3)=21, p<0.001$ |
| Blue-collar worker | 125 | 40 | 42 | 27 | |
| Low white-collar worker ^d | 73 | 23 | 21 | 14 | |
| Intermediate white-collar worker ^e | 81 | 26 | 67 | 44 | |
| High white-collar worker ^f | 34 | 11 | 23 | 15 | |
| Weekly working hours mean \pm SD (n) | 35.9 \pm 16.4 (340) | | 37.4 \pm 19.2 (162) | | ns |
| Current financial support (n) | (352) | | (165) | | $\chi^2(1)=4.1, p=0.043$ |
| Working | 266 | 75 | 130 | 79 | |
| Studying | 38 | 11 | 9 | 6 | |
| Sick-leave | 9 | 3 | 4 | 2 | |
| Unemployed | 18 | 5 | 9 | 5 | |
| Retired | 14 | 4 | 11 | 7 | |
| Other ^g | 7 | 2 | 2 | 1 | |
| Financial strain (n) | (345) | | | | $\chi^2(1)=12.3, p<0.001$ |
| Yes | 155 | 45 | 48 | 29 | |
| No | 190 | 55 | 119 | 71 | |

^a=primary school/similar/lower; ^b=upper secondary school/similar; ^c=university/similar; ^d=e.g. clerk; ^e=e.g. nurse; ^f=e.g. physician; ^g=e.g. social benefits; ^h=i.e. concerns about how to make ends meet.

lessness (none/minimal 0–3, 50% vs. 52%; mild 4–8, 36% vs. 40%; moderate 9–14, 10% vs. 7%; severe 15–20, 4% vs. 1%). Finally, there were no differences between victims and non-victims in mean scores for the subscales burnout (2.8±1 vs. 2.9±1), listlessness (4.1±1 vs. 4.2±1) and total burnout (3.3±1 vs. 3.2±1). However, victims reported higher mean scores for the subscales tension (3.5±1 vs. 3.3±1) and cognitive difficulties (2.9±1.2 vs. 2.5±1.2) than non-victims. Thus, victims were more strained and more mentally tired than non-victims.

Associations between mental and physical health variables

Depression, hopelessness and burnout were positively correlated. The coefficients ranged from r=+.39 to r=+.57 and were all significant at p<0.0001.

Depression was positively correlated with all physical ailments. The coefficients ranged from r=+.3 to r=+.24 and, with the exception of pain and skin irritation (not significant), the significance levels varied from p=0.031 to p<0.0001.

Hopelessness was positively correlated with

Table II. Physical health and life-style variables among life-time victimized (n=353) and non-victimized (n=167) men.

| Variables | Victimized n=353 | | Non-victimized n=16 | | Test/ p-level |
|--------------------------------------|---------------------|----|------------------------|----|-------------------------------|
| | n | % | n | % | |
| Diseases ^a (n) | (349) | | | | ns |
| Yes | 164 | 47 | 88 | 53 | |
| Pain ^b (n) | | | | | ns |
| Yes | 201 | 57 | 92 | 55 | |
| Headache (n) | (346) | | (165) | | ($\chi^2(1)=11.7, p=0.001$) |
| Yes | 244 | 70 | 91 | 55 | |
| Stomach pain ^c (n) | (342) | | (165) | | ns |
| Yes | 192 | 56 | 83 | 51 | |
| Sleep difficulties (n) | (345) | | (165) | | ns |
| Yes | 172 | 49 | 74 | 45 | |
| Skin irritation (n) | (341) | | (164) | | ns |
| Yes | 127 | 37 | 51 | 31 | |
| Chest weight (n) | (347) | | (165) | | ns |
| Yes | 82 | 26 | 45 | 27 | |
| Tinnitus (n) | (346) | | (164) | | ns |
| Yes | 101 | 29 | 41 | 25 | |
| Psychoactive agents ^d (n) | | | | | ns |
| Yes | 55 | 16 | 16 | 10 | |
| Somatic medication ^e (n) | | | | | ns |
| Yes | 165 | 47 | 75 | 45 | |
| Smoking (n) | (337) | | (164) | | ($\chi^2(1)=4.1, p=0.043$) |
| Yes | 112 | 33 | 40 | 24 | |
| Drinking (n) | (337) | | (164) | | ns |
| Yes | 302 | 90 | 139 | 85 | |
| BMI ^f mean ±SD (n) | 25±3.3 (337) | | 26±3.1 (164) | | (F(1,505)=9.6, p=0.002) |

^a=e.g. diabetes; ^b=musculoskeletal pain (e.g. back-pain); ^c=not included in pain; ^d=e.g. anxiolitics; ^e=e.g. insulin; ^f=body mass index.

all physical ailments. The coefficients ranged from $r=+.8$ to $r=+.27$ and, with the exception of pain and skin irritation (not significant), the significance levels varied from $p=0.034$ to $p<0.0001$.

Burnout was positively correlated with all physical ailments. The coefficients ranged from $r=+.9$ to $r=+.31$ and, with the exception of pain (not significant), the significance levels varied from $p=0.0012$ to $p<0.0001$.

With the exception of pain and skin irritation (negative correlation $r=-.9$), all other physical ailments were positively correlated. The coefficients ranged from $r=+.3$ to $r=+.30$, and with the exception of diseases/chest weight, pain/headache/skin irritation and headache/tinnitus/skin irritation (not significant), the significance levels varied from $p=0.041$ to $p<0.0001$. Thus, mental and physical health variables are correlated, but the levels seem to suggest that multicollinearity is not a problem.

Factors related to headaches

As shown in Table IV, financial strain and violence were positively associated with headaches. The model explained 5.3% of the variance in headaches.

Factors related to depression/tension/cognitive difficulties

As shown in Table V, financial strain was positively associated with high scores in depression. The model explained 4% of the variation in depression. Financial strain and high BMI were positively associated with high scores in tension, and negatively associated with low education. The model explained 6% of the variation in tension. Financial strain and violence were positively associated with high scores in cognitive difficulties. The model explained 3.4% of the variation in cognitive difficulties.

Table III. Depression, hopelessness, and burnout among life-time victimized ($n=353$) and non-victimized ($n=167$) men. The values represent mean \pm SD.

| Variables | Victimized $n=353$ | | Non-victimized $n=167$ | | Test/ p-level |
|--|-----------------------|----|---------------------------|----|--------------------------------|
| | n | % | n | % | |
| Depression mean \pm SD (n) | 2.9 \pm 2.6 (351) | | 2.2 \pm 2.3 | | (F(1,516)=7.7, $p=0.006$) |
| Depression levels (n) | (351) | | | | ($\chi^2(2)=9.1$, $p<0.01$) |
| No | 169 | 48 | 104 | 62 | |
| Low/moderate | 122 | 35 | 43 | 26 | |
| Elevated | 60 | 17 | 20 | 12 | |
| Hopelessness mean \pm SD (n) | 4.5 \pm 3.9 (351) | | 3.9 \pm 3.2(166) | | ns |
| Hopelessness levels (n) | (351) | | (166) | | ns |
| No/minimal | 175 | 50 | 86 | 52 | |
| Mild | 128 | 36 | 67 | 40 | |
| Moderate | 35 | 10 | 11 | 7 | |
| Severe | 13 | 4 | 2 | 1 | |
| Burnout mean \pm SD (n) | 2.8 \pm 1 (351) | | 2.9 \pm 1 | | ns |
| Listlessness mean \pm SD (n) | 4.1 \pm <1 (351) | | 4.2 \pm <1 | | ns |
| Tension mean \pm SD (n) | 3.5 \pm <1 (351) | | 3.3 \pm <1 | | (F(1,516)=4.5, $p=0.034$) |
| Cognitive difficulties mean \pm SD (n) | 2.9 \pm 1.2 (351) | | 2.5 \pm 1.2 | | (F(1,516)=8.5, $p=0.004$) |
| Total burnout mean \pm SD (n) | 3.3 \pm <1 (351) | | 3.2 \pm <1 | | ns |

Table IV. Multivariate logistic regression analysis of the associations between demographic/ socio-economic and lifestyle variables, overall life-time violence and headache among all men.

| Independent variables | Headache Odds Ratio (OR) | 95%CI |
|---|-----------------------------|----------|
| Age ^a | 1 | 0.9-1 |
| Education ^b | | |
| Low ^d | 0.8 | 0.4-1.7 |
| Intermediate ^e | 0.7 | 0.4-1.2 |
| High ^{c,f} | 1 | |
| Occupational status ^b | | |
| Blue-collar worker | 1.8 | 0.9-3.7 |
| Low white-collar worker ^g | 1.3 | 0.6-2.5 |
| Intermediate white-collar worker ^h | 1.7 | 0.9-3.2 |
| High white-collar worker ^{c,i} | 1 | |
| Current financial support ^b | | |
| Working | 1.4 | 0.3-5.9 |
| Studying | 0.7 | 0.1-3.8 |
| Sick-leave | 0.7 | 0.1-4.8 |
| Unemployed | 1.6 | 0.3-9.2 |
| Retired | 1.7 | 0.3-11.1 |
| Other ^{c,j} | 1 | |
| Financial strain ^{b,k} | | |
| Yes | 1.9* | 1.2-3.1 |
| No ^c | 1 | |
| Smoking ^b | | |
| Yes | 0.8 | 0.5-1.2 |
| No ^c | 1 | |
| BMI ^{a,l} | 0.9 | 0.9-1.1 |
| Overall life-time violence ^b | | |
| Yes | 2.3** | 1.4-3.6 |
| No ^c | 1 | |

^a=continuous variables; ^b=category variables; ^c=reference categories; ^d=primary school/similar/ lower; ^e=upper secondary school/similar; ^f=university/similar; ^g=e.g. clerk; ^h=e.g. nurse; ⁱ=e.g. physician; ^j=e.g. social benefits; ^k=concerns about how to make ends meet; ^l=body mass index; * p<0.01; ** p<0.001.

Table V. Multivariate linear regression analyses of the associations between demographic/socio-economic and lifestyle variables, overall life-time violence, depression, tension and cognitive difficulties among all men.

| Independent variables | Depression β^a | Tension β^a | Cognitive difficulties β^a |
|---|----------------------|-------------------|----------------------------------|
| Age | 0.041 | -0.056 | 0.060 |
| Low education ^b | 0.049 | -0.143* | 0.031 |
| Intermediate education ^c | 0.047 | -0.101 | 0.029 |
| Blue-collar worker | 0.118 | 0.051 | -0.033 |
| Low white-collar worker ^d | -0.002 | -0.005 | 0.012 |
| Intermediate white-collar worker ^e | 0.054 | -0.088 | -0.038 |
| Studying | -0.070 | 0.058 | 0.012 |
| Financial strain ^f | 0.127* | 0.196*** | 0.163** |
| Smoking | 0.050 | 0.084 | 0.042 |
| BMI ^g | -0.047 | 0.105* | 0.076 |
| Overall life-time violence | 0.094 | 0.047 | 0.108* |

^a= β i.e. standardised betas; ^b=primary school/similar/lower; ^c=upper secondary school/similar; ^d=e.g. clerk; ^e=e.g. nurse; ^f=concerns about how to make ends meet; ^g=body mass index; *p<0.05; ** p<0.01; *** p<0.001.

DISCUSSION

Physical health, lifestyles and violence

We examined physical health (e.g., pain) and lifestyles (e.g., use of alcohol) among victimized/non-victimized men. Victims were only significantly more likely to report smoking, lower BMI and headache than non-victims.

Victims did not differ from non-victims in most of the physical health indicators. This is at odds with studies showing more physical health problems and/or substance misuse among abused than among non-abused men (10–12,14–18), but in line with a study that did not find such associations (19). Comparisons with studies (9,13) examining stalking were not possible as the issue was not addressed. An exception to the physical health indicators was headaches. More victims complained of headaches than did non-victims. A following regression showed that violence and financial strain were independently associated with headaches. However, it is unclear why violence in our study should be connected with headaches. Excluding cluster headaches, all other forms of headaches are more prevalent among women (42). On the one hand, we lack knowledge about the kind of headaches that the men suffered from and it is therefore difficult to determine whether general prevalence is of any importance to our findings. On the other hand, abuse may have been a stressful experience and stress is a known headache trigger in both men and women (43–45). Interestingly, our findings are contrary to studies showing no relation between violence and headaches (17,18).

In general, our results do not support an association between violence and poor physical health as reported in most of the above-

mentioned studies. This may be because our physical health indicators, which in some cases differed from these studies, were less influenced by violence. Another explanation may be that we focused on overall violence, whereas these studies concentrate on certain violence forms/contexts (e.g., physical assaults), which may be more associated with poor physical health. Moreover, the discrepancies could pertain to methodological differences in how some of the physical health indicators (e.g., headaches) were measured. The relatively large non-response rate may have led also to an underestimation of the effects of violence.

Whether culture has any importance in the association between violence and physical health may need further examination. Of the studies addressing this issue the majority were from the USA (6 of 9) and the rest (1 each) from England, Denmark and Greenland, with 8 studies reporting a relation between violence and physical health problems in some way while 1 study did not. Thus, there is little variation in cultural terms, too few studies and some inconsistency in the results, including those of our study.

In any case, both victims and non-victims reported similar physical health problems (except headaches) and in some cases the figures were quite high, suggesting that they were in poor physical health anyway and that violence did not make much difference. Many of the men reported numerous physical problems independently of violence, which may reflect their general health situation. Indeed, findings from Sweden and elsewhere (e.g., Finland) indicate that men's physical health may poor in many areas (e.g., 25,27,28), and that they also do poorly concerning the global burden of disease and total health (46,47).

Depression, hopelessness, tension, cognitive difficulties and violence

Victims had greater mean scores in depression than non-victims. Moreover, 17% and 12% of the victims and non-victims, respectively, reported elevated depression levels, perhaps constituting a threat to their psychological health. Although GHQ is not a diagnostic instrument, it is sensitive to depression disorders (34). Thus, some of the men could be clinically depressed. However, only financial strain was independently associated with depression in the regression. This runs contrary to studies showing a linkage between violence and mental health problems, at least depression (6,9,10,12,14,15,17), but in line with 2 studies (18,19) that did not find such a connection. The differences may mean that other factors, not least financial strain, were more important in explaining men's depression than violence. Another explanation may be that we focused on overall violence, whereas the above-mentioned studies focus on certain violence forms/contexts (e.g., physical assaults), which may be more associated with depression. The relatively large non-response rate may also have resulted in an underestimation of the effects of violence.

Whether culture has any bearing on the association between violence and depression may need to be further scrutinized. Of the studies addressing this issue, the majority were conducted in the USA (7 of 9) and the rest (one each) in Denmark and Greenland, with 7 studies showing a relation between violence and depression and 2 that did not. Thus, there is little variation in cultural terms, too few studies and some inconsistency in the results, including those of our study.

Victims did not differ from non-victims in hopelessness, suggesting that violence does not play a significant role in such feelings. One could hypothesize that the victims did not feel particularly dismayed or helpless in the face of the abuse and/or that it did not affect their expectations about the future, and thus they did not experience more hopelessness than non-victims. Data from the trauma area indicating that men feel less helpless than women when exposed to comparable traumatic events may support this hypothesis (48). It is also possible that overall violence is less associated with hopelessness than certain violence forms/contexts (e.g., physical assaults). In addition, the relatively large non-response rate may have led to an underestimation of the effects of violence. It is noteworthy that the present hopelessness figures were similar to those found in community/general population samples (e.g., 29–31), but some of the men had high hopelessness levels, previously associated with decreased well-being in mental patients and community/general population samples (e.g., 30, 31, 49), not the least in Sweden (49) and Finland (30).

In any case, to our knowledge, the relationship between hopelessness and violence among men from the general population has not been addressed previously. Thus, more research on the issue is needed before firm conclusions can be drawn.

Victims scored higher in the burnout subscales of tension/cognitive difficulties than non-victims. Following regressions showed that high BMI, financial strain and high education were “risk” factors for tension. Financial strain and violence were “risk” factors for cognitive difficulties.

High BMI was independently correlated with tension in the regression. One could hypothesize that overweight is a stressful experience and that, over time, this may have resulted in tension. Findings showing that overweight is associated with various health problems (e.g., stress) may support this hypothesis (e.g., 50–53). Highly educated men were at increased “risk” for tension, which is in line with findings that highly educated people report more burnout than their less-educated counterparts (54). Financial strain was independently associated with headaches, depression and the burnout subscales of tension/cognitive difficulties in the regressions. Sweden had severe economic problems in the 1980s and 1990s, which led to negative outcomes (e.g., high unemployment). Structural reforms in the labour market during the past 3–4 years have kept, for example, unemployment at high rates (55–57). This has affected many men and may have resulted in financial strain, which in turn could have caused health problems (e.g., depression). Data on associations between economic factors (e.g., financial strain) and poor health may support such explanation (e.g., 58–60). Finally, violence was independently associated with cognitive difficulties in the regression. One could speculate that victims had difficulties in “absorbing” abuse intellectually, leading in time to mental tiredness, but this needs to be examined in future research.

As far as we know, the association between burnout and violence among men from the general population has not been examined before. It follows that more research into the issue may be necessary before firm conclusions can be drawn.

Overall, violence did not have a great impact on men’s mental health and in fact financial strain was a more important factor. Some of the men were in a poor psychological state (e.g., high depression levels) and this may reflect the general mental health situation of men. Indeed, evidence from Sweden and elsewhere (e.g., Finland) shows that men may not be doing well in terms of mental health (e.g., 25–28).

Limitations

This study has some limitations that must be acknowledged. First, the study could not establish causal links, which would require another type of design (e.g., repeated measures design). Second, the non-response rate was relatively high (41%) and there were limited possibilities to analysing differences between responders and non-responders. However, responders and non-responders were comparable in age and the total response rate was similar to several studies in the field (e.g., 8). Third, the accuracy of data was solely dependent on the men’s subjective assessment of their situation. The study did not incorporate any objective assessment strategies to corroborate the men’s responses, for example, the occurrence of diseases was not objectively confirmed. On the other hand, the instrument used to assess the presence of diseases has been shown to be reliable and valid (e.g., 38–40). Fourth, many of the men did not provide information on the perpetrators’ gender, precluding a comprehensive analysis of the issue. Fifth, the men were not asked questions about their experiences of mutual aggression and about who initiated the violence. Thus, we could not analyse whether these “factors” had any bearing

on health. Sixth, the variance accounted for by the models was modest in all cases, indicating that other factors may also have played a role. Seven, mental and physical health variables were correlated, indicating some dependency. However, the levels seem to suggest that multicollinearity was not a problem. Finally, the study's findings were based on a sample from Stockholm, which may not be transferable into other samples (e.g., rural).

Conclusions

In general, this study did not corroborate previous findings concerning the negative health impact of violence against men. Nevertheless, we may have provided new insights into the field by for example "exposing" the importance of financial strain on men's health experiences. In fact, to the extent that there were differences in health between victims/non-victims, financial strain was the most important factor. However, associations between violence and poor health were evident primarily in studies from the USA (except for one study) and one from England, whereas those from Greenland and Denmark showed both positive and negative findings. In addition, findings tended to be associated with certain types of violence (e.g., physical assaults). Thus, caution must be exercised regarding what conclusions can be drawn from the available results, including ours.

Notwithstanding this fact, there is little research about the effects of violence on men's health, although as shown previously men are exposed to a great deal of violence.

The lack of research is evident in countries other than the USA, including Nordic countries. Considering both this situation and the limitations of the present study, more research into the relationship between health and the abuse of men is warranted. There is also a need for systematic interventions for abused men, but also of preventive measures for those at risk of being abused. Yet, to the best of our knowledge, very little has been done on this issue, not the least in Nordic countries.

We also revealed that men living in Stockholm are "doing poorly" regarding mental/physical health, irrespective of violence. Similar findings have been reported from other countries (e.g., Finland). The extension/complexity of these men's health problems and indeed of men from other countries (e.g., Finland) should be a source of concern for various groups (e.g., health providers). Urgent attention is required because the impact of men's health problems on themselves and on others may be profound. Yet little attention has been paid to men's health problems. For example, to the best of our knowledge, only England has a professorship in men's health.

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