



OPEN ACCESS

# Sexual harassment at work within Belgian Defence: a prevalence study

Kaatje Buyse,<sup>1,2</sup> K Goorts ,<sup>1,3</sup> D Peeters,<sup>1</sup> E Dhondt,<sup>1</sup> G Portzky<sup>2</sup>

► Additional supplemental material is published online only. To view, please visit the journal online (<http://dx.doi.org/10.1136/bmjilitary-2021-001855>).

<sup>1</sup>Health and Wellbeing, Belgian Defence, Brussels, Belgium

<sup>2</sup>Faculty of Medicine and Health Sciences, Ghent University, Ghent, Belgium

<sup>3</sup>Environment and Health, KU Leuven, Leuven, Belgium

## Correspondence to

Dr K Goorts, Health and Wellbeing, Belgian Defence, Brussels 1140, Evere, Belgium; [kaat.goorts@kuleuven.be](mailto:kaat.goorts@kuleuven.be)

Received 5 April 2021

Accepted 13 August 2021

## ABSTRACT

**Introduction** Sexual harassment (SH) at work can have an impact on the general health and well-being and on the productivity of the employee. To date, the Belgian Armed Forces do not have any accurate data about SH. Therefore, this study assessed the prevalence of SH within Belgian Defence.

**Methods** The prevalence of SH and staff mental well-being was investigated in a sample of 399 female soldiers. Using quantitative analysis, we measured the impact on mental well-being and the relation to demographic characteristics. Using a qualitative analysis in a subsample of eight female soldiers, we investigated barriers to reporting SH and the impact on professional performance and psychosocial well-being.

**Results** The prevalence of non-physical SH is 36.1% over the last 12 months and 64.4% over the course of a career. Physical SH has a prevalence of 16.1% and 43.4%, respectively. Rape prevalence was reported to be 1.4% over the past 12 months, 9% over the course of their career.

One in three female soldiers suffer from reduced mental well-being, which was significantly associated with SH. In the interviews, female employees report an impact of SH on professional and personal performance. The willingness to report is low due to misunderstanding, disinformation and psychosocial insecurity.

**Conclusion** High prevalence numbers were found suggesting an important impact on the professional performance and mental well-being of female military personnel. Organisational changes may create more willingness among victims to report incidents to the designated services.

## INTRODUCTION

Sexual harassment (SH) is a form of gender-related violence and is identified as a risk factor for the well-being of female employees.<sup>1,2</sup>

The most commonly used definition is the US legal definition from the Equal Employment Opportunity Commission (1980):

*‘unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when:*

- *Submission to such conduct is made either explicitly or implicitly a term or condition of an individual’s employment, or*
- *Submission to or rejection of such conduct by an individual is used as a basis for employment decisions affecting such individual, or*
- *Such conduct has the purpose or effect of unreasonably interfering with an individual’s work*

## Key messages

- 67.4% of female military personnel experienced sexual harassment (SH) throughout their career.
- 64.5% of female military personnel experienced non-physical SH and 43.4% physical SH.
- Nine per cent of female military personnel experienced rape throughout their career.
- 30.8% of female military personnel report reduced well-being, which is significantly associated with SH at work.
- SH has an important impact on professional performance as well as on the individuals’ attitude and behaviour at work.
- Non-reporting of SH was due to misunderstanding, disinformation and psychosocial insecurity.

*performance or creating an intimidating, hostile, or offensive working environment.’*

In psychological terms, SH can be defined as *‘unwanted sex-related behavior at work that is appraised by the recipient as offensive, exceeding her resources, or threatening her well-being’.*<sup>3</sup>

Recent reports of UN Women define SH as *‘any unwelcome sexual conduct in a context of unequal power relations’.*

The concept of ‘unwelcomeness’ is the standard used to determine SH and can be found in all three definitions, in contrast to the concept of ‘consent’. People may consent to things they do not want in situations of inequality.<sup>4</sup> Therefore, sexual conduct is unwelcome whenever the person subjected to it considers it unwelcome.<sup>5</sup>

Prevalence figures of SH often differ greatly from one another, depending on the type of research, region or population. In addition, figures are often biased due to fear and shame or due to different definitions or interpretations of SH.<sup>6,7</sup>

Most of the existing studies on SH in armed forces have been carried out in the US Armed Forces.<sup>8</sup>

In 2018, the US Workplace and Gender Relations Survey of Active Duty Members reported a 24.2% SH rate in women and 6.3% in men over the past year. In the same year, 6.2% of Department of Defense (DoD) women and 0.7% of DoD men experienced sexual assault in the past 12 months. Sexual assault is defined by the DoD as any ‘intentional sexual contact characterized by use of force, threats, intimidation, or abuse of authority or when the victim does not or cannot consent’ (US Department of Defense, 2015). Under this definition, sexual assault includes



© Author(s) (or their employer(s)) 2021. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

**To cite:** Buyse K, Goorts K, Peeters D, et al. *BMJ Mil Health* Epub ahead of print: [please include Day Month Year]. doi:10.1136/bmjilitary-2021-001855

rape, aggravated sexual contact, abusive sexual contact, forcible sodomy (forced oral or anal sex) or attempts to commit these acts.

In 2020, the Military Services and the US National Guard Bureau investigated a total of 984 formal, 765 informal and 32 anonymous SH complaints.

Prevalence figures concerning European soldiers can only be found to a limited extent. In 2018, only 52% of the North Atlantic Treaty Organisation (NATO) member nations provided data for the section 'reported cases of SH and/or sexual abuse' in which sexual abuse is defined as any abuse of position of vulnerability, differential power or trust for sexual purposes.<sup>9</sup>

The prevalence figures at Belgian Defence originate, on the one hand, from a survey conducted by the Human Resources (HR) department of the General Staff in 2000, in response to 25 years of women in Defence<sup>10</sup> and, on the other hand, from a master's thesis in 2016.<sup>11</sup> Both surveys were targeting broader themes concerning female military personnel, such as integration, the reconciliation of private and professional life, life in operations and a brief survey on SH. They did measure some forms of non-physical SH but no clearly defined figures on SH were provided. Some questions were asked on rape and assault using physical violence over the course of the career. In 2016, 1.2% and 3.6% for rape and assault, respectively, were found over the course of the career. In 2000, 1.3% and 4.6% for rape and assault, respectively, were found over the course of the career.

Where figures are ambiguous, consensus does exist regarding the role of gender in the prevalence of SH.<sup>12-13</sup> Women are more often victims of SH compared with men.<sup>9-14-15</sup> For incidents of SH reported by NATO member states, 86% of cases were reported by women.<sup>9</sup> The lack of integration of women within Defence organisations can put women in an even more vulnerable position. In Belgium, the first female soldiers were admitted 45 years ago. However, in 2019, they only made up about 8.7% of the Belgian Defence employees. In Australia, less than one in five Defence industry employees are women. One of the key push factors for women to leave the Defence Force in Australia is sexism, SH or gender bias.<sup>16</sup> A recent study in the Netherlands describes the phenomenon of women in a hypermasculine environment. In so-called 'skewed groups (=minority is less than 15%)', women get a lot of attention and are considered the representatives of their group, which leads to high stress. In addition, they are stereotyped with gender roles being emphasised. In order not to harm this reputation, women will conform to these gender-related standards. The expectation is to behave as 'one of the guys', so women will have to turn against other women.<sup>17</sup>

Besides hypermasculinity, there are other specific organisational factors that may cause larger risk for SH. In an operational setting abroad, people live close together in primitive circumstances.<sup>18-19</sup> In military schools, a boarding school regime creates a thin line between work and private life which can lead to SH. These organisational factors as well as the closed communities possibly induce limited willingness for reporting.<sup>20</sup>

Because of the ambiguous and limited results of previous studies in Belgian Defence, the current research was set up as an exploratory study measuring the prevalence of SH in women within Belgian Defence. Some demographical factors are considered in the prevalence of both physical and non-physical harassment. The impact of SH on mental well-being is explored as well as the impact on professional behaviour. Reporting behaviour is evaluated with the aim of providing practical recommendations.

## METHODS

### Design and sample

We conducted a cross-sectional survey study using an online questionnaire. The target population of the study were Dutch-speaking and bilingual female soldiers. Female musicians were excluded from the study because of their specific employment type in which they have a limited involvement with the core business of Belgian Defence. In September 2019, female soldiers were invited to participate in the study via email using the HR database. One reminder was sent to the target population and a link to the survey was placed on social media groups for female soldiers. The total female population was 2230 in 2019, a minimum sample of 328 was needed to reach sufficient statistical power.<sup>21</sup>

Additional information on the impact of SH and reporting behaviour was assessed using eight in-depth interviews. Participants were recruited through a message on social media (group for women within Belgian Defence) and a notice on the invitation to participate in the quantitative research. The subjects who responded were invited to recruit future subjects among their acquaintances. This sampling technique (=snowball sampling) was used because of the sensitivity of the topic.<sup>22</sup> All participants had to sign an informed consent in order to participate in the study.

Response versus non-response groups were compared based on age, Force and rank.

### Variables and instruments

Quantitative measurements were executed using two existing instruments.

The first instrument was the Sexual Experiences Survey Long Form (SES-LF) which specifically asks about non-physical and physical SH. The instrument was designed to reflect hidden cases of rape and to measure aggressive or coercive sexual acts and victimisation on a dimensional scale. The SES-LF examines degrees of coercion used or experienced in sexual activity.<sup>23</sup>

The part on physical SH covers seven questions on actual and attempted behaviour. Respondents had to indicate the frequency in which they were confronted with the behaviour (0, 1, 2, 3 or more) and the harassment method for each type of behaviour using a structured list (see Table 1).

**Table 1** Structured list with methods for physical SH, based on Koss *et al*<sup>25</sup>

A	Without using a method
B	Telling lies, threatening to end the relationship
C	Continually verbally pressuring me after I said I didn't want to
D	Threatening to spread rumours about me
E	Making promises I knew were untrue
F	Getting angry but not using physical force, after I said I didn't want to
G	Using me sexually after I had taken drugs and was conscious but too incapacitated (out of it) to give consent or stop what was happening
H	Using me sexually after I had been drinking alcohol and was conscious but too intoxicated (drunk) to give consent or stop what was happening
I	Threatening to physically harm me or someone close to me
J	Using force, for example, holding me down with their body weight, pinning my arms or having a weapon
K	Acting together with two or more people to do these things to me even though I objected or was unable to give consent or stop what was happening

SH, sexual harassment.

The list of methods was based on the original SES-LF. The questions on drugs and alcohol from the original SES-LF were condensed into two questions (from eight), as was done in an earlier study by De Haas in the Netherlands to reduce complexity.<sup>24</sup>

Respondents were asked about their experiences during the past 12 months and over the course of their career. To define 'rape', a combination of behaviour and methods was used in the analysis; penetration (anal/vaginal) or oral sex using one of the methods from G to K.

The questions for non-physical SH cover 10 different types of non-physical harassment.<sup>25</sup>

The questionnaire was available in English. A certified translator executed forward-backward translation to Dutch and the researchers performed a second check.

The second instrument was the General Health Questionnaire-12 (GHQ-12) to assess general mental well-being. The GHQ consists of 12 items describing the state of mind. The cut-off value for mental well-being is 50% which means that scores higher than 18 are considered to be an indication for reduced mental well-being (stress, depression...).

Other variables extracted for this study were sociodemographic characteristics, such as age (year of birth), rank (officer, non-commissioned officer (NCO), private soldier) and Force (Land Force, Air Force, Naval Force, Medical Force). These variables were measured in the survey as well. The age variable was based on the date of birth and was further categorised into five groups: 18–20, 21–30, 31–40, 41–50 and 51–56+ years.

For the qualitative part, the interviews were all conducted by the lead researcher in a face-to-face setting and were semistructured using an interview guide which can be found in online supplemental file 1. The researcher discussed the experiences of the participant and asked specific questions on the circumstances, the reactions of management, colleagues, partners and on the reporting behaviour of the respondent.

## Analysis

First, a descriptive analysis describes the prevalence of SH over the past 12 months and over the course of the career of the female military personnel. The impact of the sociodemographic characteristics was measured using one-way analysis of variance and non-parametric testing (Kruskal-Wallis) because the data were not normally distributed. Bonferroni corrections were executed post hoc testing. The association between SH and general well-being was tested using logistic regression ( $p < 0.001$ ) using the respondents' answers concerning the past 12 months.

Quantitative data were analysed using SPSS V.25.0 (IBM, Released 2017, IBM SPSS Statistics for Windows).

Qualitative data from the eight in-depth interviews were transcribed and coded using NVivo V.12 (NVivo qualitative data analysis software; QSR International, 2018). Data were coded to find similarities and differences between the eight interviews. The interviews were coded in relation to different topics such as impact on daily life, professional performance, psychosocial and mental well-being. In addition, demographic characteristics were coded in the interviews to be compared with the quantitative outcomes. Data triangulation allows us to find similarities between the interviews and to compare quantitative and qualitative outcomes.<sup>22</sup>

## RESULTS

### Description of the study population

Three hundred and ninety-nine female soldiers were included in the study. There were no significant differences with the population ( $n = 2230$ ) when considering rank (private soldier, NCO,

**Table 2** Sample versus study population

		Sample (n=399)	General female population (n=2230)*	X <sup>2</sup> difference test (P value)
Age	18–20	2.5%	2.8%	0.002
	21–30	24.3%	18.1%	
	31–40	27.1%	24%	
	41–50	35.3%	26%	
	51–56+	10.8%	29.2%	
Force	Land	39.9%	49.4%	0.280
	Air	29.2%	24.1%	
	Naval	8.9%	8.8%	
	Medical	21.3%	17.3%	
Rank	Private soldier	25.6%	31.8%	0.408
	Non-commissioned officer (NCO)	42.2%	39.2%	
	Officer	32.2%	29%	

\*Musicians excluded.

officer), age and Force (Land Force, Air Force, Naval Force, Medical Force).

In **Table 2**, the comparison between the general population ( $n = 2230$ ) and the sample ( $n = 399$ ) in the year 2019 is listed.

No significant difference ( $p < 0.005$ ) was found for Force and rank between the sample and the population. For age, a lower  $p$  value ( $p = 0.002$ ) was found due to the under-representation of the oldest group (51–56+).

For the depth interviews, eight female soldiers were interviewed. All Forces were represented (4× Medical Force, 1× Naval Force, 1× Air Force, 2× Land Force) as well as all ranks (3× private, 3× NCO, 2× officer), and the four oldest age groups (4× 21–30, 1× 31–40, 2× 41–50, 1× 51–56).

### Prevalence of SH

Over 67% of the female military personnel in Belgian Defence have been confronted with SH (physical or non-physical) over the course of their career.

For non-physical harassment 36.1% of the female soldiers were confronted with some type of unwanted behaviour (see **Table 3**). Over the course of the career, this number increases to 64.4%.

The highest percentages both during the past 12 months and over the course of the career were found in teasing comments of a sexual nature (20.8% and 47.4%, respectively).

Different types of physical SH and their prevalence can be found in **Table 4**. During the past 12 months, 16.1% of the female soldiers were confronted with at least one of these types of physical harassment. Over the course of their career, this number increases to 43.4%.

When considering penetration (anal/vaginal) or oral sex using one of the methods from G to K (see **Table 1**), the case was defined as rape. When attempting penetration (anal/vaginal) or oral sex using methods G–K, the case was defined as attempt to rape. During the past 12 months, 1.4% of the respondents reported rape, and 1.7% reported an attempt to rape. Over the course of the career, 9% reported rape and 8.2% reported attempt to rape. These numbers represent the events that occurred at least once.

Demographic characteristics had no influence on SH in the current study, except for the variable age, which had a significant influence on non-physical SH. Females aged 21–30 years were confronted significantly more often with non-physical SH compared with the other age groups ( $p < 0.001$ ). Due to

**Table 3** Prevalence of non-physical harassment (at least one event) during the past 12 months and over the course of the career

	<12 months (%)	Course of career (%)
Someone stared at me in a sexual way or looked at the sexual parts of my body after I had asked them to stop.	14.6	42.6
Someone made teasing comments of a sexual nature about my body or appearance after I asked them to stop.	20.8	47.4
Someone sent me sexual or obscene materials such as pictures, jokes or stories in the mail or over the internet, after I had asked them to stop. —Do not include mass mailings or spam.	9.3	25.8
Someone showed me pornographic pictures when I had not agreed to look at them.	15	33.1
Someone made sexual or obscene phone calls to me when I had not agreed to talk with them.	14	31.6
Someone watched me while I was undressing, was nude or was having sex, without my consent.	1.3	14.1
Someone took photos or videotapes of me when I was undressing, was nude or was having sex, without my consent.	0.8	4.5
Someone showed me the private areas of their body (eg, butt, penis or breasts) without my consent.	7.8	25.1
Someone made sexual motions to me, such as grabbing their crotch, pretending to masturbate or imitating oral sex without my consent.	11.5	31.7
Someone masturbated in front of me without my consent.	2.3	4.9

the minor over-representation of this group in our sample, it is possible that the results on non-physical harassment are slightly exaggerated. The same relation with age was not found for physical SH.

### Impact on well-being

Well-being among the female military personnel was measured using the GHQ-12. The general cut-off value for mental health problems is 50%.<sup>26</sup> In Table 5, the percentage of female military personnel exceeding this threshold is given for each Force, rank and age group. We found that 30.8% of the female military personnel suffer from decreased mental well-being. When looking at Force, the highest percentage can be found in the Navy. For rank, the highest percentage can be found in the private soldiers, whereas the highest percentage for age was observed in the group 41–50 years.

A significant relation was found between reduced mental well-being and both physical and non-physical SH over the past 12 months. An OR of 2.18 was found (95% CI 1.41 to 3.37) with  $p < 0.005$  for non-physical SH. An OR of 1.98 was found for physical SH (95% CI 1.25 to 3.13) with  $p < 0.005$ .

### Qualitative analysis

From eight in-depth interviews, information was retrieved on how victims experienced SH.

In general, the definition of SH was not very well known by the participants. Harassment was associated with bullying, violence or intimidation. Non-physical SH was often considered as surmountable in a male world such as Defence.

The context is important and sometimes triggers SH. Different contextual factors arose during the interviews.

A first factor was location. Belgian Defence often operates in extraordinary circumstances; harassment happened more often in situations where circumstances were primitive, and where a group was living together 24/7 such as military exercises, operations abroad, Operation Vigilant Guardian, ...

A second important factor was alcohol. In most military barracks, a weekly or monthly drink is habitual, and some events are even mandatory. Incidents seem to happen more often when there was alcohol involved.

Age was mentioned as a third factor; the interviewees report that young female soldiers are more often confronted with SH. In addition, they report that hierarchy is abused in this context to suppress the victim.

The impact of SH was discussed; both in relation to professional performance and in terms of personal attitude or behaviour at work. Professionally, interviewees indicate that SH sometimes leads towards internal mobility because the work context had become unpleasant. An impact on the mental well-being and self-esteem was reported due to bullying and misunderstanding of the victim. In some cases, the victim starts behaving differently, leading to stress and frustration. Sometimes, the experience even leads to anxiety and avoidance behaviour among victims.

A lack of support from management and colleagues is an important factor leading to a problematic working atmosphere and reduced mental well-being. On a professional level, this implicates the execution of the job, which sometimes leads to internal mobility of the victim. Some victims were getting limited

**Table 4** Prevalence of physical SH (at least one event) during the past 12 months and over the course of the career

	<12 months (%)	Course of career (%)
Someone fondled, kissed or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent (but did not attempt sexual penetration) by*:	11.3	38.9
Someone had oral sex with me or made me have oral sex with them without my consent by*:	2.3	6.5
A man put his penis into my vagina, or someone inserted fingers or objects without my consent by*:	1.4	9.3
A man put his penis into my butt, or someone inserted fingers or objects without my consent by*:	0.6	0.8
Even though it didn't happen, someone TRIED to have oral sex with me, or make me have oral sex with them without my consent by*:	4.8	12.1
Someone TRIED to put fingers, objects (such as a bottle or a candle) or their penis into my vagina but stopped before genital contact after*:	2	8.7
Even though it didn't happen, a man TRIED to put his penis into my butt, or someone tried to stick in objects or fingers without my consent by*:	0.6	0.8

\*The methods A–K were listed for each one of these items; they can be found in Table 1. SH, sexual harassment.

**Table 5** Percentage of respondents in high risk of decreased mental well-being

Force (%)	Rank (%)	Age (%)
Land (33)	Officer (27.1)	18–20 (20)
Air (26)	NCO (29.1)	21–30 (32)
Naval (37.1)	Private soldiers (33.3)	31–40 (23.1)
Medical (29)		41–50 (35.5)
		51–56+ (34.9)

NCO, non-commissioned officer.

support, most often only from the first hierarchical line and not leading to specific actions.

Reporting SH is problematic. Over the last 3 years (2017–2019), an average of only 13 cases/year have been reported to the internal service for prevention and protection at work. Participants state that they did not dare to start a procedure, fearing negative consequences at work or because they feel pity for the offender. Feeling loyal towards the organisation and not wanting to ‘betray’ colleagues plays an important role. Because of this culture and the specific hierarchical structure, victims lose their confidence in the existing systems and procedures.

## DISCUSSION

### Prevalence

The prevalence of SH within Belgian Defence is 36.1% over the past 12 months compared with 24.2% in the US forces.

The prevalence of rape over the course of the career was 9% in the current research which is more than double the prevalence of rape in women over 18 years in Flanders (3.8%)<sup>6</sup> and also much higher compared with the research reports by Wouters<sup>10</sup> and Vandenhoeke<sup>11</sup> within Belgian Defence.

In the USA, prevalence rates of 6.2% ‘sexual assault’ were declared over the past 12 months, which is higher than the 1.4% that was found in the Belgian population. However, the definition of rape was stricter in the current research compared with the definition of sexual assault in the US report.

The higher rates compared with previous studies in Belgium can be explained by a non-direct measurement of rape, which is less confronting for victims.<sup>18 25</sup>

High prevalence numbers within Defence or within Armed Forces in general can be explained by the specific military organisational culture where female soldiers are often accommodated with their male colleagues in primitive circumstances, without any privacy during operations abroad. This precarious situation combined with job-specific stressors can lead to role conflicts, which create opportunities for SH.<sup>18 19</sup>

A hypermasculine environment can lead to gender roles being emphasised. The qualitative research shows that women are indeed feeling the need to conform to these gender-related standards and will thus turn against other women or will not report SH when it happens to themselves.<sup>17</sup>

Alcohol is a risk factor for SH.<sup>27</sup> In the current research, it was identified as one of the methods for physical SH, where the victim was under the influence of alcohol. In addition, alcohol was mentioned as a contextual factor during the interviews, which can make boundaries fade. In a US study, military-related traumatic stress was identified as a risk factor for individuals to misuse alcohol. The co-occurrence of post-traumatic psychiatric disorders seems to play a major explanatory role in the association between military stress and alcohol misuse. In addition, research shows that female military reservists may be prone to

abuse alcohol as a way of coping with depression symptoms that are secondary to experiencing military SH.<sup>28</sup>

Alcohol misuse as a consequence of trauma (sexual or other) did not emerge in the current study, probably because the reasons for drinking (for victim and/or perpetrator) were not questioned.

However, knowing that heavy drinking is elevated among women in the military compared with similarly aged civilians,<sup>28</sup> alcohol can be both a large risk factor and an indication for the presence of (sexual) trauma and thus deserves extra attention within military organisations.

Demographical factors were not significant, except for the impact of age on non-physical SH. Younger female military personnel are more often confronted with non-physical SH, which is consistent with earlier research.<sup>11</sup>

### Impact

One in three female soldiers are experiencing decreased mental well-being. A high number, although the same scores, were measured on a national level in 2018.<sup>29</sup> Both physical and non-physical SH can be significantly related to decreased mental well-being. The interviews confirm the presence of stress due to SH. Anxiety, absenteeism, burnout or depression can be a consequence of SH.<sup>18 19</sup> On an organisational level, exposure to sexual assault has been proven to double the odds for turnover within 28 months in the US military. Consequently, sexual assault and harassment can be costly for both the affected soldier and the service itself but it can also harm military readiness.<sup>30</sup>

### Support and reporting behaviour

Among military personnel, commonly identified barriers for reporting SH include concerns about reports not being kept confidential, fear of retaliation or reprisal, fear that they will not be believed and beliefs that nothing will be done as a result of the report.<sup>31</sup> These barriers were also identified by the participants of the qualitative study and are reflected in the reported numbers of SH within Belgian Defence. Hence, in 2018, there was an incidence of only eight cases of SH among female military personnel registered with the network of confidants of Belgian Defence where employees can report difficulties due to psychosocial risks in a confidential way. This service is part of the internal service for prevention and protection at work. We can thus conclude that there is very little reporting of SH and that the numbers of reported cases do not reflect the prevalence numbers within the organisation. Low rates of reporting are problematic because reports by definition alert employers that harassment is occurring, thereby allowing them to pay attention to the subject matter.<sup>31</sup>

### Strengths, limitations and need for future research

The most important strength of our study is that it was conducted on a representative, large sample from the population of female soldiers. The mixed methods research added more insight in the quantitative data using qualitative analysis.

A limitation in this study might be that only women were in scope because literature states that they are the predominant victim group in SH.<sup>9</sup> However, including men could give a more nuanced insight into the problem of SH at work. We would therefore suggest that future studies and evaluations include men. Additionally, it would be interesting to gain more insight into possible risk factors for sexual assault such as heavy drinking as a consequence of trauma.

### CONCLUDING REMARKS

The prevalence numbers of SH within Belgian Defence indicate a problematic organisational culture and insufficient support for

victims. The top management of Belgian Defence has already put in place a large awareness campaign to induce organisational changes and to create more willingness among victims to report incidents to the designated services. Follow-up studies must show the impact of these measures.

**Contributors** KB as the head researcher was responsible for the planning and conduct of the research and for the analysis of the data. KG as a contributor was responsible for the interpretation of the data and for reporting the work. DP as a contributor was responsible for the internal contacts, for recruiting the respondents and for the coordination of the internal processes (planning and conduct). ED as a contributor was responsible for the dissemination of the results of the study and for the contextualisation of the final results (reporting). GP as a coordinator was responsible for the conception of the work and the interpretation of the results (planning and conduct). KB, DP, ED and GP have read and approved the final manuscript.

**Funding** This research was financed by the Belgian Defence.

**Competing interests** None declared.

**Patient consent for publication** Not required.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**Data availability statement** No data are available.

**Supplemental material** This content has been supplied by the author(s). It has not been vetted by BMJ Publishing Group Limited (BMJ) and may not have been peer-reviewed. Any opinions or recommendations discussed are solely those of the author(s) and are not endorsed by BMJ. BMJ disclaims all liability and responsibility arising from any reliance placed on the content. Where the content includes any translated material, BMJ does not warrant the accuracy and reliability of the translations (including but not limited to local regulations, clinical guidelines, terminology, drug names and drug dosages), and is not responsible for any error and/or omissions arising from translation and adaptation or otherwise.

**Open access** This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

#### ORCID iD

K Goorts <http://orcid.org/0000-0003-0793-0414>

#### REFERENCES

- O'Neill R, O'Neill R, Knew WHO. Who knew. How the world Health organization (who) became a dangerous Interloper on workplace health and safety and COVID-19. *New Solut* 2020;30:237–48.
- Willness CR, Steel P, LEE K. A meta-analysis of the antecedents and consequences of workplace sexual harassment. *Pers Psychol* 2007;60:127–62.
- Fitzgerald LF, Swan S, Magley VJ. *But was it really sexual harassment?: Legal, behavioral, and psychological definitions of the workplace victimization of women. sexual harassment: theory, research, and treatment*. Needham Heights, MA, US: Allyn & Bacon, 1997: 5–28.
- Sen P, Algora RG. Sexual harassment against women with disabilities in the world of work and on campus United nations entity for gender equality and the Empowerment of women (un women) 2020.
- Preventing sexual harassment BNA communications, Inc 1992.
- Buysse A, Caen M, Dewaele A, et al. *Seksuele gezondheid in Vlaanderen*. Gent: Academia press, 2013.
- Latcheva R. Sexual harassment in the European Union: a pervasive but still hidden form of gender-based violence. *J Interpers Violence* 2017;32:1821–52.
- Godier LR, Fossey M. Addressing the knowledge gap: sexual violence and harassment in the UK armed forces. *J R Army Med Corps* 2018;164:362–4.
- NATO. *Summary of the National reports of NATO member and partner nations to the NATO Committee on gender perspectives*. NATO, 2018.
- Wouters N. *Les femmes dans les forces armées belges: 25 ans de presence*. Brussel: Division personnel de l'Etat-major general, 2000.
- Vandenhoeye C. *40 ans des femmes la Défense belge: Ou en sommes-nous?* Brussel: Koninklijke Militaire School, 2016.
- McCabe MP, Hardman L. Attitudes and perceptions of workers to sexual harassment. *J Soc Psychol* 2005;145:719–40.
- Baillien E, Neyens I, De Witte H. Ongewenst grensoverschrijdend gedrag OP Het werk: OP welke manier speelt de organisatie EEN Rol? EEN kwantitatieve studie van risicofactoren OP niveau van job, team en organisatie. KUL Onderzoeksgroep voor stress, gezondheid en welzijn 2005.
- Bakker F, de Graaf H, de Haas S. *Seksuele gezondheid in Nederland*. Utrecht: Rutgers Nisso group, 2009.
- Street AE, Gradus JL, Giasson HL, et al. Gender differences among Veterans deployed in support of the wars in Afghanistan and Iraq. *J Gen Intern Med* 2013;28 Suppl 2:556–62.
- Professionals Australia. *The underrepresentation of women in defence: more than just a pipeline issue*, 2019.
- Tziamali I. *De KMA raad IK mijn toekomstige dochter niet eens AAN*. Breda: Royal military academy, 2021.
- Estrada AX, Olson KJ, Harbke CR. Evaluating a brief scale measuring psychological climate for sexual harassment. *Military psychology* 2011;23:410–32.
- Goldstein LA, Dinh J, Donalson R, et al. Impact of military trauma exposures on posttraumatic stress and depression in female veterans. *Psychiatry Res* 2017;249:281–5.
- Mengeling MA, Booth BM, Torner JC, et al. Reporting sexual assault in the military: who reports and why most servicewomen don't. *Am J Prev Med* 2014;47:17–25.
- Polit DF, Beck CT. *Nursing research: generating and assessing evidence for nursing practice*. 10th ed. Philadelphia: Wolters Kluwer Health, 2017.
- Holloway I, Galvin K. *Qualitative research in nursing and healthcare*. John Wiley & Sons, 2016.
- Koss MP, Oros CJ. Sexual experiences survey: a research instrument investigating sexual aggression and victimization. *J Consult Clin Psychol* 1982;50:455–7.
- De Haas S. Seksueel grensoverschrijdend gedrag onder jongeren en volwassenen in Nederland. *Tijdschrift voor Seksuologie* 2012;36.
- Koss MP, Abbey A, Campbell R, et al. Revising the Ses: a collaborative process to improve assessment of sexual aggression and victimization. *Psychol Women Q* 2007;31:357–70.
- Hankins M. The reliability of the twelve-item general health questionnaire (GHQ-12) under realistic assumptions. *BMC Public Health* 2008;8:3355.
- Abbey A, Zawacki T, Buck PO, et al. Alcohol and sexual assault. *Alcohol Res Health* 2001;25:43–51.
- Schumm JA, Chard KM. Alcohol and stress in the military. *Alcohol Res* 2012;34:401–7.
- Gisle L, Drieskens S, Demarest S. *Geestelijke gezondheid: gezondheidsenquête 2018 (report No.: D/2020/14.440/4)*. Brussel: Sciensano, 2018.
- Morrall AR, Matthews M, Cefalu M. *Effects of sexual assault and sexual harassment on separation from the U.S. military: findings from the 2014 Rand military workplace study*. RAND Corporation, 2021.
- Bell ME, Street AE, Stafford J. Victims' psychosocial well-being after reporting sexual harassment in the military. *J Trauma Dissociation* 2014;15:133–52.

*Faculty of Medicine and Health Sciences***Interview guide:**

<b>INTRODUCTION</b>	<b>Introduction</b> <b>Anonymity and confidentiality</b> <b>Recording</b>
<b>INTERVIEW</b>	<b>Main question:</b> 'What experience did you have with sexual harassment in the unit/department where you work'? <b>Topics:</b> <ul style="list-style-type: none"> <li>• In what circumstances/location was this? At practice/during working hours/on a mission abroad, ...?</li> <li>• What was your reaction to this?</li> <li>• How did the person react to the rejection or to your reaction?</li> <li>• Have you reported the behavior?</li> <li>• What was the reaction of superiors/colleagues/partner?</li> <li>• Have they taken measures/actions in the unit/department?</li> <li>• How do you see the future? Is there a need to raise awareness concerning this problem in the unit/department?</li> </ul> <b>Side questions:</b> <ul style="list-style-type: none"> <li>• Why did you say this?</li> <li>• How did this start?</li> <li>• What thoughts did you have?</li> <li>• Could you talk to someone about it?</li> <li>• How does that make you feel?</li> <li>• What happened then?</li> <li>• Why did this happen?</li> </ul>
<b>CLOSING</b>	