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ORIGINAL ARTICLE

Workplace sexual and gender-based harassment in Denmark: a comparison of the self-labelling and behavioural list method

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Abstract

Aim: Knowledge about the prevalence of sexual and gender-based harassment is hampered by disagreements about definitions and measurement methods. The two most common measurement methods are the self-labelling (a single question about exposure to sexual harassment) and the behavioural list method (an inventory of sexually harassing behaviours). The aim of this paper was to compare the self-labelling and the behavioural list methods for measuring sexual harassment and assess the association with depressive symptoms. *Methods:* The study is based on a convenience sample of 1686 individuals employed in 29 workplaces in Denmark. Survey data were collected from November 2020 until June 2021 and there were 1000 participants with full data on key variables. We used a linear mixed-effects model to examine the relationship between sexual harassment and depressive symptoms. *Results:* In total, 2.5% self-labelled as being sexually harassed, while 19.0% reported exposure to at least one type of sexual and gender-based harassment using the behavioural list method. Both groups reported higher levels of depressive symptoms compared with non-exposed employees. The most common types of behaviours were: that someone spoke derogatorily about women/men (11.6%); being belittled because of one's gender or sexuality (4.7%); and unwanted comments about one's body, clothes or lifestyle (4.5%). *Conclusions:* **The behavioural list method yielded a higher prevalence of sexual and gender-based harassment compared with the self-labelling method. Self-labelling and reporting at least one type of sexual and gender-based harassment was associated with depressive symptoms.**

Keywords: *sexual harassment, self-labelling, survey, prevalence, depressive symptoms*

Background

Workplace sexual harassment is associated with depression, anxiety, post-traumatic stress disorder and suicide[1-7]. There is no universally accepted definition, but most highlight that it is unwanted and harms the victim and/or contributes to a hostile working environment [2,8-10]. One of the most widely used conceptual frameworks is the Tripartite Model [2] that defines sexual harassment as three distinct, but interrelated phenomena: unwanted sexual attention; coercion; and gender harassment. *Unwanted sexual attention* encompasses unreciprocated sexual advances, *coercion* includes job-related pressures or bribes, for example, a promotion in exchange for sexual favours or threats of employment

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if demands are not met, and *gender harassment* includes hostile or degrading behaviours and attitudes about another person's gender or sex [10,11].

Knowledge about the prevalence is severely hampered by disagreements about definitions and measurement methods. Thus, researchers, policy makers and workplaces have no standards against which to measure progress in reducing sexual harassment [12]. The two most common measurement methods are the self-labelling method (typically a single-item question asking the respondents whether they have experienced sexual harassment) and the behavioural list method (an inventory of sexually harassing behaviours). When using the behavioural list method, the respondent does not have to label these behaviours as sexual harassment, and the method is therefore not affected by the respondent's subjective definition of sexual harassment. Previous research suggests that the behavioural list method yields higher prevalence compared with the self-labelling method [13]. Possible reasons for the self-labelling method underestimating the prevalence of sexual harassment include: sexual harassment being associated with considerable social stigma, that is, beliefs that targets of it are complainers, weak and powerless [14], and people may reject this label to avoid social stereotypes and maintain positive self-images [14]. Moreover, respondents may be unsure whether their experience constitutes sexual harassment without pre-established definitions.

National surveys on sexual harassment in Denmark and other Scandinavian countries have been based on the self-labelling method. In 2018, 5.5% of employed women and 1.8% of employed men in Denmark reported exposure to sexual harassment in the previous 12 months [15]. While these sex differences could reflect that women are more often targets of sexual harassment, they could also reflect sex differences in self-labelling, for example, because sexual harassment is often framed as a women's problem. The aim of this research project was to measure workplace sexual and gender-based harassment in Denmark using the behavioural list method. We developed a new survey, the Inventory of Workplace Sexual and Gender-based harassment (IWS). In this article, we describe the development process, compare the prevalence using IWS and the self-labelling method in a sample of Danish employees, and examine the cross-sectional association between sexual harassment and self-reported depressive symptoms.

Methods

Designing IWS

One of the most widely used surveys is the Sexual Experience Questionnaire (SEQ), which measures unwanted sexual attention, coercion and gender harassment [16]. SEQ was originally developed to measure male-to-female harassment, and although it has been used in different countries, it is not a standardized survey, as the number of items and wordings differs [17]. SEQ was developed 30 years ago, and while sexual harassment may not have changed fundamentally, major changes in the way we work, for example, due to digitalization, may not be adequately reflected [18,19]. Moreover, other surveys have been developed specially for the Nordic and European context, including the Bergen Sexual Harassment Scale (BSHS) [4,20] and the survey of the European Union Agency for Fundamental Rights (FRA) [18]. The latter only focused on women and was not designed to measure workplace sexual harassment, and neither BSHS nor FRA include non-sexual gender harassment.

We aimed to develop an inventory covering a broad range of behaviours that may constitute sexual and gender-based harassment to aid preventive efforts. We developed the survey in collaboration with workplaces and labour market stakeholders to strengthen its relevance and acceptability to support a more uniform way of measuring sexual and gender-based harassment in Denmark. This is particularly important given the controversies surrounding the definition [2]. Here, we explain the three phases of the process.

Phase 1: Theoretical and conceptual framework. IWS is rooted in a broad understanding of sexual harassment inspired by Fitzgerald's Tripartite Model and Berdahl's conceptualization of sexual harassment. According to Berdahl [21], sexual harassment is primarily driven by the motivation to protect one's sex status, rather than sexual desire. Thus, it can be understood as a punitive mean of *doing gender*, which moves focus to a broader range of behaviours, that is, sex-based slurs and exclusion [21]. It challenges the traditional notion that only men harass women, because the desire to protect one's sex status is held by men and women alike [21].

Phase 2: Item development. We reviewed different surveys and discussed their strengths and weaknesses. Next, we developed a first draft of IWS inspired by a Danish version of the Sexual Experience Questionnaire–Department of Defence (SEQ-DoD), the Sexual Harassment Inventory (SHI), BSHS and FRA, and the theoretical and conceptual framework described in the previous section. Table I shows overlaps between IWS and surveys used for inspiration. We discussed the first draft with an advisory board consisting of key labour market stakeholders (about 20 unions, employer organizations and researchers) and conducted a parallel qualitative study among employees exposed to sexual harassment.

Table I. Prevalence of sexual harassment according to self-labelling and the IWS.

	Number of persons	Percentage share
Have you been sexually harassed in your workplace during the last 12 months? (Total)	25	2.5%
Men	6	1.0%
Women	19	4.3%
Persons reporting at least one of the 21 IWS items, total	190	19.0%
Men	83	14.8%
Women	105	24.3%
How many times during the last 12 months have you been exposed to the following in connection with your work:		
(1) Unwanted sexual comments about your body, clothes or lifestyle[a,b,c,d]	45	4.5%
(2) Unwanted sexual comments in a larger group/gathering[b]	35	3.5%
(3) Unwanted messages with sexual content (e.g. letters, text messages, emails or messages on social media)[a,d]	26	2.6%
(4) Staring or flirtatious glances with sexual undertones that were unwanted or unpleasant to you[a,b,c,d]	23	2.3%
(5) Unwanted physical contact with sexual undertones (e.g. pat, kiss or hug)[a,b,c,d]	16	1.6%
(6) Unwanted movements with sexual undertones directed at you[b]	6	0.6%
(7) Unsolicited requests for dates even if you have already said no[b,c,d]	7	0.7%
(8) Someone showing you pornographic images or other material with sexual content that were unwanted or unpleasant to you[a,b,c,d]	17	1.7%
(9) Someone whistling at or catcalling you in a way that was unwanted or unpleasant to you[b,c]	5	0.5%
(10) Someone exposing themselves to you (e.g. taken off their clothes) in a way that was unwanted or uncomfortable for you[b,c,d]	6	0.6%
(11) Someone bringing you into conversations about sex against your will[b]	20	2%
(12) Someone spreading sexual rumours about you[a,b]	8	0.8%
(13) Someone telling stories with sexual content that were unwanted or unpleasant to you[b]	29	2.9%
(14) Someone speaking derogatorily about women/men in a way that was unwanted or unpleasant to you[b,c]	116	11.6%
(15) Sexually explicit activities (e.g. games or strippers) at festive events that were unwanted or unpleasant to you[c]	5	0.5%
(16) Someone belittling you because of your gender or sexuality[b,c]	47	4.7%
(17) Someone excluding you from social gatherings or social network because of your gender or sexuality[b]	11	1.1%
(18) Someone asking you for sexual favours in exchange for a reward (e.g. a pay rise or promotion)[a,b,c]	0	0%
(19) Someone threatening punishment or sanctions (e.g. firing) if you refused their requests for sexual favours[a,b,c]	0	0%
(20) Someone touching you against your will (e.g. groped you and/or held on to you)	6	0.6%
(21) Attempted rape or actual rape[a,b,c]	0	0%

[a]BSHS[4,20].

[b]SEQ-DoD[28,29].

[c]SHI[30].

[d]FRA[18].

BSHS: Bergen Sexual Harassment Scale; FRA: Agency for Fundamental Rights; IWS: Inventory of Workplace Sexual and Gender-based harassment; SHI: Sexual Harassment Inventory; SEQ-DoD: Sexual Experience Questionnaire–Department of Defence.

Phase 3: Field testing. We conducted cognitive interviews with employees (some had experiences with sexual harassment, others not) to ensure that questions were understandable and relevant. Besides minor adjustments in wording, these interviews contributed to the development of item 20, 'Someone touching you against your will (e.g. groped you and/ or held on to you)'. This item was introduced to encompass physical advances that do not constitute rape or rape attempts but are more severe than unwanted physical contact (item 6). Finally, we distributed the survey in 29 workplaces and received feedback from employers and employees.

IWS consists of two sections. The first section measures sexual and gender-based harassment during the last 12 months (Table I). In total, 11 items cover different types of verbal harassment, 3 items cover physical advances and 7 items cover non-verbal behaviours. Item 3 covers online harassment, and items 18 and 19 cover coercive behaviours. We also

included harassment based on the target's sexual orientation in item 16 and 17 because of the strong theoretical link between them and the input from stakeholders [22,23]. The second section includes questions about workplace management and witness experiences to aid management.

Data collection

The study is based on data from a convenience sample encompassing 29 workplaces recruited via the researchers and the Advisory Boards Network. We aimed to recruit a diverse group of workplaces, and the sample consist of workplaces from the public and private sector and from different industries and sizes. In some workplaces, all employees received the survey, while in other workplaces only selected departments were invited (this was decided by the management). The mean number of invited participants in each work unit was 57.5 individuals (10th

percentile: $n = 4$, 90th percentile: $n = 126$). Survey data were collected from November 2020 until June 2021. A representative from the workplace sent a list of email addresses to the researchers, who forwarded an invitation letter by email with an online link to the questionnaire to the employees. The letter included information explaining participation in the survey was voluntary, the purpose of the study and use of data. A reminder was later sent. The management received a report with results and was offered a consultation with the research team to discuss findings. In a few workplaces, the researchers presented the results for the employees. Management never received the data to ensure respondents anonymity. In Denmark, register and questionnaire studies do not require approval by committees on biomedical research ethics according to Danish legislation. A total of 1668 individuals were invited to respond to the survey, and 1029 employees chose to do so, yielding a 62% response rate. We excluded respondents with missing key data (self-labelled sexual harassment, IWS, Major Depression Inventory, $n = 29$), yielding a final study population of 1000 participants from 29 work units.

Depressive symptoms were measured with the Major Depression Inventory (MDI), an instrument that allows measurement of depressive symptoms on a continuous scale and to ascertain incidence of prevalent depressive disorders. The MDI has been comprehensively validated, particularly in Denmark. Bech et al. tested the sensitivity and specificity of the MDI against the Present State Examination among patients in psychiatric departments and among healthy controls [24]. Olsen et al. examined the internal and external validity of the MDI among 91 psychiatric patients [25]. Bech et al. evaluated the standardization of the MDI as a depression severity scale in a re-analysis of two previous studies, using the Visual Analogue Scale as an index of external validity [26]. Olsen et al. used the MDI to measure depressive symptoms and prevalent depressive disorders in the Danish general population [27]. These studies concluded that the MDI is a reliable and valid instrument for measuring the level of depressive symptoms and identifying individuals with a probable depressive disorder. The MDI consists of 12 items rating symptoms of depression according to the International Classification of Diseases (ICD)-10. The items were answered on a scale ranging from 0 'At no time', 1 'Some of the time', 2 'Slightly less than half of time', 3 'Slightly more than half the time', 4 'Most of the time' to 5 'All of the time'. For two pairs of items (items 8 and 9, and items 10 and 11) only the item with the highest score was included in the score. Responses were scored 0–5 and summed, yielding a scale from 0 to 50, with higher scores indicating a higher level of depressive symptoms.

Workplace sexual harassment was measured in two ways. First, with the self-labelling method, using the item from the national survey 'Work Environment and Health in Denmark' [5,15] with the wording, 'Have you been sexually harassed in your workplace in the last 12 months?'. Response was 'Yes, daily', 'Yes, weekly', 'Yes, monthly', 'Yes, rarely' or 'Never'. No definition of sexual harassment was given in the questionnaire. Second, sexual harassment was measured using the behavioural list method with IWS which consists of 21 items (see Table II). The responses were recorded on a scale ranging from 1 'Never', 2 'Once', 3 'Two–five times' and 4 'More than five times'. To examine the frequency, we created a compiled binary IWS variable based on whether the employees had experienced sexual harassment ($\geqslant 1$) or none (0) of the IWS questions. Furthermore, we created a categorical variable for sexual harassment, distinguishing between (a) respondents who self-label as targets of sexual harassment, (b) respondents who report one or more items from the IWS but do not self-label, and (c) respondents who do not self-label and report none of the IWS behaviours (non-exposed employees).

Statistical analyses

We used a linear mixed-effects model to examine the relationship between sexual harassment and depressive symptoms comparing the level/degree of depressive symptoms in groups with and without exposure to harassment. We conducted analyses comparing levels of depressive symptoms between employees that either reported sexual harassment measured by self-labelling or reported sexual harassment measured by IWS (but did not self-label as targets of sexual harassment), to employees who did not report sexual harassment according to either method. We also examined the association of each of the items from the IWS with depressive symptoms.

We performed linear mixed-effects models in SAS 9.4 (SAS Institute Inc., Cary, NC) using PROC MIXED to assess the association between sexual harassment as a fixed effect (two levels: Yes/No) and the response variable (MDI score). By using a mixed model with random intercepts across workplaces, we accounted for correlated observations from participants being employed in the same workplace. Assumptions of normality and homogeneity of variance of residuals was inspected by quantile–quantile plots and residual plots. Due to differences in age, gender and educational level across the different workplaces, we decided to adjust for these three

Table II. Descriptive statistics for main study variables for the full population.

	Study population N = 1000
Gender	
Women	435 (43.5%)
Men	562 (56.2%)
Age groups	
18–25 years	39 (3.9%)
26–35 years	268 (26.8%)
36–45 years	265 (26.5%)
46–55 years	248 (24.8%)
55+ years	180 (18.0%)
Educational background	
Long-cycle higher education (Masters or equivalent)	465 (46.5%)
Medium-cycle higher education (Bachelor or equivalent)	243 (24.30%)
Short-cycle higher education	100 (10.0%)
Vocational school	51 (5.1%)
High school	70 (7.0%)
Other (primary school with or without graduation, other)	71 (7.1%)
Job category	
Skilled manual worker	56 (5.6%)
Non-manual worker (e.g. clerk)	633 (63.3%)
Manager	204 (20.4%)
Student	50 (5.0%)
Apprentices	15 (1.5%)
Other (self-employed, unskilled worker, supported employment)	42 (4.2%)

variables (fixed effects), as these factors are related to depressive symptoms and workplace sexual harassment. Information on age and gender of the respondents was collected in the questionnaire. All analyses used a level of statistical significance of $p < 0.05$, and p values were calculated using Restricted Maximum Likelihood Estimation. Model estimates are presented with confidence intervals (CIs) and p values. We assessed the internal consistency of the IWS as a scale, by calculating the Cronbach's alpha across the 21 items.

Results

Table I shows the prevalence of sexual harassment, and Table II shows the characteristics of the respondents.

As shown in Table I, 25 respondents (2.5%) self-labelled as being sexually harassed during the past 12 months (1.0% among men and 4.3% among women), while 190 (19.0%) reported exposure to at least one of the behaviours in IWS (14.8% among men and 24.1% among women). The respondents most often reported that someone spoke derogatorily about women/men (11.6%), belittled them because of their gender or sexuality (4.7%), or exposed them to unwanted comments about their body, clothes, or lifestyle (4.5%). The Cronbach's alpha across all 21 IWS items was 0.73.

As shown in Table II, 43% of the respondents were women and 47% had a higher education.

Model 1 in Table III shows the estimated mean difference in depressive symptoms between employees who self-labelled as being sexually harassed compared with non-exposed respondents, and model 2 shows the estimated mean difference between respondents exposed to at least one of the items in IWS compared with non-exposed respondents. Employees who self-labelled as being sexually harassed had a higher mean level of depressive symptoms compared with the non-exposed, as did employees who reported exposure to at least one item in IWS but did not self-label.

Table IV shows that exposure to six of the items in IWS was statistically significantly associated with higher levels of depressive symptoms, including item 1 (unwanted sexual comments about your body, clothes or lifestyle), item 4 (unwanted physical advances), item 5 (staring and flirtatious glances with sexual undertone), item 14 (some talking negatively about men/women) and items 16 and 17 (being belittled or excluded because of one's gender or sexuality).

Discussion

We found a higher prevalence of sexual harassment using IWS (19.0%) compared with the self-labelling method (2.5%). Previously, Nielsen et al. reported a prevalence of 18.4% when using the BSHS [20], consisting of 11 items and measures experienced during the past 6 months. The FRA survey showed that one in five (21%) women in the European Union (EU) have been exposed to sexual harassment in the previous 12 months. The FRA survey used an 11-item inventory, and although the study only included women and was not limited to sexual harassment at work, the prevalence is similar to the prevalence in our study [18]. Thus, it seems that the behavioural list method produces relatively stable prevalence, even though the wording and number of items differ. When we calculated the internal consistency of the IWS as a scale, the Cronbach's alpha was 0.7, indicating acceptable validity. However, we do not assume that IWS measures one latent construct, and more sophisticated analyses, like principal component analyses or factor analyses, are needed to fully assess the psychometric properties of the inventory. We are currently conducting such analyses based on a larger dataset that has recently been collected. Results are as yet unpublished.

Our findings support previous research showing that sexual harassment is related to poor mental health [1,4,5,7]. We found higher depressive symptoms among employees self-labelling as being sexually

Table III. Mean level of depressive symptoms in relation to sexual harassment recorded by self-labelling and IWS.

	Estimated mean difference	95% CI low	95% CI high	*p* value
Association of sexual harassment and depressive symptoms (*N* = 1000)				
Employees who self-label as being sexually harassed compared with non-exposed employees	3.42	0.68	6.16	0.0145*
Employees exposed to at least one item in IWS but do not self-label compared with non-exposed employees	2.59	1.44	3.73	<0.0001*
Association of sexual harassment and depressive symptoms by gender (effect of at least one incident according to IWS)				
Men exposed to at least one item in IWS regardless of self-labelling compared with non-exposed employees	2.39	0.89	3.89	0.0019
Women exposed to at least one item in IWS regardless of self-labelling compared with non-exposed employees	3.17	1.53	4.81	0.0002

All estimates are adjusted for gender and age, and educational level was added as a covariate. Results are presented as estimates and 95% CI and *p* < 0.05 as significant.

CI: confidence interval; IWS: Inventory of Workplace Sexual and Gender-based harassment.

Table IV. Mean level of depressive symptoms in relation to sexual harassment according to IWS.

Association of the 21 IWS items with depressive symptoms (*N* = 1000)	Estimated mean difference	95% CI low	95% CI high	*p* value
(1) Unwanted sexual comments about your body, clothes or lifestyle	3.27	1.19	5.34	0.0020*
(2) Unwanted sexual comments in a larger group/gathering	0.24	−2.10	2.58	0.8394
(3) Unwanted messages with sexual content (e.g. letters, text messages, emails or messages on social media)	0.59	−2.11	3.28	0.6689
(4) Staring or flirtatious glances with sexual undertones that were unwanted or unpleasant to you	5.34	2.49	8.19	0.0002*
(5) Unwanted physical contact with sexual undertones (e.g. pat, kiss or hug)	4.10	0.69	7.51	0.0184*
(6) Unwanted movements with sexual undertones directed at you	2.83	−2.71	8.38	0.3159
(7) Unsolicited requests for dates even if you have already said no	1.47	−3.70	6.65	0.5766
(8) Someone showing you pornographic images or other material with sexual content that were unwanted or unpleasant to you	1.72	−1.58	5.03	0.3066
(9) Someone whistling at or catcalling you in a way that was unwanted or unpleasant to you[b,c]	−1.11	−7.15	4.92	0.7170
(10) Someone exposing themselves to you (e.g. taken off their clothes) in a way that was unwanted or uncomfortable for you	−2.14	−7.66	3.37	0.4457
(11) Someone bringing you into conversations about sex against your will	2.26	−0.76	5.29	0.1420
(12) Someone spreading sexual rumours about you	2.54	−2.23	7.31	0.2960
(13) Someone telling stories with sexual content that were unwanted or unpleasant to you	1.53	−1.01	4.06	0.2370
(14) Someone speaking derogatorily about women/men in a way that was unwanted or unpleasant to you	3.44	2.12	4.77	<.0001*
(15) Sexually explicit activities (e.g. games or strippers) at festive events that were unwanted or unpleasant to you	−1.54	−7.80	4.71	0.6285
(16) Someone belittling you because of your gender or sexuality	3.60	1.56	5.65	0.0006*
(17) Someone excluding you from social gatherings or social network because of your gender or sexuality	4.24	0.16	8.32	0.0415*
(18) Someone asking you for sexual favours in exchange for a reward (e.g. a pay rise or promotion)	–			–
(19) Someone threatening punishment or sanctions (e.g. firing) if you refused their requests for sexual favours	–			–
(20) Someone touching you against your will (e.g. groped you and/or held on to you)	4.26	−1.34	9.85	0.1362
(21) Attempted rape or actual rape	–			–

All estimates are adjusted for sex and age, and educational level was added as a covariate. Results are presented as estimates and 95% CI and *p* < 0.05 as significant.

CI: confidence interval; IWS: Inventory of Workplace Sexual and Gender-based harassment.

harassed, and among those reporting exposure to at least one item in IWS compared. While coercion is often considered a more serious form of sexual harassment, research show that frequent expose to gender harassment is also detrimental to mental health [10]. However, more prospective studies are needed to elicit the relationship between different types of sexual harassment and frequency of exposure and mental health.

IWS builds on a broad understanding of sexual harassment and includes aspects of unwanted sexual attention, coercion and gender harassment. IWS also includes online harassment and harassment related to employee's sexuality, which can be seen as a type

of heterosexism. Researchers have more recently begun to draw parallels between gender harassment and heterosexism, and Rabelo and Cortina propose a closer integration of the two fields [22].

We compared IWS with the self-labelling method and found that both approaches have advantages and disadvantages. First, employers may underestimate the magnitude of the problem and underprioritize prevention of sexual harassment when relying on the self-labelling method. An advantage of IWS, and the behavioural list method, is that it gives workplaces more detailed data that may focus attention to problems that might otherwise have been overlooked. However, we also found some challenges. Second, most of the workplaces in this study were unable to incorporate IWS in existing employee surveys, for example, engagement and wellbeing surveys, because it was too long. Most workplaces chose to use IWS as a standalone survey, which increases the risk that workplaces will not continuously follow up, develop a shorter version or dismiss IWS. Third, small- and medium-sized workplaces may not be able to ensure and protect respondents' anonymity. This problem, however, will be even more pronounced when using the self-labelling method.

We collected the data during the Covid-19 pandemic, with many employees working from home, which may have resulted in lower prevalence of harassment. Although the data were not based on a representative sample of the Danish population, it is a strength that we cover different sectors and industries. The percentage who self-labelled as being sexually harassed in this study was similar to previous findings from a representative study among employees in Denmark from 2018 reporting a prevalence of 4.6%. The cross-sectional design does not allow to draw causal inferences whether sexual and gender harassment has influenced the level of depressive symptoms, and it possible that depressive symptoms have caused the reporting of sexual and gender harassment. Finally, the 12-month timeframe may lead to an underestimation between sexual harassment and depressive symptoms.

Conclusion

About 19% of employees reported at least one type of sexual or gender-based harassment, while 2.5% self-labelled as being sexually harassed. Both self-labelling as being sexually harassed and reporting at least one type of sexual and gender-based harassment in IWS was associated with a higher level of depressive symptoms compared with being non-exposed to sexual or gender harassment.

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