

Lifetime prevalence and impact of stalking: Epidemiological data from Eastern Austria

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ABSTRACT – Background and Objectives: Community-based studies of stalking in European countries are scarce. The aim of the present study was to replicate the epidemiological study by Dressing and colleagues, which analyzed a sample drawn from a middle-sized German city (Dressing *et al.*, 2005) by using a general population sample (urban as well as rural citizens) from Eastern Austria.

Methods: In a survey of 401 persons from Eastern Austria we tried to replicate the study on the lifetime and point prevalence of stalking in a German urban community. The survey included a stalking questionnaire and the WHO-5 well-being scale.

Results: Nearly 11% of the respondents ($n = 43$, 37 women, 6 men) reported having been stalked. Victims scored significantly lower on the WHO-5 well-being scale. We found no significant differences in stalking and well-being between rural and urban areas.

Conclusions: Epidemiological data on stalking collected in an Austrian community closely resemble the data derived from a community-based sample in a middle-sized German city. We also inquired about the living environment of the participants (rural or urban), but found no difference between the two. Furthermore, the lifetime prevalence of being a stalking victim is associated with currently impaired psychological well-being as measured by the WHO-5 Well-being Index.

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Introduction

Research on the impact of stalking is limited by a paucity of consistent, agreed upon definitions, a clear demarcation of the concept^{1,2} and, particularly in European countries, epidemiological studies³⁻⁵. Thus, the reported prevalence rates predominantly refer to English-speaking countries, ranging from 12% to 32% for women and 4% to 17% for men⁶⁻⁸. So far, only one community-based epidemiological study on stalking has been performed in a continental European country, namely Germany⁴. The data were obtained from a middle-sized German city and not from the general population. In order to bridge this gap we replicated the study of Dressing *et al.*⁴ and investigated a general population sample drawn from the population of Eastern Austria. To our knowledge the current study is the first to report on stalking in Austria. In order to avoid the problem of discordant definitions and to ensure meaningful comparisons, we used the same definition of stalking as did Dressing *et al.*⁴, but did not restrict our sample to urban citizens.

Method

Subjects and data collection

Study participation was solicited in Vienna and surrounding Eastern Austrian areas through personal contacts (various occupational and living backgrounds) ($n = 401$). Participants were contacted face-to-face and explicitly informed of the fact that data collection was anonymous. Each questionnaire was placed in a sealed envelope and inserted into a box which was then shaken. Participants were informed that the data would be

prepared and analyzed by different persons in order to maintain the highest possible anonymity.

Only one of the contacted individuals returned the questionnaire with the majority of the questions left blank. Thus, 400 questionnaires (224 women [56%], 176 male [44%]) served as the basis for the following analyses. The mean age of women was 29.4 years (s.d. = 12.9) and that of men, 32.1 years (s.d. = 13.3). Nearly equal numbers of respondents lived in urban and rural areas (59% vs. 41%). Comparing our sample to the census of Eastern-Austria (provinces: Vienna, Lower Austria, Upper Austria, Burgenland, Styria)⁹, in our sample women were slightly but not significantly overrepresented (51% female vs. 49% male; odds-ratio $OR = 1.2$; 95%- $CI = [1.0 - 1.5]$; Hasselblad and Hedges¹⁰ unbiased odds ratio-to-Cohen's d transformation¹¹ $d_1 = 0.10$; d -based effect sizes around 0.20 or lower are considered as small, around 0.50 as medium, and around .80 or higher as large¹¹). More people were residing in urban areas (51% vs. 49%; $OR = 1.4$; 95% $CI [1.1 - 1.7]$; $d_1 = 0.18$) and the average participant was younger than the general population between 14 and 60 years of age (mean age for women: 37.9 years, one-sample t -test $t_{[223]} = -9.90$, $p < 0.001$; $d = 0.66$; mean age for men: 37.7 years, one-sample t -test $t_{[175]} = -5.78$, $p < 0.001$; $d = 0.44$). Although younger adults between 18 and 29 years are the primary targets of stalkers⁸, the prevalence and incidence rates may have been slightly biased.

Instruments and stalking definition

The survey included a short introduction about stalking, questions on demographic variables, a self-reported stalking questionnaire, and the WHO-5 Well-Being Index¹².

The stalking questionnaire was adapted from Voss & Hoffmann¹³ and advanced by adding six additional stalking behaviours which had been frequently reported in other studies on the subject (such as invading the victim's home or following the victim by car). If the respondents stated any instance of harassment, they were asked to provide additional information about the duration and frequency of the particular intrusion as well as whether it was still continuing. They were also asked to provide detailed information about the nature and the extent of certain intrusive behaviours (such as sexual harassment or sexual violation), their relationship to the stalker, possible motives of the stalker, and behavioural and psychological responses to the harassment. Participants were subsequently asked to fill the WHO-5 Well-Being Index. This index is a 5-item scale for measuring positive well-being and has proved to be a good screening instrument for the detection of depression in the general population¹⁴. The sum score ranges from 0 to 25 whereas a score below 13 indicates poor well-being. The internal consistency of the scale was satisfying (Cronbach's $\chi = 0.82$). In contrast to Dressing *et al.*⁴ we skipped the psychological dependency scale but added a question about the living environment (urban or rural).

We used a more restrictive definition of stalking^{2,4}, in line with the definition provided by Meloy¹. In order to be categorized as a stalking victim, the following criteria had to be met: at least 2 different intrusive behaviours had to be reported, lasting for a minimum of 2 weeks and provoking fear.

Statistical analysis

First of all, descriptive analyses were conducted and summarized. Lifetime incidence

was defined as the percentage of stalking victims who had experienced stalking at any time in their lives. Stalking victims who reported being stalked at the present time were used to calculate the point prevalence of stalking. Comparisons of descriptive data were analyzed with Pearson's χ^2 test. When two contingency tables were compared, a Breslow-Day test as a measure of homogeneity between odds ratios was performed. We used a multifactorial ANOVA to analyze age differences in the factors "sex", "being a stalking victim", and "living environment". We used a *t*-test and the *d* effect size described by Cohen¹¹ to compare well-being scores. A linear regression was computed to identify the impact of stalking on current psychological well-being.

Results

Based on our above mentioned definition of stalking, 43 individuals (11%) were classified as stalking victims. When comparing the number of stalking victims in rural and urban areas, a Breslow-Day test as a measure of homogeneity between odds ratios revealed a non-significant difference ($OR_{\text{urban}} = 5.74$; $OR_{\text{rural}} = 5.72$; $\chi^2_{[1]} < 0.1$, $p = 0.996$). Women constituted 86% of the stalking victims while 81% of the stalkers were men. The question as to whether male stalkers are more common in urban than in rural areas revealed no significant difference ($OR_{\text{urban}} = 2.21$; $OR_{\text{rural}} = 5.22$; $\chi^2_{[1]} < 0.1$, $p = 0.320$). Women were predominantly stalked by men (88%) while men were nearly equally stalked by men and women (60% male stalkers). Eight individuals reported that they were still being harassed (they constituted 19% of the victims; 5 women and 3 men). This corresponds to a point prevalence rate of 2.0%.

We compared the data obtained in the present study with those of Dressing *et al.*⁴ (see Table I). No significant differences were registered with regard to the relationship between the stalker and the victim ($\chi^2_{[6]} = 2.17, p =$

0.963), the stalker's motivation ($\chi^2_{[4]} = 1.06, p = 0.906$), stalking behaviours ($\chi^2_{[10]} = 13.60, p = 0.192$), impact on the victims ($\chi^2_{[5]} = 1.71, p = 0.888$), and physical and mental symptoms ($\chi^2_{[10]} = 17.11, p = 0.072$).

Table I

Comparison of data reported by Dressing, *et al.*⁴ and the current study

	Dressing <i>et al.</i> ⁴ – Germany	Current sample – Austria
Demographics		
Sample	$n = 675$ (59% women)	$n = 400$ (56% women)
Age (mean, \pm s.d.)	42.5 (± 3.3)	30.6 (± 13.1)
Living environment	NA	59% urban and 41% rural
Education	50.6% less than 10 years	NA
Incidence of stalking		
Stalking victims	12% (78)	11% (43)
Stalking victims by sex	17% (68) women, 4% (10) men	17% (37) women, 3% (6) men
Stalking victims	87% women	86% women
Stalkers	86% men	81% men
Female victims stalked by a man	91%	88%
Male victims stalked by a man	44%	60%
Duration of stalking	less than 1 month (17%, 13) 1 year and longer (24%, 19)	NA*
Frequency of pursuing	few times (32%, 25) several times a month (8%, 6) several times a week (35%, 27) daily (9%, 7) several times a day (16%, 12)	NA*
Ongoing harassment	14% (9 women, 2 men)	19% (5 women, 3 men)
Point prevalence rate	1.6%	2.0%
Relationship between stalkers and victims		
Stalker was known	76% (59)	70% (28)
Prior intimate partner	32% (25)	40% (16) in 93% victim quit relationship
Ex-partner of the current partner	3% (2)	0% (0)
Friend or acquaintance	20% (16)	23% (9)
Colleague at work	9% (7)	13% (5)
Client or customer	1% (1)	3% (1)
Family member	4% (3)	5% (2)
Motivation (multiple rankings were possible)		
Desire for a loving relationship	35% (27)	37% (16)
Resumption of a former relationship	30% (23)	28% (12)
Jealousy, envy or distrust	32% (25)	37% (16)
Revenge	27% (21)	33% (14)
Feeling hurt by rejection	24% (19)	37% (16)
Stalking behaviours		
Mean number (\pm s.d.)	5 (± 2.8)	5 (± 3.0)
Unwanted telephone calls	78% (61)	72% (31)
Loitering nearby	63% (49)	36% (15)
Unwanted letters, emails or faxes	50% (39)	49% (21): 9% postal letter; 21% SMS, e-mail, fax; 19% both

NA, not applicable.

NA*, in contrast to Dressing *et al.*⁴, duration and frequency were collected for each potential behaviour and are therefore not listed in detail.

Table I (continue)

	Dressing <i>et al.</i> ⁴ – Germany	Current sample – Austria
Following	38% (30)	30% (13)
Approach via a third party	36% (28)	47% (20)
Standing in front of the door	33% (26)	9% (4)
Leaving messages at the door	19% (15)	19% (8)
Pursuing by car	19% (15)	12% (5)
Damage of property	17% (13)	16% (7)
Invading the home	15% (12)	5% (2)
Placing orders under the victim's name	10% (8)	2% (1)
Sending offensive material	9% (7)	5% (2)
Insult	NA	74% (32)
Unwanted telephone calls without talking	NA	65% (28)
Spreading personal information	NA	61% (26)
Spreading defamation	NA	51% (22)
Non-accidental physical contact	NA	47% (20)
Getting in touch through false pretences	NA	28% (12)
Threats of violence	NA	23% (10)
Self-injury if rejected	NA	23% (10)
Threatening, insulting or harassing current partner	NA	19% (8)
Physical aggression	NA	19% (8)
Unwanted visit at work	NA	14% (6)
Letters were opened or removed	NA	9% (4)
Silently hanging around	24% (19)	NA
Sending unsolicited goods	18% (14)	NA
Sexual harassment	42% (33)	30% (10)
Sexual assaults	19% (15)	6% (2)
Impact on the victims		
Changed lifestyle	73% (57)	72% (29)
Changing telephone number, installing an answerphone	32% (25)	41% (12)
Taking additional security measures	17% (13)	17% (5)
Changing residence	17% (13)	10% (3)
Changing workplace	5% (4)	3% (1)
Filing a report at the police	20% (15)	17% (5)
Seeking help from a lawyer	12% (9)	7% (2)
Physical and mental symptoms		
Agitation	56% (44)	61% (26)
Anxiety symptoms	44% (34)	88% (38)
Sleep disturbances	41% (32)	30% (13)
Stomach trouble	35% (27)	19% (8)
Depression	28% (22)	26% (11)
Headaches	14% (11)	14% (6)
Panic attacks	12% (9)	14% (6)
Aggressive thoughts	31% (24)	49% (21)
More suspicious of others	39% (30)	44% (19)
On sick leave	18% (14)	14% (6)
Consulted psychologist or physician	24% (19)	12% (5)

NA, not applicable.

NA*, in contrast to Dressing *et al.*⁴, duration and frequency were collected for each potential behaviour and are therefore not listed in detail.

In contrast to Dressing *et al.*⁴, we found neither age differences nor interactions with regard to the factors “sex” ($F_{[1,391]} = 0.03$, $p = 0.862$), “being a stalking victim” ($F_{[1,391]} = 1.57$, $p = 0.211$), and “living environment” ($F_{[1,391]} = 2.20$, $p = 0.139$). Women were stalked more frequently than men (17% vs. 3%; $\chi^2_{[1]} = 17.7$, $p < 0.001$).

The WHO-5 Well-Being Index score of stalking victims was significantly poorer than that of participants with no prior stalking experience ($\bar{x} = 12.8 \pm 5.1$ vs. $\bar{x} = 15.3 \pm 4.7$; $t_{[372]} = 3.18$, $p = 0.002$; medium effect size Cohen’s $d = 0.51^{11}$). On the categorical level, 52% of the victims and 27% of the non-victims scored in the pathological range of 12 and below ($\chi^2_{[1]} = 11.4$, $p = 0.001$), which is in line with the data reported by Dressing *et al.*⁴ (57% v. 27%).

A linear regression analysis was performed to identify the impact of the lifetime incidence of stalking on current psychological well-being. The variables age, sex, and living environment were included simultaneously in the model. The model explained 4% (adjusted R^2) of the variation in WHO-5 scores ($F_{[4,368]} = 3.43$, $p = 0.009$). Only the fact of being a stalking victim or not could explain variations in the WHO-5 scores (standardized coefficient $\beta = -0.151$, $t = -2.87$, $p = 0.004$). The stated living environment had no impact on the WHO-5 score ($\beta = 0.026$, $t = 0.50$, $p = 0.620$). Contrary to Dressing *et al.*⁴, we registered no influence of age on the WHO-5 score ($\beta = -0.065$, $t = 1.250$, $p = 0.212$).

Discussion

The reported epidemiological data on stalking collected in an Austrian community

closely resemble the data derived from a community-based sample in a middle-sized German city⁴. Despite the potential limitation of using a sample that is younger than the general population, we registered nearly the same cumulative lifetime incidence (17% women vs. 3% men) and point prevalence rate of stalking victims (2.0%) as did Dressing *et al.*⁴ (17% vs. 4%; 1.6%), who used a stratified random sample from a middle-sized German city. This similarity was understandable in view of the fact that Germany and Austria are very similar in terms of cultural, linguistic, societal, and sex-role-typical aspects. In addition to the factors covered by Dressing *et al.*⁴, in the present study we also inquired about the living environment of the participants (rural or urban), but found no difference between the two.

The rates registered in the present study are comparable to those reported by Dressing *et al.*⁴ as well as those concerning representative samples from English-speaking countries such as England and Wales⁷ (12% overall, 16% female, 7% males) and the USA⁸ (8% women, 2% males).

In line with Dressing *et al.*⁴, we found that the lifetime prevalence of being a stalking victim is associated with currently impaired psychological well-being as measured by the WHO-5 Well-being Index. The percentage of victims scoring in a pathological range (52%) is not only in line with Dressing *et al.*⁴ (57%) but also with Kamphuis and Emmelkamp¹⁵ (59%).

To our knowledge, this is the first study reporting lifetime prevalence rates and point prevalence rates of stalking in Austria. Although the only epidemiological data from Germany were collected from a middle-sized city, our results are very similar. This emphasizes the validity of the German data although further studies are needed to

confirm this observation. Furthermore, we found no difference between stalking victims from rural and urban areas although samples with higher rates of stalking victims are needed to obtain more specific data on this aspect.

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