Original Research

Journal of Interpersonal Violence
2023, Vol. 38(11-12) 7426–7456

DOI: 10.1177/08862605221145954
journals.sagepub.com/home/jiv
SAGE

Incidence and Severity of Sexual Harassment, and its Impact on Mental Health in a Cohort of International Humanitarian Field-Workers

Saara E. Martinmäki[1,2], Kaz de Jong[3], Ivan H. Komproe[4], Paul A. Boelen[5,6], and Rolf J. Kleber[5,6]

Abstract

To date, there have been no cohort studies of sexual harassment incidence and its relation to mental health within humanitarian field-workers. Research among numerous occupations suggests an association between workplace sexual harassment and several health complaints. This study examined the incidence and severity of sexual harassment and its association with changes in mental health in a cohort of international humanitarian aid field-workers (iHAWs). Four hundred and seventy-eight iHAWs filled in questionnaires about sexual harassment, depression, anxiety, and Post-Traumatic Stress Disorder (PTSD) as part of a larger study on health and well-being. Six percent of male and 18% of female iHAWs reported experiencing sexual

[1]ARQ Centre of Expertise for the Impact of Disasters and Crises, Diemen, The Netherlands
[2]ARQ International, Diemen, The Netherlands
[3]Médecins Sans Frontières (MSF), Amsterdam, Noord-Holland, The Netherlands
[4]HealthNet TPO, Amsterdam, Noord-Holland, The Netherlands
[5]ARQ National Psychotrauma Centre, Diemen, The Netherlands
[6]Utrecht University, The Netherlands

Corresponding Author:
Saara Martinmäki, ARQ International, Nienoord 5, Diemen, 1112 XE, The Netherlands.
Email: s.martinmaki@arq.org

harassment during their latest field assignment, with most reporting low levels of nonphysical forms of sexual harassment. Sexual harassment was predictive of negative changes in both depression and anxiety symptom severity between before and after an assignment for females; for males, it predicted negative changes in PTSD symptom severity. Sexual harassment did not predict utilization of mental healthcare services within 2 months after the end of assignment. The current findings are the first figures derived from a representative sample of iHAWs on the incidence of sexual harassment during a field assignment and show sexual harassment to be a relatively common and present issue. The findings are mostly in line with the extant literature and underscore the importance of attending to the issue of sexual harassment in the humanitarian sector.

Keywords
harassment, humanitarian workers, incidence, mental health, anxiety, PTSD, depression

Introduction

While workplace sexual harassment has been a topic of study since the 1970s, it has made its way firmly to public awareness in the last years, with a slew of organizations coming under fire about workplace sexual harassment or misconduct. With increasing attention to sexual harassment in occupational contexts following the #MeToo movement, more focus has been placed on the organization's responsibility to safeguard their staff from it. International humanitarian aid field-workers (iHAWs) work in settings characterized by emergencies, danger, and exhausting and demanding working conditions (De Jong, Martinmäki, Te Brake, Haagen, et al., 2021). They are often far away from home, working and living in relative isolation, removed from many resources available in their home environments, bound to their professional setting around the clock, and sharing living quarters with other colleagues. Together with significant power differentials among different staff groups, these settings are situations associated with a high likelihood of sexual harassment and abuse (Shaw, 2018). This investigation will examine the incidence of sexual harassment and its psychosocial health consequences in this unique occupational group.

Sexual harassment can be defined as any unwelcome conduct of sexual nature (verbal, nonverbal, or physical) "with the purpose or effect of violating the dignity of a person, in particular when creating an intimidating,

hostile, degrading, humiliating or offensive environment" (European Institute for Gender Equality, 2021). Experiencing workplace sexual harassment is unfortunately not uncommon, particularly for women. Estimates vary substantially between countries and occupational groups, as well as women and men (Marsh et al., 2009; Niedhammer et al., 2012; Richman et al., 1999). For example, in the United States, an estimated 41% of female workers appear to face sexual harassment at some point during their careers, as do 32% of male workers (Das, 2009). In China, a meta-analysis estimated the 12-month prevalence of sexual harassment against nurses at 7.5%; no estimate could be derived for male nurses in the meta-analysis, due to their small numbers (Zeng et al., 2019). Further, the estimated 6-month prevalence rates of sexual harassment by a supervisor or by a coworker in the South African Navy were 33.8% and 84.3% for females, and 14.1% and 51.5% for males, respectively (van Wijk et al., 2009). A meta-analysis of over 86,000 female workers found that 58% of women reported experiencing sexual harassment at work; there were large differences in the rates of reporting among different industries (Ilies et al., 2003). Similarly, the rates at which males reported workplace sexual harassment were also related to the industry, with much higher rates in policing (Lonsway et al., 2013) or military (Street et al., 2007) as opposed to for example, government jobs (NASEM, 2018). Male-dominated sectors and their often rigid job gender context, in particular, tended to have more problems with sexual harassment (e.g., Kabat-Farr & Cortina, 2014; Willness et al., 2007). It is worth noting that a large proportion of the research into workplace sexual harassment has taken place among White women, even though women of color often faced the highest victimization rates (e.g., Leskinen et al., 2011). Furthermore, there is little research on workplace sexual harassment that focuses on the experiences of transgender or nonbinary individuals.

Only a small proportion of those exposed to workplace sexual harassment make a formal report of harassment to their employer (Feldblum & Lipnic, 2016; Lonsway et al., 2013). Without accurate estimates of the incidence of harassment that occurs within an occupational group or setting, it is challenging to create meaningful strategies toward combatting it.

Not only do studies find that a large number of workers experience sexual harassment, but also that experiencing sexual harassment at work has negative health consequences. Repeated workplace sexual harassment and the resulting strain have been connected to less physical and psychological well-being (Chan et al., 2008; Gunnarsdottir et al., 2006; Willness et al., 2007), poor sleep (Nabe-Nielsen et al., 2016), depression (Marsh et al., 2009), anxiety, hostility, and alcohol consumptiom (Richman et al., 1999), as well as post-traumatic stress disorder (PTSD) (Kang et al., 2005; Street et al., 2007).

Incidence and impact of sexual harassment appear particularly large in male-dominated occupational contexts or client-facing jobs. An investigation (Hom et al., 2017) into harassment and its mental health consequences in a sample of female firefighters found that harassment was positively associated with reporting suicidal ideation and severe mental health symptoms. Similarly, a study into workplace harassment experienced by male and female flight attendants (Gale et al., 2019) revealed associations between the experience of harassment and mental health outcomes (depression, sleep disturbances, and musculoskeletal injuries). There is substantive evidence that while less often targeted, the experience of sexual harassment in a work context is also detrimental to the health and well-being of males (e.g., Kang et al., 2005; Street et al., 2007).

Stoddard et al. (2019) identified three sets of issues revolving around sexual violence within the aid sector: (a) sexual assaults, (b) nonviolent forms of misconduct such as harassment and sexual exploitation, and (c) abuse by aid workers themselves toward recipients. The last issue received much attention following the Oxfam scandal of 2018 (Gayle, 2018), a sexual exploitation scandal involving Oxfam staff members in Haiti. Following that, the first two also began receiving attention via whistleblower stories detailing harassment-permissive work cultures. However, there is a shortage of systematically collected research data on sexual harassment, sexual assault, and their health associations from representative datasets.

The risk of underreporting appears endemic in the humanitarian aid industry. Data from the Aid Worker Security Database, a database recording deliberate acts of violence affecting aid workers, has recorded only 21 incidents of sexual violence affecting 29 female victims between 1997 and 2018 (Stoddard et al., 2019). This figure is in stark contrast to the findings from two recent surveys about sexual harassment and violence in humanitarian fieldwork: the Humanitarian Women's Network (2017) Survey and Report the Abuse (Nobert, 2017), both of which reported high numbers of experienced sexual harassment.

However, the lack of random sampling or studying a cohort of aid workers instead of self-selection by survey respondents obstructs the generalization of results to (international) humanitarian workers overall (Mazurana & Donnelly, 2017; Stoddard et al., 2019). Furthermore, the two surveys provided no information about the health impact of sexual harassment on humanitarian workers. The reports by Stoddard et al. (2019) and Mazurana and Donnelly (2017) pointed, among other things, to the need for conducting a large-scale representative study that would allow analysis of rates of harassment and their health effects.

The current study attempted to fill the gaps in the literature outlined above. First, we examined the incidence of sexual harassment in a large cohort of international staff members on a humanitarian field assignment. Second, we investigated whether experiencing sexual harassment is associated with changes in psychosocial health between before and after a humanitarian field assignment and the use of health care following a field assignment. An earlier investigation based on the same sample indicated that other stressors than sexual harassment—namely field assignment-related stressors (e.g., health risks, high workload team stressors, security incidents)—were associated with higher mental health symptoms after an assignment (De Jong, Martinmäki, Te Brake, Kleber, et al., 2021). Therefore, we chose to control for the effect of field stressors in our analysis. The following hypotheses were put forth: (a) female humanitarian field-workers report more sexual harassment than male humanitarian field-workers and (b) sexual harassment predicts negative changes in psychosocial health when controlling for field stressors and pre-assignment psychosocial health.

Method

Study Design and Participants

The present investigation was part of a larger prospective cohort study into the health and well-being of international humanitarian field staff members of Médecins Sans Frontières Operational Centre Amsterdam (MSF OCA) (De Jong, Martinmäki, Te Brake, Haagen, et al., 2021). The current study used data from three measurement occasions: pre-field assignment, post-field assignment, and a 2-month follow-up. Four hundred and seventy-eight international humanitarian field-workers of MSF OCA between the ages of 24 and 76 years ($M = 40.4$; $SD = 10.9$) completed post-assignment measures; there was some missing data on pre-assignment measures and the follow-up questionnaire. There were more female (60.9%, $n = 284$) than male (39.1%, $n = 182$) participants. The majority of the participants had prior experience on international humanitarian missions (78.2%, $n = 374$), and some had previously worked on a mission as national staff (14.2%, $n = 64$). Further demographic and mission-related information is presented in Table 1.

The participants were recruited between December 2017 and February 2019. All international field staff of MSF OCA departing for a field mission on an expatriate contract within the recruitment period were eligible for the study. This excluded field visits from the office staff, which were typically as brief as, on average, 2 weeks. The participants were informed and recruited

Table 1. Demographics and Humanitarian Aid Assignment-Related Data ($n = 478$).

Variable	*N*	%
Age		
In years (*M*, *SD*)	40.43	10.93
Sex		
Male	182	39.1
Female	284	60.9
Continent of origin		
Africa	39	8.6
Asia	55	12.1
Europe	250	54.8
North America	87	19.1
South America	12	2.6
Oceania	13	2.9
Education		
Secondary or high school	7	1.6
Higher vocational training/technical training	32	7.3
University degree: Bachelors or Master	286	64.9
Postgraduate degree	116	26.3
Relationship status		
Single, never married	202	43.4
Married	89	19.1
Committed relationship but not married	104	22.4
Separated	24	5.2
Divorced	41	8.8
Widowed	5	1.1
Sexual orientation		
Heterosexual	421	90.1
Gay or lesbian	18	3.9
Bisexual	28	6.0
Assignment function		
Coordinator	133	29.10
Activity manager and clinical medical specialist	297	65.0
Supervisor and specialist	21	4.60
Other	6	1.30
Prior humanitarian assignment experience		
First-timer	104	21.8
Experienced	374	78.2
Number of assignments (*M*, *SD*)	4.66	5.80
Previously worked as national staff		
No experience	386	80.8
Any experience	64	14.2
In years (*M*, *SD*)	4.72	3.74

by an independent non-MSF researcher face-to-face during pre-assignment briefings at the MSF office or via a video call. All participants provided written informed consent. Ethics approval for the study was granted by the internal Ethics Review Board of Médecins Sans Frontières on February 24th, 2017 (ID 1642).

Procedure

The participants filled in the self-report questionnaires on an online platform, at each measurement occasion, either at the MSF OCA office or remotely. The pre-assignment measures took place 0 to 14 days before departing on a mission. The participants filled in post-assignment questionnaires as soon as possible after returning from the mission, at the latest 4 weeks after returning. The follow-up measures were filled in on an online platform 2 months after filling in the post-assignment questionnaires (for more details on the procedure, see De Jong, Martinmäki, Te Brake, Haagen, et al. [2021]). The data collection was terminated on March 12th, 2020, approximately 3 weeks before the official planned termination date, due to the Dutch government's COVID-19 regulations, logistical issues such as borders and workplaces closing, and the desire to avoid confounding the study results.

Measures

Depression and anxiety. The Hopkins Symptom Checklist (HSCL-25) (Parloff et al., 1954) was used to assess symptoms of anxiety and depression within the past week. The self-report questionnaire consists of 10 anxiety and 15 depression items, scored on a four-point scale ranging from 1 ("not at all") to 4 ("often"). The internal consistency was good for the two subscales ($\alpha = .90$ depression; $\alpha = .87$ anxiety).

Post-traumatic stress disorder. The Post-Traumatic Check List for DSM-5 (PCL-5) (Blevins et al., 2015) was used to assess symptoms of post-traumatic stress. The questionnaire consists of 20 items scored on a 0–4 scale ("not at all" to "extremely"). The range of total scores is 0 to 80, with higher scores denoting higher symptom severity. In the current sample, the scale had good internal consistency ($\alpha = .89$).

Humanitarian field stressor list. The Psychosocial Care Unit (MSF OCA) developed an instrument that was used to measure the severity of 39 potential assignment-related stressors in six dimensions (De Jong, Martinmäki, Te Brake, Haagen, et al., 2021) at post-assignment: field conditions, cultural

stressors, work-related stressors, team stressors, self-experienced traumatic events, and code of conduct. The answers were scored on a six-point scale ranging from 0 ("none/not applicable") to 5 ("high"). A total sum score (0–195) was used, with a higher score denoting higher experienced stressor exposure. The sum score was used as a control predictor variable.

Sexual harassment. The sexual harassment section of the Deployment Risk and Resilience Inventory-2 (DRRI-II) (Vogt et al., 2013) was used to estimate the incidence and severity of sexual harassment on a humanitarian field assignment of MSF OCA and therefore used only at post-assignment. The DRRI-II has been widely used for assessing deployment-related risk and resilience among veterans. As the instrument is designed to be used by veterans or Armed Forces service members, we adapted the wording by replacing "deployment" with "assignment." All the questions referred to the field assignment from which the participant has just returned. Following the recommendations of the DRRI-II manual, we named the scale "Relationships during assignment" rather than "sexual harassment."

Sexual harassment was assessed with eight questions rated on a four-point scale with the answer options 0 ("never"), 1 ("once or twice"), 2 ("several times"), and 3 ("many times"). The sum scores of each scale range between 0 and 24, with higher scores denoting a higher level of exposure to harassment. Sexual harassment, as measured by the DRRI-II scale, is conceptualized as "exposure to unwanted sexual contact or verbal conduct of a sexual nature" from "people you work with" (Vogt et al., 2013). The sexual harassment scale of the DRRI-II has demonstrated strong internal consistency, reliability, and criterion-related validity (Vogt et al., 2013). In the current sample, the internal consistency of the sexual harassment scale was acceptable ($\alpha = .62$). The sexual harassment scale sum score (possible range 0–24) was used to estimate the incidence and severity of harassment on a single field assignment and as a predictor variable of changes in psychosocial health.

Healthcare utilization. At the 2-month follow-up measurement occasion, participants were asked to report whether they had utilized any healthcare services since returning from the assignment. If affirmative, they were asked whether they had used services related to physical health, mental health, or both. Mental healthcare utilization was binary coded as "yes" or "no" and was used as the outcome variable for logistic regression analyses.

Statistical Analyses

Descriptive analyses and hierarchical regression analyses were performed using SPSS (Version 27.0). The frequencies of reported sexual harassment

were used to estimate the incidence of sexual harassment per field assignment. Cross-tabulation and chi-square statistics were employed to contrast the incidence between males and females, and to examine any differences in incidence related to the control variables sexual orientation, previous humanitarian mission experience, or age. Age was mean centered for the analyses, and for the sexual orientation variable, we collapsed across categories to make sure there were enough cases in each category. List wise deletion on scale level was applied in case of missing data.

The association between potential predictors and change in depression, anxiety, and PTSD symptoms was examined separately by using three multivariate hierarchical regression analyses. The predictors were regressed on the change in symptom severity throughout the field assignment. The analyses were stratified by sex, and all used an alpha level of .05. The change in symptom severity was operationalized as the difference score between the pre- and post-assignment symptom severity scores, implying that positive change scores denote an improvement (decrease) in symptoms and negative change scores denote a worsening (increase) in symptoms. The predictors were added to the models in a specific order. In the first step, pre-assignment symptom severity (depression, anxiety, or PTSD) was added to the model to predict change in symptoms, together with the three control variables. In the second step, the severity of field assignment stressors score was added. In the final step, the sexual harassment score was added to the model. Significance of the overall model, change in variance explained by the model, and regression coefficients of the predictors were tested after each step.

The association between sexual harassment and mental healthcare service utilization 2 months after an assignment was examined through a logistic regression analysis, also stratified by sex. The outcome was binary coded (0 = no; 1 = yes), and the predictor variable was the sum score of the sexual harassment scale.

Results

Incidence of Sexual Harassment

The incidence of sexual harassment was higher among females than males: 17.7% of female iHAWs reported having experienced at least one incident of sexual harassment at least once or twice during the latest assignment. The corresponding figure for males was 6.6%. The difference was statistically significant ($\chi^2(1) = 12.01$, $p < .001$). In addition, whether the participant was on a humanitarian assignment for the first time or had previous experience was significantly related to reporting sexual harassment; a larger proportion

of first-timers reported sexual harassment ($\chi^2(1)=4.21$, $p<.05$). There was no significant difference in the incidence of sexual harassment based on sexual orientation ($\chi^2(1)=.07$, $p=.79$).

There were significant differences in the extent the participants endorsed the different items of the sexual harassment questionnaire (Table 2). Females' most commonly endorsed (14.1%, $n=38$) item was receiving crude and offensive sexual remarks directed at them by people with whom they worked, either publicly or privately. In contrast, fewer than 2%[1] of males endorsed the same item. For males, the most commonly endorsed item concerned people with whom they worked spreading negative rumors about their sexual activities, which was endorsed by 5.6% ($n=10$) of male iHAWs. The same item was also endorsed by 5.9% ($n=16$) of female iHAWs. Two other items were endorsed by more than five female iHAWs, and they concerned someone with whom they worked with trying to talk them into participating in sexual acts when they did not want to (3.7%, $n=10$) or touching them against their will in a sexual way (2.2%, $n=6$). The remaining items on the questionnaire were endorsed by fewer than five (<2%) male or female iHAWs, but all endorsed by at least some iHAWs.

Severity of Sexual Harassment

The mean reported sum score of the exposure to sexual harassment was 0.34 ($SD=0.96$, range 0–7) for females and 0.13 ($SD=0.74$, range 0–8) for males. This difference in means was significant, $t(447)=-2.40$, $p<.05$, denoting that in addition to a significantly larger proportion of females reporting sexual harassment, the mean exposure to sexual harassment (discrete types and frequency) was also significantly higher for females than for males. Age was negatively correlated with severity of sexual harassment (correlation −.183 [$p<.001$]), meaning that lower age was associated with higher severity of reported sexual harassment. The mean reported severity sum score of participants who had no previous humanitarian fieldwork experience was significantly higher than the mean score of participants with previous experience, $t(478)=6.34$, $p<.05$. The mean difference in severity score when comparing heterosexual participants with gay, lesbian, or bisexual participants was insignificant, $t(466)=.008$, $p=.93$.

Sexual Harassment as Predictor of Change in Psychosocial Health

Correlations and descriptive analyses. Among female iHAWs (Table 3), sexual harassment was significantly and negatively correlated with depression and

Table 2. Incidence of Sexual Harassment on the Latest Assignment, per Type of Sexual Harassment.

	Females				Males			
	No		Yes		No		Yes	
Type of Sexual Harassment	*n*	%	*n*	%	*n*	%	*n*	%
. . . made crude and offensive sexual remarks directed at me, either publicly or privately.	232	85.9	38	14.1		>98%		<2%
. . . spread negative rumors about my sexual activities.	254	94.1	16	5.9	169	94.4	10	5.6
. . . tried to talk me into participating in sexual acts when I didn't want to.	260	96.3	10	3.7		>98%		<2%
. . . used a position of authority to pressurize me into unwanted sexual activity.		>98%		<2%		>98%		<2%
. . . offered me a specific reward or special treatment to take part in sexual behavior.		>98%		<2%		>98%		<2%
. . . threatened me with some sort of retaliation if I was not sexually cooperative (for example, the threat of negative review or physical violence).		>98%		<2%		>98%		<2%
. . . touched me in a sexual way against my will.	264	97.8	6	2.2		>98%		<2%
. . . physically forced me to have sex.		>98%		<2%		>98%		<2%

Note. The types of sexual harassment are based on the questions from the Deployment Risk and Resiliency Inventory-2 (DRRI-II), section K2. Each question begins with "*During mission, the people I worked with. . ..*" Categories such as "once or twice," "several times," and "many times" were collapsed into one category: "yes."

Table 3. Correlations Between Sexual Harassment, and Change in Depression, Anxiety, PTSD, and Field Stressors Among Female Participants.

	Variable	1	2	3	4	5	6
1	Sexual harassment	—					
2	Depression change	−.19**	—				
3	Anxiety change	−.16*	.70**	—			
4	PTSD change	−.11	.53**	.44**	—		
5	Field stressors	.25**	−.15*	−.13*	−.15*	—	
6	Age	−.21**	.18**	.07	.05	−.20**	—

Note. Sexual harassment was measured with the Deployment Risk and Resiliency Inventory-2, section K2. Depression and anxiety change scores (T2–T1) were measured with the Hopkins Symptom Checklist (HSCL-25) depression and anxiety subscales, respectively. PTSD change score was measured with the PTSD Checklist for DSM-5. Field stressors were measured with the Humanitarian Field Stressor List. PTSD = post-traumatic stress disorder.
*$p < .05$. **$p < .01$.

Table 4. Correlations Between Sexual Harassment, and Change in Depression, Anxiety, PTSD and Field Stressors Among Male Participants.

	Variable	1	2	3	4	5	6
1	Sexual harassment	—					
2	Depression change	–.05	—				
3	Anxiety change	–.08	.61**	—			
4	PTSD change	–.07	.57**	.38**	—		
5	Field stressors	.22**	–.04	–.07	–.13	—	
6	Age	–.10	.19**	–.02	.04	–.14	—

Note. Sexual harassment was measured with the Deployment Risk and Resiliency Inventory-2, section K2. Depression and anxiety change scores (T2–T1) were measured with the Hopkins Symptom Checklist (HSCL-25) depression and anxiety subscales, respectively. PTSD change score was measured with the PTSD Checklist for DSM-5. Field stressors were measured with the Humanitarian Field Stressor List. PTSD = post-traumatic stress disorder.
**$p < .01$.

anxiety symptom change. For male iHAWs, sexual harassment was not significantly correlated with any of the change scores (Table 4). Severity of field-assignment stressors was also significantly and positively correlated with more sexual harassment for both males and females. Age was positively correlated with depression change score among females and males, and negatively correlated with sexual harassment sum score and general harassment sum score for females only.

The mean changes in depression symptoms of female and male iHAWs were 0.01 ($SD=0.51$) and 0.01 ($SD=0.43$), respectively, whereas the baseline depression mean scores were 1.65 ($SD=0.51$) for females and 1.51 ($SD=0.46$) for males. Anxiety mean change scores were 0.12 ($SD=0.49$) and 0.11 ($SD=0.40$) for female and male iHAWs, respectively, with females having slightly higher baseline scores ($M=1.54$, $SD=0.49$) than males ($M=1.44$, $SD=0.45$). PTSD change scores, on the other hand, had a mean of 0.57 ($SD=10.81$) among female iHAWs and 1.02 ($SD=7.76$) among male iHAWs. Like with the change scores, baseline PTSD scores were slightly lower among females ($M=8.9$, $SD=8.93$) than among males ($M=9.00$, $SD=7.84$). With regard to severity of field stressors, females reported a higher mean total score ($M=63.51$. $SD=27.89$) than males ($M=59.60$, $SD=27.94$).

Prediction of Symptom Change

Depression

Females. As shown in Table 5, baseline depression severity together with the control variables explained 19.8% of the variance of changes in depression symptom severity from pre-assignment to post-assignment. The addition of field stressor severity explained a further 2.1% of the variation in change scores. Finally, the addition of sexual harassment to Block 3 of the model explained an additional 1.7% of the variance, so that for each standard deviation increase in sexual harassment score, we would expect a 0.14 standard deviations smaller depression change score (implying increased depression symptomatology). The total variance explained by the final model was 23.6%, and each predictor significantly added to the model. Age was the only significant control predictor, predicting a larger change score and, therefore, decreased symptoms of depression.

Males. For males, baseline depression together with control variables explained 22.9% of the variance in changes of depression symptom severity. The addition of field stressors and sexual harassment did not significantly improve the model (Table 5) and did not significantly explain any change in depression symptoms. As with females, the only significant control predictor among males was also age, which was associated with decreased symptoms.

Anxiety

Females. The initial model with baseline anxiety and control variables explained 31.3% of the variance in changes in anxiety symptom severity. The addition of field stressors explained a further 1.9%, and finally, adding

Table 5. Association of Sexual Harassment and Other Predictors With Change in Depression Symptom Severity of Female ($n = 260$) and Male ($n = 164$) International Humanitarian Workers in a Hierarchical Regression Model.

	Females						
Predictors	*B*	*SE B*	β	*t*	*P*	R^2	ΔR^2
Block 1						.198	.198***
Constant	−0.67	0.11		−6.28	<.001		
Baseline depression	0.39	0.06	.41	7.06	<.001		
Age	0.009	0.003	.18	3.06	.002		
Experience	0.05	0.07	.04	.61	.540		
Sexual orientation	−0.04	0.10	−.02	−.34	.731		
Block 2						.219	.021*
Constant	−0.52	0.12		−4.25	<.001		
Baseline depression	0.41	0.06	.42	7.35	<.001		
Age	0.007	0.003	.15	2.51	.013		
Experience	0.04	0.07	.03	.55	.585		
Sexual orientation	−0.02	0.10	−.01	−.23	.819		
Field stressors	−0.003	0.001	−.15	−2.58	.010		
Block 3						.236	.017*
Constant	−0.53	0.12		−4.40	<.001		
Baseline depression	0.40	0.06	.42	7.36	<.001		
Age	0.006	0.003	.124	2.11	.036		
Experience	0.05	0.07	.04	.63	.529		
Sexual orientation	−0.02	0.10	−.01	−.20	.840		
Field stressors	−0.002	0.001	−.12	−2.00	.047		
Sexual harassment	−0.07	0.03	−.14	−2.36	.019		
	Males						
	B	*SE B*	β	*t*	*P*	R^2	ΔR^2
Block 1						.229	.229***
Constant	−0.58	0.11		−5.02	<.001		
Baseline depression	0.37	0.06	.41	5.81	<.001		
Age	0.007	0.003	.17	2.43	.016		
Experience	0.06	0.08	.06	.80	.424		
Sexual orientation	−0.18	0.11	−.12	−.172	.087		
Block 2						.239	.010
Constant	−0.53	0.12		−4.42	<.001		
Baseline depression	0.39	0.07	.43	6.00	<.001		
Age	0.006	0.003	.16	2.19	.030		

(continued)

Table 5. (continued)

	Males						
	B	*SE B*	β	*t*	*P*	R^2	ΔR^2
Experience	0.08	0.08	.07	1.02	.311		
Sexual orientation	−0.15	0.11	−.10	−1.47	.145		
Field stressors	−0.002	0.001	−.11	−1.43	.156		
Block 3						.247	.008
Constant	−0.52	0.12		−4.41	<.001		
Baseline depression	0.39	0.06	.43	6.01	<.001		
Age	0.006	0.003	.16	2.26	.025		
Experience	0.09	0.08	.08	1.13	.259		
Sexual orientation	−0.15	0.11	−.10	−.14	.164		
Field stressors	−0.002	0.001	−.13	−1.69	.093		
Sexual harassment	0.05	0.04	.09	1.25	.213		

Note. ΔR^2 is change in R^2 compared to the previous step. Depression was measured with the Hopkins Symptom Checklist (HSCL-25) depression subscale. Age was mean centered. Previous humanitarian field assignment experience was coded as 0 = no, 1 = yes. Sexual orientation was coded as 0 = heterosexual, 1 = gay, lesbian, or bisexual. Field stressors were measured with the Humanitarian Field Stressor List. Sexual harassment was measured with the Deployment Risk and Resiliency Inventory-2 (DRRI-II), section K2.
$^{**}p < .01$. $^{***}p < .001$.

sexual harassment score increased the explained variance by an additional 1.2% when controlling for the previously added predictors. Like with depression, the significant association between sexual harassment and change in anxiety was negative, so that for each standard deviation increase in sexual harassment score, we would expect a 0.11 standard deviations smaller anxiety change score (implying increased anxiety symptomatology). As shown in Table 6, the total model explained 34.4% of the variance in anxiety change scores. All the changes in R^2 were significant, indicating that each added predictor significantly improved the model. None of the control variables were significant predictors of change in anxiety symptomatology in the final model.

Males. Baseline anxiety explained 34.7% of the variance in change in anxiety score severity. Field stressor scores explained a further 3.3% of the variance. Similar to the depression model of males, sexual harassment was not predictive of changes in anxiety scores. The control variables were not significant predictors of change in severity of anxiety symptoms.

Table 6. Association of Sexual Harassment and Other Predictors With Change in Anxiety Symptom Severity of Female ($n = 260$) and Male ($n = 164$) International Humanitarian Workers in a Hierarchical Regression Model.

	Females						
Predictors	*B*	*SE B*	β	*t*	*P*	R^2	ΔR^2
Block 1						.313	.313***
Constant	−0.72	0.10		−7.30	<.001		
Baseline anxiety	0.55	0.05	.56	10.57	<.001		
Age	0.006	0.003	.14	2.50	.013		
Experience	−0.01	0.06	−.01	−.19	.849		
Sexual orientation	−0.02	0.09	−.01	−.21	.837		
Block 2						.332	.019**
Constant	−0.57	0.11		−5.10	<.001		
Baseline anxiety	0.56	0.05	.57	10.83	<.001		
Age	0.005	0.003	.11	1.95	.052		
Experience	−0.02	0.06	−.01	−.24	.810		
Sexual orientation	−0.006	0.09	−.004	−.07	.943		
Field stressors	−0.003	0.001	−.14	−2.67	.008		
Block 3						.344	.012*
Constant	−0.58	0.11		−5.21	<.001		
Baseline anxiety	0.55	0.05	.56	10.82	<.001		
Age	0.004	0.003	.09	1.59	.113		
Experience	−0.01	0.06	−.009	−.18	.859		
Sexual orientation	−0.004	0.09	−.002	−.05	.964		
Field stressors	−0.002	0.001	−.12	−2.13	.034		
Sexual harassment	−0.06	0.03	−.11	−2.10	.036		
	Males						
	B	*SE B*	β	*t*	*P*	R^2	ΔR^2
Block 1						.347	.347***
Constant	−0.72	0.10		−7.01	<.001		
Baseline anxiety	0.53	0.06	.59	9.04	<.001		
Age	0.002	0.002	.06	.93	.356		
Experience	0.08	0.06	.09	1.29	.198		
Sexual orientation	−0.009	0.09	−.006	−.10	.923		
Block 2						.380	.033**
Constant	−0.63	0.11		−5.98	<.001		
Baseline anxiety	0.55	0.06	.62	9.59	<.001		
Age	0.001	0.002	.04	.57	.568		
Experience	0.11	0.06	.12	1.78	.078		
Sexual orientation	0.03	0.09	.02	.34	.733		
Field stressors	−0.003	0.001	−.19	−2.88	.005		

(continued)

Table 6. (continued)

	Males						
	B	*SE B*	β	*t*	*P*	R^2	ΔR^2
Block 3						.380	.000
Constant	−0.63	0.11		−5.97	<.001		
Baseline anxiety	0.55	0.06	.62	9.52	<.001		
Age	0.001	0.002	.04	.59	.559		
Experience	0.12	0.06	.12	1.78	.076		
Sexual orientation	0.03	0.09	.02	.35	.725		
Field stressors	−0.003	0.001	−.19	−2.83	.005		
Sexual harassment	0.008	0.03	.02	.23	.816		

Note. ΔR^2 change in R^2 compared to the previous step. Anxiety was measured with the Hopkins Symptom Checklist (HSCL-25), anxiety subscale. Age was mean centered. Previous humanitarian field assignment experience was coded as 0 = no, 1 = yes. Sexual orientation was coded as 0 = heterosexual, 1 = gay, lesbian, or bisexual. Field stressors were measured with the Humanitarian Field Stressor List. Sexual harassment was measured with the Deployment Risk and Resiliency Inventory-2 (DRRI-II), section K2.
*$p < .05$. **$p < .01$. ***$p < .001$.

Post-traumatic stress disorder

Females. For female iHAWs, the initial model with baseline PTSD symptoms as the predictor explained 30.3% of the variance in PTSD symptom severity change scores. As shown in Table 7, the addition of field stressors increased the explained variance by 3.5%, but the addition of sexual harassment scores did not improve explained variance quite significantly ($p = .065$) when controlling for the other variables. In other words, sexual harassment was not predictive of change in PTSD symptom severity for female iHAWs. The final model explained 34.7% of the variance in PTSD change scores. None of the control variables significantly predicted change in PTSD symptom severity.

Males. For male iHAWs, baseline PTSD symptom severity explained 24.2% of the variance in changes in PTSD symptom severity scores. The addition of field stressors increased the explained variance by 5%, and adding sexual harassment score added a further 1.8% to the variance explained by the model. The association between sexual harassment and change in PTSD symptoms was negative so that for each standard deviation increase in sexual harassment score, we would expect a 0.14 standard deviations smaller PTSD change score (implying increased PTSD symptomatology). Altogether, this model explained 31.0% of the variation of changes in PTSD scores for male iHAWs. Similar to females, the control variables were not significant predictors of PTSD symptom severity change.

Table 7. Association of Sexual Harassment and Other Predictors With Change in PTSD Symptom Severity of Female ($n = 262$) and Male ($n = 169$) International Humanitarian Workers in a Hierarchical Regression Model.

	Females						
Predictors	*B*	*SE B*	β	*t*	*P*	R^2	ΔR^2
Block 1						.303	.303***
Constant	−4.6	1.36		−3.41	<.001		
Baseline PTSD	0.68	0.07	.56	10.42	<.001		
Age	0.11	0.06	.11	1.97	.051		
Experience	−0.88	1.45	−.03	−.61	.542		
Sexual orientation	−2.31	1.97	−.06	−1.17	.241		
Block 2						.338	.035***
Constant	0.06	1.85		.03	.97		
Baseline PTSD	0.70	0.06	.57	10.93	<.001		
Age	0.07	0.06	.07	1.26	.208		
Experience	−0.101	1.4	−.04	−.71	.477		
Sexual orientation	−2.03	1.93	−.06	−1.06	.293		
Field stressors	−0.08	0.02	−.19	−3.63	<.001		
Block 3						.347	.009
Constant	−0.22	1.85		−.23	.904		
Baseline PTSD	0.70	0.06	.58	11.05	<.001		
Age	0.06	0.06	.05	.95	.341		
Experience	−0.94	1.41	−.04	−.67	.505		
Sexual orientation	−2.03	1.92	−.06	−1.06	.292		
Field stressors	−0.07	0.02	−.17	−3.15	.002		
Sexual harassment	−1.13	0.61	−.10	−1.85	.065		
	Males						
	B	*SE B*	β	*t*	*P*	R^2	ΔR^2
Block 1						.242	.242***
Constant	−1.90	1.28		−1.48	.140		
Baseline PTSD	0.49	0.07	.49	7.08	<.001		
Age	0.09	0.05	.13	1.90	.059		
Experience	−1.76	1.32	−.09	−.134	.183		
Sexual orientation	−1.07	1.86	−.04	−.57	.568		
Block 2						.292	.050***
Constant	0.91	1.50		.61	.545		
Baseline PTSD	0.54	0.07	.54	7.86	<.001		
Age	0.07	0.05	.10	1.51	.132		

(continued)

Table 7. (continued)

	Males						
	B	*SE B*	β	*t*	*P*	R^2	ΔR^2
Experience	−1.07	1.30	−.06	−.82	.411		
Sexual orientation	−0.07	1.83	−.003	−.04	.968		
Field stressors	−0.07	0.02	−.24	−3.38	<.001		
Block 3						.310	.018*
Constant	0.65	1.49		.44	.662		
Baseline PTSD	0.56	0.07	.57	8.18	<.001		
Age	0.07	0.05	.10	1.46	.146		
Experience	−1.36	1.29	−.07	−1.05	.293		
Sexual orientation	−0.21	1.81	−.008	−.12	.908		
Field stressors	−0.06	0.02	−.21	−2.92	.004		
Sexual harassment	−1.45	0.70	−.14	−2.06	.041		

Note. ΔR^2 change in R^2 compared to the previous step. PTSD was measured with the PTSD Checklist for DSM-5 (PCL-5). Age was mean centered. Previous humanitarian field assignment experience was coded as 0 = no, 1 = yes. Sexual orientation was coded as 0 = heterosexual, 1 = gay, lesbian, or bisexual. Field stressors were measured with the Humanitarian Field Stressor List. Sexual harassment was measured with the Deployment Risk and Resiliency Inventory-2 (DRRI-II), section K2. PTSD = post-traumatic stress disorder.
*$p < .05$. ***$p < .001$.

Sexual Harassment and Mental Healthcare Utilization

As shown in Table 8, a logistic regression analysis found no significant relationship between exposure to sexual harassment during the assignment and utilizing mental healthcare services within 2 months following an assignment. The lack of association was found for both male and female iHAWs.

Discussion

As hypothesized, a significantly more sizable proportion of female than male iHAWs reported at least one incident of sexual harassment during their latest field assignment. Exposure to sexual harassment was associated with worsening depression and anxiety symptom severity in female iHAWs and worsening PTSD symptom severity in male iHAWs at post-assignment.

Incidence and Severity of Sexual Harassment

The estimates of the current study are the first figures derived from a representative sample of iHAWs. The reported incidence and severity of sexual

Table 8. Association of Sexual Harassment and use of Mental Healthcare Services of Female ($n = 184$) and Male ($n = 115$) International Humanitarian Workers in a Simple Logistic Regression Model.

				Females			95% CI	
Variable	*B*	*SE B*	Wald	*df*	*p*	Exp. (B)	Lower	Upper
Sexual harassment	0.026	0.225	0.013	1	.908	1.026	0.660	1.595
(Constant)	−1.353	0.191	1	<.001	.259			
				Males			95% CI	
	B	*SE B*	Wald	*df*	*p*	Exp. (B)	Lower	Upper
Sexual harassment	0.225	0.213	1.116	1	.291	1.252	0.825	1.901
(Constant)	−1.329	0.233	32.617	1	<.001	0.265		

Note. Sum score of the sexual harassment subscale (K2) of the Deployment Risk and Resiliency Inventory-2 was used to measure sexual harassment. The outcome—use of mental healthcare services—was binary coded (0 = no; 1 = yes).

harassment found among iHAWs are considerably lower than the rates reported for other occupations such as female firefighters (21.7%; Hom et al. 2017), flight attendants (26%; Gale et al. 2019), and female veterans of the Gulf War (24%; Kang et al., 2005). Differences are likely related to the different time periods applied in the different studies. Our single field assignment, on average half a year in length ($SD = 3.82$ months), measured incidence per average field assignment, as opposed to a 12-month prevalence (Gale et al., 2019) or prevalence based on several years in the specific occupation (Hom et al., 2017). However, this should not be a reason to discount the findings. The nature of international humanitarian work means that their work is assignment based rather than a continuous job. Therefore, measuring a 12-month prevalence would be difficult, if not impossible.

Furthermore, female firefighters work in a strongly male-dominated setting, often being the sole female in a crew, perhaps making them more of a target of harassment. Flight attendants, on the other hand, are working in a strongly feminized, client-facing profession, with the potential of being subject to harassment by clients as well as colleagues. These factors can also explain some of the differences in incidence rates between previous research and the current study.

Being exposed to sexual harassment is often considered a typically female-specific risk. The significant difference between female and male iHAWs on

reported mean scores of sexual harassment is in line with Vogt et al.'s (2013) findings on such differences among military personnel. The mean score reported by females from the military cohort was considerably higher than that of female iHAWs. Male iHAWs and males from the military cohort reported almost similar mean scores on sexual harassment. However, sex is only one of the many identities that can be related to the likelihood of experiencing workplace sexual harassment. In the current study, sexual orientation was not predictive of differences in reported mean scores of sexual harassment; this is in contrast to much of previous research, which suggests that individuals with minority identities (e.g., sexual orientation, race) face more sexual harassment (Konik & Cortina, 2008; McDonald, 2012). On the other hand, previous experience of humanitarian fieldwork was related to exposure to sexual harassment, with more first-time field staff members reporting sexual harassment than the participants who had previous fieldwork experience. This finding echoes the results of other studies: for example, LeardMann et al.'s (2013) study with a large female military cohort showed that previous deployment was associated with a lower risk of sexual stressors, as was higher age.

While the current study tried to ensure optimal conditions for participants to feel comfortable reporting any experienced sexual harassment (e.g., researchers from outside the organization handling all of the data collection and analysis), the rates of harassment reported in the study might have still been subjected to underreporting. One way to examine the overall potential underreporting of sexual harassment among iHAWs is to compare the current study's reporting level relative to the officially filed reports of sexual harassment within the organization in the same time frame. MSF OCA's internal Responsible Behavior Unit (RBU) has been collecting data systematically since 2019. Altogether, 36 official complaints of sexual harassment were filed by field staff between March 2019 and December 2020, according to the RBU's internal reporting (personal communication, received April 07, 2021). Seventeen (47.2%) of these reports were filed by international staff, and in 15 of those (88.2%), the alleged perpetrator was also an international staff member. The current study's data collection period was approximately 6 months shorter than that of the RBU, yet at the very least, twice as many occurrences of sexual harassment were reported in our study than through the official reporting channels. Of note, most reported incidents of sexual harassment in the current research referred to making sexual remarks or spreading rumors, and these harassment types are typically dealt by the line management. They may not, therefore, end up at the RBU office. The lower reporting numbers through the official channels is not surprising: few sexually harassed women and even fewer men tend to formally report, with reporting figures being as

low as 15% of women and 11% of men (Lonsway et al., 2013). Fear or blame, inaction, damage to one's career, trivialization, and retaliation are some of the common reasons for not reporting sexual harassment (e.g., Lonsway et al., 2013; NASEM, 2018).

One aspect of the results which invites further discussion is the meaning behind the reported mean severity of sexual harassment on assignment. While most participants who reported sexual harassment, reported types of verbal harassment as opposed to physical harassment, the relationship between the severity of sexual harassment and impact is not a straightforward one. Langhout et al.'s (2005) study of a very large female military sample reported that the mildest forms of sexual harassment—when experienced in a pervasive manner—can lead to similar distress as infrequent sexual coercion. Furthermore, Sojo et al. 's (2016) meta-analysis of over 70,000 women in the workforce found that high-frequency low-intensity sexual harassment had stronger effects on general health, job satisfaction, as well as organizational commitment, than low-frequency but high-intensity sexual harassment experiences.

Health Associations

Exposure to sexual harassment predicted worsening depression and anxiety symptomatology from pre-assignment to post-assignment in females and worsening of PTSD symptom severity in males, when controlling for baseline symptom scores, field stressors, and the control variables. These findings are partially in line with earlier research into the consequences of sexual harassment. Several studies have previously found associations between sexual harassment and depression and anxiety (e.g., Gale et al., 2019; Marsh et al., 2009; Richman et al., 1999), but unlike in our study, earlier studies have found those associations to also hold for males. Indeed, a meta-analyses (Chan et al., 2008) did not find evidence that sexual harassment would be associated with a larger impact among females than males. Similarly, Bergman and Henning (2008) found that sex did not moderate the relationship between sexual harassment and various outcomes.

One potential reason for the lack of (linear) relationship between sexual harassment and changes in anxiety and depression scores in male iHAWs could be related to the different impacts of field stressors on male and female iHAWs. De Jong, Martinmäki, Te Brake, Haagen, et al., 2021 showed that field stressors had a larger negative impact on the Sense of Coherence—a mechanism that typically protects one's well-being and mental health (Antonovsky, 1987; Mittelmark et al., 2017)—of male than female iHAWs in this cohort. Therefore, it is plausible that for most male iHAWs, field

stressors were the main culprit for anxiety and depression; in contrast, field stressors and sexual harassment had unique contributions for females. Additionally, females and males can appraise sexual harassment differently and that appraisal could, in turn, affect how sexual harassment and various outcomes are connected (Cortina & Areguin, 2021; Willness et al., 2007). Furthermore, the power to find any potentially existing relationships may not be sufficient as a relatively small proportion of male iHAWs reported experiencing sexual harassment.

The finding that sexual harassment was associated with worsening PTSD symptom severity in male iHAWs warrants attention. A large study on the sex-specific risks of PTSD following work-related sexual harassment or assault among Gulf War veterans showed that despite the vastly lower reporting of sexual harassment and assault among male veterans than female veterans, the association with PTSD was significant for both males and females (Kang et al., 2005). The similarity in association also held when controlling for other covariates like combat exposure levels. Our dissimilar findings could stem from two different sources. First, the most commonly reported type of sexual harassment was related to verbal harassment of sexual nature. Unfortunately, confrontation of females to such harassment is common in their everyday life and many occupational contexts. Therefore, it may be that this type of harassment, if experienced in low volumes, does not produce a strong psychological impact in terms of provoking PTSD on females but is perceived as an unavoidable occupational hazard creating anxiety and sadness. The findings of a recent study on different types of military sexual trauma (MST) and their associations of PTSD seem to support this idea: while women were overall at higher risk for many of the PTSD symptoms, when considering those reporting harassment-only MST men were at higher risk of severe PTSD symptoms (Tannahill et al., 2021). Second, the association of sexual harassment with PTSD severity trended toward significance; with larger sample size and therefore more power, we may have seen a significant (weak) association between PSTD symptoms and the experience of sexual harassment for female iHAWs as well.

Several control variables were also included in our analyses. Sexual orientation and whether the participants had previous experience of humanitarian fieldwork were not associated with symptom severity changes in any of the measured outcomes for neither males nor females. To the authors' knowledge, there is no previous research on whether sexual orientation or previous fieldwork or deployments moderate the relationship of sexual harassment and mental health outcomes. In looking at other potentially "vulnerability characteristics" of individuals exposed to sexual harassment, Bergman and Drasgow (2003) found that while race was associated with different mean

levels of sexual harassment, it did not moderate the relationship between sexual harassment and various outcomes. Similarly, Bergman and Henning (2008) showed that neither ethnicity nor sex moderated the same relationship. In the current study, there was no main difference in the incidence of sexual harassment depending on sexual orientation, but there was a difference in incidence depending on experience level. This difference was not, however, reflected in symptom changes, similar to these earlier findings about other participant characteristics. The remaining control variable, age, was predictive of change in only depression symptoms for both males and females. These findings partially echoed those of a meta-analysis which showed that the relationship between workplace sexual harassment and psychological outcomes was stronger among young than older workers. LeardMann et al. (2013) also showed that lower age was associated with a higher risk of sexual stressors (harassment or assault) in a large female military cohort, but the study did not consider the impact of harassment.

The lack of association between experiencing any sexual harassment and the use of mental healthcare services in the 2 months following return from an assignment suggests that while experiencing sexual harassment was detrimental to the mental health of iHAWs, experiencing sexual harassment did not lead to help-seeking, which contradicts some earlier findings on the effects of sexual and general harassment on service utilization. For example, Rospenda (2002) showed that workers who experienced workplace sexual harassment were likelier to seek mental health or other health services than those who had not experienced sexual harassment, regardless of sex. However, as our follow-up measurement occasion was 2 months after returning from an assignment, some delayed reactions related to the experience of sexual harassment may have been missed. Furthermore, some iHAWs may have decided not to seek help due to shame or self-blame, which can be experienced by those who have experienced sexual harassment (Houle et al., 2011). Furthermore, it is possible that help-seeking occurred, but it was underreported.

Strengths, Limitations, and Diversity

This study had several strengths. For one, it was the first study in which a cohort of international humanitarian workers reported on any sexual harassment they faced during their assignment; furthermore, the cohort was reasonably large and representative of the international staff of MSF. The participants were aware that all the data were collected and processed by independent non-MSF affiliated researchers, which likely contributed to more open reporting of sexual harassment. This study also allowed the participants to

report sexual harassment they had experienced without going through the official reporting process, which can lead to lower reported numbers. In addition, our sexual harassment measure captured several types of sexual harassment, rather than utilizing a single-item question.

However, there are also limitations to this study. First, the sample might not be typical for all aid workers: our sample only covered international humanitarian workers, who tend to be highly educated professionals in middle or higher management positions, with relatively equal male–female ratios. As national staff makes up more than 80% of the humanitarian fieldwork workforce (Stoddard et al., 2019), they can be expected to bear the brunt of sexual harassment and violence, and efforts should be directed toward investigating the incidence of sexual harassment among national staff specifically. In future studies, it would be advisable to also consider the structural context of violence against women in the specific country (Brown et al., 2021). Similarly, sexual harassment toward clients or patients using medical or other aid services requires research attention. While our study concerns staff members from various countries and cultural backgrounds, we could not examine potential differences in the exposure to and consequences of sexual harassment based on race or ethnicity due to the lack of demographic data on these topics; the intersection of race and sex is particularly important, and we invite future research to take this into account. The current study also did not investigate the potential association of gender identity and the experience of sexual harassment. Finally, while our research is the first to systematically report the incidence and consequences of harassment in humanitarian workers, it does not reveal anything about the perpetrators, whether the person exposed to harassment reported the event, and how the reporting process was. It would be particularly useful to include questions about the perpetrator in future research, to better understand the organizational dynamics, such as power differentials, that may play a role in who experiences sexual harassment. Further research is recommended to tackle these issues in more detail and in relation to health outcomes, particularly with national humanitarian staff.

Implications

The current findings of the incidence and the detrimental impact of sexual harassment on increasing depression, anxiety, and PTSD symptom severity of iHAWs underscore the importance of addressing the issue of harassment in aid organizations. With these first estimates of incidence per assignment from a representative sample, it is possible to start creating meaningful strategies toward combating sexual harassment in the field. While the added detrimental

impact of sexual harassment may be relatively low, it is by no means negligible. Some of the concrete steps that can be taken to lessen the impact of sexual harassment on iHAWs include but are not limited to: training managers, addressing organizational culture, increasing awareness of the health connection, creating better structures for reporting of sexual misconduct, and making sure that reports lead to action. However, as Cortina and Areguin (2021) outlined in their review on workplace sexual harassment, relying on reporting by individuals is not the ideal focus when trying to address the issue: when most of the focus goes into reporting, the more difficult tasks of changing organizational climate can easily be overlooked, and action against known "bad apples" might not be taken unless formal reports come through. As Stoddard et al. (2019) pointed out in their report on sexual violence in the aid world, organizational cultures that permit relatively lower levels of sexual misconduct create an environment where higher levels of misconduct such as sexual assaults or abuse of aid recipients are likelier to occur. Therefore, addressing the issue of sexual harassment, regardless of its frequency and severity, within aid organizations is of even higher importance.

Conclusion

The current findings add further evidence toward sexual harassment as a relatively common and present problem during humanitarian field assignments, in particular for female iHAWs. Most of the iHAWs reported nonphysical forms of sexual harassment. Sexual harassment experiences were associated with worsening symptomatology of depression and anxiety in females and a worsening PTSD symptom severity in males. Consequently, sexual harassment in the humanitarian world should be given consistent and thorough attention.

Declaration of Conflicting Interests

The author(s) declared a potential conflict of interest (e.g., a financial relationship with the commercial organizations or products discussed in this article) as follows: The funder provided financial support in the form of a grant that also included salaries for some of the authors (SM, KdJ, IK, RJK). The funder did not have any additional role in the study design, data collection, and analysis, decision to publish, or preparation of the article. Dr. Kaz de Jong is employed by Médecins Sans Frontières (MSF), the research funder. To ensure no potential conflicts could arise, the data collection and statistical analyses were performed by independent researchers (SM and colleagues from her organization) without involvement of Dr. de Jong or any other employee of MSF. The results were interpreted with the full research team, including independent researchers and external supervisors (university professors, RK, IK, PB)

to ensure quality and independence. MSF also signed a written agreement that it would adhere to the code of conduct for scientific integrity of the Royal Netherlands Academy of Arts and Sciences regarding this research.

Funding

The author(s) disclosed receipt of the following financial support for the research and/or authorship of this article: This research was supported by a grant from Médecins Sans Frontières (MSF). Kaz de Jong is employed by MSF. The data collection and analyses were performed by independent researchers; the funder did not have any additional role in the study design, data collection and analysis, decision to publish, or preparation of the article. Other authors report no conflicts of interest.

ORCID iDs

Saara E. Martinmäki https://orcid.org/0000-0003-0230-4641

Rolf J. Kleber https://orcid.org/0000-0003-2418-234X

Note

1. To safeguard the anonymity of the participants, if fewer than five participants (<2% of the subsamples) had endorsed a specific type of harassment, the exact *n* was not reported. "Under 2%" was utilized to denote these cases.

References

Antonovsky, A. (1987). *Unraveling the mystery of health: How people manage stress and stay well*. Jossey-Bass.

Bergman, M. E., & Drasgow, F. (2003). Race as a moderator in a model of sexual harassment: An empirical test. *Journal of Occupational Health Psychology*, *8*(2), 131–145. https://doi.org/10.1037/1076-8998.8.2.131

Bergman, M. E., & Henning, J. (2008). Sex and ethnicity as moderators in the sexual harassment phenomenon: A revision and test of Fitzgerald et al. (1994). *Journal of Occupational Health Psychology*, *13*, 152–167. https://doi.org/10.1037/1076-8998.13.2.152

Blevins, C. A., Weathers, F. W., Davis, M. T., Witte, T. K., & Domino, J. L. (2015). The posttraumatic stress disorder checklist for DSM-5 (PCL-5): Development and initial psychometric evaluation. *Journal of Traumatic Stress*, *28*(6), 489–498. https://doi.org/10.1002/jts.22059

Brown, M. J., Nkwonta, C. A., Kaur, A., James, T., Haider, M. R., Weissman, S. B., ... & Li, X. (2021). Intervention program needs for older adults living with HIV who are childhood sexual abuse survivors. *Aging & Mental Health*, 1–7.

Chan, D. K.-S., Chow, S. Y., Lam, C. B., & Cheung, S. F. (2008). Examining the job-related, psychological, and physical outcomes of workplace sexual harassment: A meta-analytic review. *Psychology of Women Quarterly*, *32*(4), 362–376. https://doi.org/10.1111/j.1471-6402.2008.00451.x

Cortina, L. M., & Areguin, M. A. (2021). Putting people down and pushing them out: Sexual harassment in the workplace. *Annual Review of Organizational Psychology and Organizational Behavior*, *8*(1), 285–309. https://doi.org/10.1146/annurev-orgpsych-012420-055606

Das, A. (2009). Sexual harassment at work in the United States. *Archives of Sexual Behavior*, *38*(6), 909–921. https://doi.org/10.1007/s10508-008-9354-9

De Jong, K., Martinmäki, S. E., Te Brake, H., Haagen, J. F. G., & Kleber, R. J. (2021). Mental and physical health of international humanitarian aid workers on short-term assignments: Findings from a prospective cohort study. *Social Science & Medicine*, *285*, 114268. https://doi.org/10.1016/j.socscimed.2021.114268

De Jong, K., Martinmäki, S. E., Te Brake, H., Kleber, R. J, Haagen, J. F. G., & Komproe, I. H. (2021). How do international humanitarian aid workers stay healthy in the face of adversity? Is Sense of Coherence a mediator for health and work engagement? *Manuscript Submitted for Publication*.

European Institute for Gender Equality. (2021, November 18). *Sexual harassment*. https://eige.europa.eu/thesaurus/terms/1376

Feldblum, C., & Lipnic, V. (2016). *Select task force on the study of harassment in the workplace* (Full Report). https://ncvc.dspacedirect.org/handle/20.500.11990/620

Gale, S., Mordukhovich, I., Newlan, S., & McNeely, E. (2019). The impact of workplace harassment on health in a working cohort. *Frontiers in Psychology*, *10*, 1181. https://doi.org/10.3389/fpsyg.2019.01181

Gayle, D. (2018, June 15). Timeline: Oxfam sexual exploitation scandal in Haiti. *The Guardian*. http://www.theguardian.com/world/2018/jun/15/timeline-oxfam-sexual-exploitation-scandal-in-haiti

Gunnarsdottir, H. K., Sveinsdottir, H., Bernburg, J. G., Fridriksdottir, H., & Tomasson, K. (2006). Lifestyle, harassment at work and self-assessed health of female flight attendants, nurses and teachers. *Work*, *27*(2), 165–172.

Hom, M. A., Stanley, I. H., Spencer-Thomas, S., & Joiner, T. E. (2017). Women firefighters and workplace harassment. *The Journal of Nervous and Mental Disease*, *205*(12), 8.

Houle, J. N., Staff, J., Mortimer, J. T., Uggen, C., & Blackstone, A. (2011). The impact of sexual harassment on depressive symptoms during the early occupational career. *Society and Mental Health*, *1*(2), 89–105. https://doi.org/10.1177/2156869311416827

Humanitarian Women's Network. (2017). *Humanitarian women's network full survey results*. https://www.humanitarianwomensnetwork.org/about

Ilies, R., Hauserman, N., Schwochau, S., & Stibal, J. (2003). Reported incidence rates of work‐related sexual harassment in the United States: Using meta‐analysis to explain reported rate disparities. *Personnel Psychology*, *56*(3), 607–631.

Kabat-Farr, D., & Cortina, L. M. (2014). Sex-based harassment in employment: New insights into gender and context. *Law and Human Behavior*, *38*(1), 58.

Kang, H., Dalager, N., Mahan, C., & Ishii, E. (2005). The role of sexual assault on the risk of PTSD among Gulf War Veterans. *Annals of Epidemiology*, *15*(3), 191–195. https://doi.org/10.1016/j.annepidem.2004.05.009

Konik, J., & Cortina, L. M. (2008). Policing gender at work: Intersections of harassment based on sex and sexuality. *Social Justice Research*, *21*(3), 313–337. https://doi.org/10.1007/s11211-008-0074-z

Langhout, R. D., Bergman, M. E., Cortina, L. M., Fitzgerald, L. F., Drasgow, F., & Williams, J. H. (2005). Sexual harassment severity: Assessing situational and personal determinants and outcomes. *Journal of Applied Social Psychology*, *35*(5), 975–1007. https://doi.org/10.1111/j.1559-1816.2005.tb02156.x

LeardMann, C. A., Pietrucha, A., Magruder, K. M., Smith, B., Murdoch, M., Jacobson, I. G., Ryan, M. A. K., Gackstetter, G., & Smith, T. C. (2013). Combat deployment is associated with sexual harassment or sexual assault in a large, female military cohort. *Women's Health Issues*, *23*(4), e215–e223. https://doi.org/10.1016/j.whi.2013.05.002

Leskinen, E. A., Cortina, L. M., & Kabat, D. B. (2011). Gender harassment: broadening our understanding of sex-based harassment at work. *Law and human behavior*, *35*(1), 25.

Lonsway, K. A., Paynich, R., & Hall, J. N. (2013). Sexual harassment in law enforcement: incidence, impact, and perception. *Police Quarterly*, *16*(2), 177–210.

Marsh, J., Patel, S., Gelaye, B., Goshu, M., Worku, A., Williams, M. A., & Berhane, Y. (2009). Prevalence of workplace abuse and sexual harassment among female faculty and staff. *Journal of Occupational Health*, *51*(4), 314–322. https://doi.org/10.1539/joh.L8143

Mazurana, D., & Donnelly, P. (2017). *STOP the sexual assault against humanitarian and development aid workers*. https://fic.tufts.edu/publication-item/stop-sexual-assault-against-aid-workers/

McDonald, P. (2012). Workplace sexual harassment 30 Years on: A review of the literature. *International Journal of Management Reviews*, *14*(1), 1–17. https://doi.org/10.1111/j.1468-2370.2011.00300.x

Mittelmark, M. B., Sagy, S., Eriksson, M., Bauer, G. F., Pelikan, J. M., Lindström, B., & Espnes, G. A. (Eds.). (2017). *The Handbook of Salutogenesis*. Springer International Publishing.

Nabe-Nielsen, K., Grynderup, M. B., Lange, T., Andersen, J. H., Bonde, J. P., Conway, P. M., Garde, A. H., Høgh, A., Kaerlev, L., Rugulies, R., & Hansen, Å. M. (2016). The role of poor sleep in the relation between workplace bullying/unwanted sexual attention and long-term sickness absence. *International Archives of Occupational and Environmental Health*, *89*(6), 967–979. https://doi.org/10.1007/s00420-016-1136-4

National Academies of Sciences, Engineering, and Medicine (NASEM). (2018). *Sexual harassment of women: climate, culture, and consequences in academic sciences, engineering, and medicine*.

Niedhammer, I., Sultan-Taieb, H., Chastang, J.-F., Vermeylen, G., & Parent-Thirion, A. (2012). Exposure to psychosocial work factors in 31 European countries. *Occupational Medicine*, *62*(3), 196–202. https://doi.org/10.1093/occmed/kqs020

Nobert, M. (2017). *Humanitarian experiences with sexual violence: Compilation of two years of report the abuse data collection - world*. https://reliefweb.int/report/

world/humanitarian-experiences-sexual-violence-compilation-two-years-report-abuse-data

Parloff, M. B., Kelman, H. C., & Frank, J. D. (1954). HSCL-25, Comfort, effectiveness, and self-awareness as criteria of improvement in psychotherapy. *American Journal of Psychiatry*, *111*(5), 343–352. http://doi.org/10.1176/ajp.111.5.343

Richman, J. A., Rospenda, K. M., Nawyn, S. J., Flaherty, J. A., Fendrich, M., Drum, M. L., & Johnson, T. P. (1999). Sexual harassment and generalized workplace abuse among university employees: Prevalence and mental health correlates. *American Journal of Public Health*, *89*(3), 358–363. https://doi.org/10.2105/AJPH.89.3.358

Rospenda, K. (2002). Workplace harassment, services utilization, and drinking outcomes. *Journal of Occupational Health Psychology*, *7*(2), 141.

Shaw, E. (2018). *Sexual harassment and assault at work: Understanding the costs*. *Institute for Women's Policy Research Publication, IWPR B, 376*.

Sojo, V. E., Wood, R. E., & Genat, A. E. (2016). Harmful workplace experiences and women's occupational well-being: A meta-analysis. *Psychology of Women Quarterly*, *40*(1), 10–40. https://doi.org/10.1177/0361684315599346

Stoddard, A., Harvey, P., Czwarn, M., & Breckenridge, M. (2019). *Aid worker security report 2019, speakable: Addressing sexual violence and gender-based risk in humanitarian aid*. (Humanitarian Outcomes). Aid Worker Security Database (AWSD). https://www.humanitarianoutcomes.org/AWSDR2019

Street, A. E., Gradus, J. L., Stafford, J., & Kelly, K. (2007). Gender differences in experiences of sexual harassment: Data from a male-dominated environment. *Journal of Consulting and Clinical Psychology*, *75*(3), 464–474. https://doi.org/10.1037/0022-006X.75.3.464

Tannahill, H. S., Fargo, J. D., Barrett, T. S., & Blais, R. K. (2021). Gender as a moderator of the association of military sexual trauma and posttraumatic stress symptoms. *Journal of Clinical Psychology*, *77*(10), 2262–2287. https://doi.org/10.1002/jclp.23162

van Wijk, C., Finchilescu, G., & Tredoux, C. (2009). Sexual harassment of women in the South African navy. *South African Journal of Psychology*, *39*(2), 169–183. https://doi.org/10.1177/008124630903900203

Vogt, D., Smith, B. N., King, L. A., King, D. W., Knight, J., & Vasterling, J. J. (2013). Deployment risk and resilience inventory-2 (DRRI-2): An updated tool for assessing psychosocial risk and resilience factors among service members and veterans. *Journal of Traumatic Stress*, *26*(6), 710–717. https://doi.org/10.1002/jts.21868

Willness, C. R., Steel, P., & Lee, K. (2007). A meta-analysis of the antecedents and consequences of workplace sexual harassment. *Personnel Psychology*, *60*(1), 127–162. https://doi.org/10.1111/j.1744-6570.2007.00067.x

Zeng, L.-N., Zong, Q.-Q., Zhang, J.-W., Lu, L., An, F.-R., Ng, C. H., Ungvari, G. S., Yang, F.-Y., Cheung, T., Chen, L., & Xiang, Y.-T. (2019). Prevalence of sexual harassment of nurses and nursing students in China: A meta-analysis of observational studies. *International Journal of Biological Sciences*, *15*(4), 749–756. https://doi.org/10.7150/ijbs.28144

Author Biographies

Saara E. Martinmäki, MSc, is a researcher and policy adviser at ARQ National Psychotrauma Centre, and a PhD candidate at Utrecht University. Her research focuses on the health and well-being of individuals working in high-risk occupations, with a focus on the relationship between different types of occupational stressors and well-being.

Kaz de Jong, PhD, is head of the staff health department of Médecins Sans Frontières. His research focuses on effects of emergency humanitarian work on health, well-being, engagement, and morality. He challenges the pathological perspective on this and researches how the staff stays healthy.

Ivan H. Komproe, PhD, is a director of research, HealthNet TPO, the Netherlands and a former professor of Collective Trauma & Global Mental Health, Utrecht University. His research focuses on intra- and interpersonal mechanisms that determine the mental health and well-being of communities and individuals that have to deal with the demanding circumstances in post-disaster and post-conflict settings.

Paul A. Boelen, PhD, is a full professor of clinical psychology at Utrecht University, researcher at ARQ National Psychotrauma Centre, and psychotherapist at ARQ Centrum'45, the Netherlands. His research focuses on the impact of loss and trauma on children, adults, and families.

Rolf J. Kleber, PhD, is emeritus professor of psychotraumatology, Utrecht University and Past Director Research, Arq National Psychotrauma Centre, the Netherlands. His research focuses on coping with trauma, outcome assessment of PTSD treatment, (late) consequences of war stress and disasters, and cultural aspects of mental health. He has been a consultant in mental health care after emergencies in the Netherlands and abroad.